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# INTERGENERATIONAL FERTILITY AMONG HISPANIC WOMEN: NEW EVIDENCE OF IMMIGRANT ASSIMILATION\*

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*In recent decades, rapid growth of the U.S. Hispanic population has raised concerns about immigrant adaptation, including fertility. Empirical research suggests that Hispanics, especially Mexicans, might not be following the historical European pattern of rapid intergenerational fertility decline (and convergence toward native levels). If confirmed, continued high Hispanic fertility could indicate a broader lack of assimilation into mainstream American society. In this paper, we reexamine the issue of Hispanic and Mexican fertility using an approach that combines biological and immigrant generations to more closely approximate a comparison of immigrant women with those of their daughters' and granddaughters' generation. Contrary to cross-sectional results, our new analyses show that Hispanic and Mexican fertility is converging with that of whites, and that it is similarly responsive to period conditions and to women's level of education. In addition, we employ a mathematical simulation to illustrate the conditions under which cross-sectional analyses can produce misleading results. Finally, we discuss the import of the fertility convergence we document for debates about immigrant assimilation.*

**W**ith an estimated 18 million foreign-born Hispanics currently residing in the United States, the issue of immigrant adaptation and assimilation has become a pressing social concern (Brubaker 2001; Chavez 2004; Hirschman 2005; Huntington 2004; Jacoby 2004; Kivisto 2005; Massey 1995; Perlmann and Waldinger 1997; Rumbaut, Massey, and Bean 2006). A large body of research has addressed the issue, and the resulting evidence is mixed. On the one hand, recent evidence suggests that Hispanic assimilation is occurring across diverse areas of social life, including language acquisition, socioeconomic position, residential integration, and intermarriage (Alba and Nee 2003; Arias 2001; Bean and Stevens 2003; Farley and Alba 2002; Nee and Sanders 2001; Perlmann 2005; Rumbaut et al. 2006). On the other hand, a number of studies highlight the unique challenges facing modern day Hispanic migrants that could complicate their prospects for assimilation (e.g., Grogger and Trejo 2002; Portes and Rumbaut 1996; Portes and Zhou 1993; Zhou 1997). Rather than predicting assimilation and upward mobility for subsequent generations of Hispanic migrants, this body of research stresses the importance of the context of reception for immigrant adaptation and warns of the dangers of “segmented” assimilation or even downward mobility across generations.

One area of concern with respect to Hispanic assimilation is the area of fertility. Between 1990 and 2004, the percentage of all births attributable to U.S. Hispanic women increased from 15% to 23%. The increase was even more pronounced for the Mexican population, whose share of births almost doubled from 9% to 17% during the same period (Martin et al. 2006). While the bulk of this increase is likely attributable to immigration, above average fertility was another important contributor. Between 1990 and 2000, the reported total fertility rate for Hispanic and Mexican women decreased slightly from 2.9 and 3.2, respectively, to 2.7 and 2.9, only to increase again to 2.8 and 3.0 in 2004—levels

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that are 47% and 58% higher, respectively, than among non-Hispanic whites (Martin et al. 2006). Moreover, compared with the rapid intergenerational fertility decline exhibited by European immigrants a century ago (Morgan, Watkins, and Ewbank 1994), Hispanics (especially Mexicans) appear to be retaining high fertility levels. In fact, empirical analyses suggest substantial and persistent Hispanic-white fertility differences that do not appear to decline across generations (Bean, Swicegood, and Berg 2000; Carter 2000; Forste and Tienda 1996; Frank and Heuveline 2005; Stephen 1989; Swicegood and Morgan 1999).

Accordingly, this paper examines intergenerational trends in fertility levels among Hispanics. We first elaborate the theoretical expectations derived from the varying assimilation perspectives and the literature connecting social mobility and fertility. Next, the empirical analysis extends a recently proposed approach that aligns biological and immigrant generations to examine changes in the number of children ever born (CEB) to Hispanic women in general and to Mexican women in particular. The central aim of this analysis is to determine whether Hispanic fertility levels increasingly approximate those of non-Hispanic whites (hereafter simply “whites”) over time and across immigrant generations. In addition, we assess the extent to which different immigrant generations exhibit the same period fluctuations and responsiveness to educational attainment as white women. The final part of the paper simulates cohort changes in fertility to illustrate how intergenerational convergence can be masked by cross-sectional analyses. Overall, our findings clearly point toward converging fertility behavior for Hispanics and whites. We elaborate on the implications for the literature on Hispanic immigrant adaptation and prospects for socioeconomic change.

### **IMMIGRANT ASSIMILATION AND FERTILITY BEHAVIOR**

Changes in fertility behavior are part and parcel of the general process of immigrant adaptation and assimilation. Alba and Nee defined assimilation as “the decline of an ethnic distinction and its corollary cultural and social differences” (2003:11). In this process, ethnic distinctions attenuate in salience and involve fewer domains of social life. Rather than an inevitable or conscious endeavor of individuals, assimilation becomes a by-product of the purposive actions of immigrants and their children to improve their life chances within given human capital, social network, and institutional constraints. As such, assimilation can occur both among immigrants themselves with added time in the host society and across generations (Alba and Nee 2003; Brubaker 2001). Assimilation is a multifaceted concept, however, and can proceed unevenly across various dimensions. For instance, one can distinguish among structural assimilation—that is, interpersonal contact across ethnic lines; socioeconomic assimilation—convergence in education, wages, and occupational attainment; and cultural assimilation or acculturation— language use, modes of dress, and social behaviors (Alba and Nee 1997; Arias 2001; Gordon 1964). Immigrant assimilation in one dimension may enhance the likelihood of assimilation in another, but does not guarantee it. For instance, a group can be relatively acculturated with respect to cultural values and practices, and still not reach socioeconomic parity with the majority. Likewise, a group can achieve socioeconomic success but retain a distinctive culture and/or reside in segregated communities.

Classical assimilation models were based on the experiences of pre-World War II white European immigrants. Many argue that this assimilation paradigm is inappropriate for the current wave of immigrants, who as nonwhites face barriers that earlier waves of immigrants did not. Moreover, the economic context that immigrants face has changed dramatically, with an hourglass labor market structure that offers few avenues for upward mobility through blue-collar work (Portes and Rumbaut 1996; Portes and Zhou 1993). And finally, the prolonged nature of the current immigration stream and the resulting ethnic communities that have been forged continually refurbish and reinforce ethnic identities, and may provide an avenue to mobility that does not require cultural assimilation. In these contexts, “segmented assimilation” could occur, whereby immigrant groups adapt to some

elements of the host society but not others. Thus, rather than being a melting pot, the contemporary United States may be trending toward a multiethnic society in which immigrant groups maintain indefinitely some aspects of cultural distinctiveness (Portes and Rumbaut 1996; Portes and Zhou 1993; Zhou 1997).

Values and beliefs concerning family life, such as the number of children that families should have, the appropriate timing of marriage, and household composition, are important aspects of immigrant assimilation (Abma and Krivo 1991; Amaro 1988; Arias 2001). These values and beliefs reflect the level of cultural assimilation and may impact the possibilities for socioeconomic assimilation and mobility. For example, successful completion of a college education usually entails the postponement of marriage and childbearing, and for women in particular, upward occupational mobility is often incompatible with a large number of children. Thus, the modern assimilation perspective (Alba and Nee 1997) suggests that the quest for social mobility would encourage Hispanic immigrants and their descendants to discard attitudes and behaviors that limit their chances of success in the United States and adopt those that promote them, including smaller family sizes. Alternatively, the segmented assimilation approach could predict the opposite: that limited labor market opportunities diminish the opportunity costs of large families for Hispanic women, and the continual presence of new immigrants reinforces preferences for larger families, undermining fertility convergence across immigrant generations.

The few studies that have addressed intergenerational trends in Hispanic fertility have tended to support the latter interpretation. Specifically, cross-sectional comparisons of first, second, and third immigrant generations have found a reversal in fertility decline among Mexican women born in the United States. Among this group, third-generation immigrants average higher completed fertility than second-generation immigrants (Bean, Swicegood, and Berg 2000; Frank and Heuveline 2005; Swicegood and Morgan 1999). Thus, a puzzling pattern of stagnation or even reversal of fertility decline across Hispanic immigrant generations appears as a recurrent finding, contradicting the process of intergenerational change predicted by the classical assimilation perspective and generally consistent with a segmented assimilation view (Grogger and Trejo 2002).

Smith (2003), however, pointed out that cross-sectional comparisons across immigrant generations do not reflect the experience of the children and grandchildren of immigrants (see also Borjas 2006). In the context of fertility, comparing the completed fertility of 40-year-old women across immigrant generations at any particular point in time does not necessarily capture intergenerational progress correctly because in the cross section, a 40-year-old woman who is a second-generation immigrant cannot be the mother of a third-generation immigrant of the same age. Smith (2003, 2006) proposed a solution to this problem by reorganizing the relevant data by immigration and birth cohort and then lagging subsequent birth cohorts in order to compare generations—that is, by directly comparing immigrant women with the women in their daughters' and granddaughters' cohorts over time (see Data and Methods section below). As we will show below, aligning birth cohorts and immigrant generations in this fashion can produce substantially different findings from those of cross-sectional analyses.

In this paper, we argue that, at least with respect to family size, Hispanics exhibit a pattern consistent with the modern assimilation perspective expectation of convergence with mainstream white fertility levels across immigrant generations. We posit and test four related hypotheses regarding Hispanic fertility difference and change.

**Hypothesis 1:** The fertility level of Hispanic immigrants will be intermediate, in between that of origin and destination populations.

A long tradition of status enhancement and social mobility studies has conceptualized the fertility behavior of mobile persons as a process of adaptation that is remarkably similar to the one experienced by immigrants. Relying on reference group theory, Blau (1956) explained the particular practices and behaviors of mobile persons as part of a process

of acculturation. In a language reminiscent of Park's (1928) classical characterization of the immigrant personality, Blau described mobile persons as ". . . marginal men, in some respects out of tune with others both in their new and original strata in the occupational hierarchy" (1956:290). According to the acculturation hypothesis, the fertility of the socially mobile lies intermediate between the nonmobile at origin and the nonmobile at destination because mobile persons are not fully integrated into either social group (Kasarda and Billy 1985). The mobile may lack extensive and intimate contacts with members of the destination group, thus limiting their opportunities for complete acculturation. At the same time, the mobile no longer experience the full influence of the origin social group. Since both origin and destination groups exert some influence over mobile persons' behaviors, fertility (and other relevant characteristics) is expected to be intermediate between the two nonmobile comparison groups (Kasarda, Billy, and West 1986).

We apply this perspective to immigrant groups. Classical studies of immigrant assimilation have highlighted fertility limitation as a dimension of immigrant incorporation that facilitates occupational mobility, for instance among Jewish immigrants to the United States (Gordon 1964:173–95). In the specific case of Latin American (especially Mexican) migration, the higher fertility levels in countries of origin contrast with lower fertility prevalent in the United States. It is this dissociation between fertility at origin and fertility at destination that is posited to affect the fertility behavior of Hispanic immigrant generations.

**Hypothesis 2:** The fertility level of Hispanic-origin women will converge with the fertility level of whites across immigrant generations.

Fertility limitation has often been identified as a strategy that may further the life chances of individuals and their children. In more child-oriented societies, parents' main investments may consist of helping their children get ahead (Aries 1980; Boyd 1973; Kasarda and Billy 1985; Van Bavel 2006). The expectation that children's social status should surpass that of their parents has been a central motivation for fertility limitation. This might be particularly so for immigrants, ". . . who commonly see fulfillment of their ambitions not in their own achievement but in those of their offspring" (Portes and Rumbaut 2001:62). Moreover, as Alba and Nee argued (1997), the reduction of social distance is critical for structural assimilation and entails convergence with mainstream ideological structures, including those governing such factors as ideal or appropriate family size.

**Hypothesis 3:** Hispanic fertility will exhibit increasing responsiveness to period conditions across generations.

For some dimensions of immigrant incorporation, such as educational attainment or wages, one could expect somewhat linear and continuous progress across generations. U.S. fertility trends, in contrast, fluctuated dramatically in the twentieth century as norms regarding desired family size responded to period conditions. Thus, an additional indicator of assimilation or acculturation could be the extent to which Hispanic fertility mimics the period fluctuations observed for the majority group, particularly the increased fertility during the baby boom years.

For the period between 1954 and 1970, Rindfuss and Sweet (1977) showed that Mexican Americans had higher fertility levels but very similar trends compared with whites. It is unclear whether these trends are comparable among the foreign-born, for whom fertility behavior is in part determined by patterns that are prevalent in their countries of origin. In fact, we would expect that if Hispanic groups were assimilating across generations with respect to fertility, then second- and third-generation immigrants would follow the fertility trends of the white population more closely than would first-generation immigrants.

**Hypothesis 4:** The impact of women's education on fertility will grow increasingly similar to whites across generations.

The mobility-fertility literature highlights women's education as an engine of status enhancement that promotes the transition from high to low fertility both in developed and less developed countries. Education increases knowledge and facilitates access to information,



including contraception. It is a main source of women's empowerment, which fosters the acquisition of marketable skills that, in turn, encourages labor force participation and other nonfamilial roles. Evidence from developing countries consistently shows a linear inverse relationship between education and fertility (Kasarda et al. 1986).

Thus, we would expect intergenerational increases in women's schooling to be a main mechanism promoting convergence in fertility levels between whites and Hispanics. However, the strength of the association could vary. If Hispanics were not assimilating across generations, either because continued migration reinforced a cultural preference for larger families or because blocked opportunities limited the opportunity costs of childbearing, the strength of the inverse relationship between women's education and fertility could be lower for Hispanics than for whites, and could show little or no evidence of strengthening across immigrant generations.

## DATA

We test these hypotheses using various U.S. and Mexican data sources. The approach to intergenerational change that we use (following Smith 2003, 2006) requires a long series of cohort observations that allow us to align the parent immigrant cohort with children and grandchildren. To produce these data, we estimate average CEB for five-year birth cohorts and by immigrant generation using censuses and the Current Population Survey (CPS). The information is then indexed by first-generation birth cohorts, and the estimates for the second- and third-generation immigrant birth cohorts are offset by a 25-year lag between generations. This approach implies that the average number of CEB to second-generation immigrant women in a particular cohort reflects the completed fertility of second-generation immigrant women who were born 25 years after the first immigrant generation.<sup>1</sup>

In order to construct such a long time series, we pool information from the 1940, 1950, 1960, and 1970 censuses (Ruggles et al. 2004) with data from the 1986, 1988, 1994, 1995, 1998, 2000, 2002, and 2004 June CPS. All of these sources contain information on respondent's and parents' place of birth, as well as CEB. CEB is a relatively straightforward measure of average family size that does not suffer from the difficulties in estimating other fertility measures, particularly fertility rates.<sup>2</sup> However, focusing on completed fertility implies restricting the analysis to women beyond childbearing age, in our case to those ages 40 and older.

In the censuses, CEB was obtained for all women ages 15 and older; in the CPS, data on CEB were collected only from women ages 15–44. Accordingly, we restrict the data to women ages 40–44 in the CPS but ages 40–65 in the censuses. The higher age limit in the censuses is necessary in order to expand our sample size and to obtain more reliable estimates of CEB for Hispanic groups. Systematic differences with estimates obtained from the CPS are unlikely, since they would primarily result from childbearing after age 45 or

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1. The length of the generational lag is a function of cumulative fertility, fertility initiation, and spacing; as such, it varies over time with shorter or longer lags, reducing or increasing the extent of intergenerational change. In our case, though, assuming a 20- or 30-year intergenerational lag instead of a 25-year lag does not change the overall findings of the study.

2. Under certain circumstances, such as situations of rapid in-migration, the denominator of the birth rate (i.e., the size of the population exposed to risk) can be extremely difficult to measure (Pollard, Yusuf, and Pollard 1990). As an illustration, the 2002 *National Vital Statistics Report* (Martin et al. 2002) reported that the total fertility rate for Hispanic and Mexican women *increased* from 3.0 and 3.2, respectively, to 3.1 and 3.3 between 1990 and 2000. The 2002 report estimated the population at risk using 1990 census information and assumptions about Hispanic fertility, mortality, and immigration. However, after the population estimates from the 2000 census were available, the calculations were corrected, and the originally reported figures were shown to be off by a wide margin. The 2006 report (Martin et al. 2006) showed that the total fertility rate for Hispanic and Mexican women in fact *decreased* from 3.0 and 3.2, respectively, in 1990 to 2.7 and 2.9 in 2000. The difference was mainly the product of the underestimation of the population at risk. Similar difficulties are likely present in the estimation of fertility rates after 2000.

from recall error. Calculations restricting the upper age limit to 44 in the censuses do not alter the substantive findings of the analysis but result in a large number of cells with fewer than 30 cases.

In addition, except for 1970, fertility questions in the censuses were limited to ever-married women; thus, we restrict later data sources accordingly. Estimates from the 1995, 1998, 2000, 2002, and 2004 CPS indicate that 10% of Hispanic women over age 40 reported having never been married, compared with 7% among white women. Among the never married, 56% of Hispanic women and 18% of white women reported having had children. Analyses including all women do not change the substantive findings of the study.

Pooling together these data sources allows us to construct a time series of CEB for the three immigrant generations of Hispanic and Mexican women by five-year cohorts starting in 1885 and ending in 1964. Given that they are all independently drawn, nationally representative sources, data for the same birth cohort across multiple samples were added together in order to expand the sample size and increase the reliability of the estimates.

We use the following criteria in our definition of immigrant generation and ethnicity. We consider the first generation to be women born outside the United States; the second generation includes native-born women with at least one parent born outside the United States; and the third generation captures those with both parents born in the United States and thus includes all generations subsequent to the second. Hispanic and Mexican ethnicity is somewhat more difficult to measure. While first- and second-generation Hispanic immigrants can be easily identified with information on respondent's and parents' place of birth, the information available to identify the third generation differs across data sources (Bean and Tienda 1987). In the CPS, we rely on respondent's self-identification to the ethnicity question and define all Hispanics with U.S.-born parents as members of the third generation. The censuses included in the analysis, however, did not collect self-identifying ethnicity information, which affects the definition of the third generation. Based on a methodology proposed and evaluated by Gratton and Gutmann (2000), the IPUMS project imputed Hispanic origin prior to 1980 using any of one of several criteria based on birthplace, parents' birthplace, grandparents' birthplace, Spanish surname, and/or family relationship to a person with one of these characteristics. We rely on this imputation for our estimates. Comparable estimates are obtained for native-born white women with native parents—that is, third-generation white women, which is the reference group in subsequent analyses.

Hispanics are diverse in terms of country of origin, complicating any comparison of migrant fertility with fertility across a wide array of Latin American countries. However, for Mexicans, the largest national origin group among Hispanics, we are able to compare the U.S. information with data from the 1990 and 2000 Mexican censuses. Specifically, we construct a time series of CEB to Mexican women in Mexico grouped by five-year cohort from 1920 to 1964. We use this information to compare fertility levels in Mexico with those prevalent among the Mexican-origin population in the United States.

## METHODS

The empirical analysis relies on descriptions of trends in CEB across Hispanic and Mexican cohorts and generations. To assess differences with whites, we compute first-difference estimates, such that

$$D\_CEB_{cg} = HM\_CEB_{cg} - W\_CEB_c,$$

where  $HM\_CEB$  and  $W\_CEB$  correspond to CEB to Hispanic (or Mexican) women and white women, and  $c$  and  $g$  index cohort and immigrant generation, respectively. Reductions in first-difference estimates between Hispanics and whites by cohort and generation would be indicative of convergence in absolute number of CEB across groups.

First differences, however, might mask variations in processes of fertility decline across groups. A more direct test of accelerated fertility decline among Hispanic/Mexican women across generations requires taking into account changes in white women's fertility. Following the same 25-year generational lag procedure applied to align immigrant and biological cohorts, we can also estimate intergenerational change among whites. Indexing by first-generation immigrant cohorts, we can then compare, for instance, how fertility changes between first and second generations across Hispanic and white women. To explore this relationship we use ratios of ratios, which are comparable to difference-in-difference estimators, so that

$$ROR\_CEB_{iy} = \frac{HM\_CEB_{iy} / HM\_CEB_{io}}{W\_CEB_{iy} / W\_CEB_{io}},$$

where  $i$  represents the first-generation cohort; and  $y$  and  $o$  are the younger and older generations, respectively. For instance, focusing on the 1910–1914 first-generation cohort and the changes taking place between the first and second generation, the ratio of ratios computes the ratio of (1) the ratio of CEB to second-generation Hispanics to CEB to first-generation Hispanics to (2) the ratio of CEB to second-generation whites to CEB to first-generation whites. Estimates below unity imply convergence because they reflect faster fertility decline among Hispanic women than among white women.

Finally, to understand Hispanic women's responsiveness to socioeconomic characteristics, we model CEB, controlling for cohort membership and years of education. Number of CEB can be viewed as a realization of a negative binomial process and can be modeled using count data techniques. The negative binomial model is a generalization of the Poisson model that relaxes the assumption that the variance of the dependent variable is equal to its mean and accounts for overdispersion (Long 1997). Goodness-of-fit tests based on the Bayesian information criterion (BIC) show that negative binomial models fit the data better than do Poisson models. Specifically, we estimate the following equation:

$$\ln(\mu_i) = \mathbf{x}_i\beta + \varepsilon_i,$$

where the log of the mean  $\mu$  is assumed to be a linear function of the independent variables  $\mathbf{x}$ ;  $\beta$  are parameters to be estimated; and  $\exp(\varepsilon)$  is random error term assumed to be gamma distributed with a mean of 1 and a variance of  $\alpha$ . We estimate two models: the first pools data for whites and Hispanics, and the second pools data for whites and Mexicans. In both cases, the models control for cohort, generational status, and years of education. Interaction terms between generational status and years of education capture differences in the impact of education on CEB between white and Hispanic (Mexican) women across generations (Long and Freese 2003).

## RESULTS

### Intergenerational Fertility Decline and Convergence With Whites

Before we report the results obtained from aligning biological and immigrant generations, Table 1 replicates the fertility trends found in cross-sectional analyses. Specifically, pooling data from the 1995, 1998, 2000, 2002, and 2004 CPS, the table reports CEB for Hispanic and Mexican women by immigrant generation, and first differences with whites. Results show that while the completed fertility of Hispanic and Mexican-origin women is indeed lower among the second than among the first immigrant generation, it is actually higher among third- relative to second-generation women. Overall there is no difference in fertility levels between first- and third-generation Hispanic women, and for Mexican women, the average number of CEB is only modestly lower (3.26 relative to 2.81). The

**Table 1. Cross-Sectional Estimates of CEB, by Immigrant Generational Status**

Immigrant Generation	Hispanics	Mexicans	Difference With Third-Generation Whites	
			Hispanics	Mexicans
First	2.79	3.26	0.58	1.05
Second	2.52	2.68	0.31	0.47
Third	2.75	2.81	0.54	0.60
All	2.74	3.03	0.53	0.82

*Source:* June Current Population Surveys (1995, 1998, 2000, 2002, and 2004).

same pattern is evident for fertility differences with whites. While there is some evidence of convergence between the first and the second generation, the gap in fertility levels is again higher among the third generation of Hispanic and Mexican women. As a result, third-generation Hispanic and Mexican women have, on average, 0.53 and 0.82 more children than white women, respectively.

These differences by immigrant generation replicate those reported in previous studies of immigrant assimilation and support the image of a lack of convergence or even reversal of fertility trends among third-generation Hispanics. However, as we discussed earlier, this information may not accurately measure intergenerational change because the comparison of immigrant generations at one point in time does not capture change across biological generations.

The rows of Table 2 align biological and immigrant generations. We show CEB estimates for Hispanic and Mexican women, as well as first differences in fertility levels with comparable cohorts of whites. In the case of Mexican women, we also report fertility estimates for Mexican birth cohorts. The first three columns, presenting data on three generations of Hispanic immigrants, show clear evidence of intergenerational fertility decline. To illustrate, the table shows that Hispanic immigrant women born between 1910 and 1914 averaged 3.4 children. The next entry in this row shows that completed fertility remained high (at 3.5) for the second generation, that is, the immigrants' daughters who were born 25 years after 1910–1914. The next row entry shows that fertility declined to 2.4 among the third generation, that is, immigrants' granddaughters who were born 50 years after 1910–1914.

Estimates of CEB for Mexican women, also presented in Table 2, allow us to compare the fertility of first-generation<sup>3</sup> women in the United States with their counterparts in Mexico. Results support expectations from the social mobility-fertility framework. First-generation immigrant Mexican women in the United States exhibit fertility levels that are higher than those of native whites but considerably lower than those of women in Mexico. On average, first-generation immigrant women tend to have two fewer children than women still living in Mexico. This pattern holds for all cohorts in our analysis, including the most recent cohort born between 1960 and 1964. Among this cohort, our estimates show that the number of CEB to foreign-born Mexican women in the United States is 2.9 compared with 4.3 among those residing in Mexico. This is important because this cohort migrated to the United States after 1965, during a period when the context of reception became less

3. The fertility behavior of the first generation captures diverse processes because the group includes women who migrated at young ages; these women could be considered more akin to the second generation than women who migrated at adult ages, and thus could be considered similar to nonmigrating women for fertility purposes. Data limitations and small sample sizes prevent us from further distinguishing within this group.



**Table 2.** Average Number of CEB to Hispanic and Mexican Women and Difference With Native Whites, by Immigrant Birth Cohort

Immigrant Birth Cohort	Hispanics			In Mexico	Mexicans			Whites
	First Gen.	Second Gen.	Third Gen.		First Gen.	Second Gen.	Third Gen.	
Panel a. Average CEB								
1835–1839			4.5				4.8	
1840–1844			4.8				5.2	
1845–1849			4.3				4.6	
1850–1854			3.9				4.1	
1855–1859			3.7				4.0	
1860–1864		3.9	4.0			4.4	4.2	
1865–1869		4.2	4.1 <sup>a</sup>			5.0	4.4 <sup>a</sup>	
1870–1874		3.6	3.8 <sup>a</sup>			3.9	4.0 <sup>a</sup>	
1875–1879		4.0	4.1 <sup>a</sup>			4.4	4.3 <sup>a</sup>	
1880–1884		3.7	4.8 <sup>a</sup>			4.1	5.1 <sup>a</sup>	
1885–1889	4.4	3.5	3.6 <sup>a</sup>	6.5 <sup>b</sup>	4.8	4.2	4.0 <sup>a,c</sup>	3.0
1890–1894	4.3	3.7 <sup>a</sup>	3.3	6.5 <sup>b</sup>	4.7	4.2 <sup>a</sup>	3.6	2.8
1895–1899	4.4	4.1 <sup>a</sup>	3.1	6.5 <sup>b</sup>	5.1	4.5 <sup>a</sup>	3.3	2.7
1900–1904	4.2	4.1 <sup>a</sup>	2.5	6.5 <sup>b</sup>	4.9	4.5 <sup>a</sup>	2.6	2.6
1905–1909	3.8	4.0 <sup>a</sup>	2.5	6.5 <sup>b</sup>	4.8	4.1 <sup>a</sup>	2.6	2.4
1910–1914	3.4	3.5 <sup>a,c</sup>	2.4	6.5 <sup>b</sup>	4.3	3.5 <sup>a,c</sup>	2.4	2.4
1915–1919	3.2 <sup>a</sup>	2.9		6.5 <sup>b</sup>	4.1 <sup>a</sup>	3.1		2.5 <sup>a</sup>
1920–1924	3.3 <sup>a</sup>	2.5		6.1	4.3 <sup>a</sup>	2.7		2.8 <sup>a</sup>
1925–1929	3.4 <sup>a</sup>	2.4		6.6	4.5 <sup>a</sup>	2.4		3.0 <sup>a</sup>
1930–1934	3.3 <sup>a</sup>	2.3		6.7	4.2 <sup>a</sup>	2.4		3.2 <sup>a</sup>
1935–1939	3.6 <sup>a</sup>	2.3		6.7	5.0 <sup>a</sup>	2.5		2.9 <sup>a</sup>
1940–1944	3.0			6.3	4.0			2.5
1945–1949	2.9			5.6	3.7			2.2
1950–1954	2.7			5.2	3.3			2.0
1955–1959	2.6			4.6	3.0			2.0
1960–1964	2.6			4.3	2.9			2.0

*(continued)*

favorable and immigrants were increasingly low-skilled (Borjas 1987), potentially encouraging higher fertility levels (Frank and Heuveline 2005). In spite of these trends, considerable decline in fertility is already evident among first-generation immigrants compared with their peers in Mexico.

Estimates of intergenerational change across Mexican immigrant generations show a more consistent pattern of fertility decline than the one found among Hispanics in general. Following, as before, the cohort born between 1910 and 1914 shows that the number of CEB to Mexican women who are first-generation immigrants is 4.3 but declines to 3.5 among immigrant women's simulated daughters and declines again to 2.4 among their

(Table 2, continued)

Immigrant Birth Cohort	Hispanics			Mexicans			
	First Gen.	Second Gen.	Third Gen.	In Mexico	First Gen.	Second Gen.	Third Gen.
Panel b. Difference With Whites							
1835–1839			1.5				1.8
1840–1844			2.1				2.4
1845–1849			1.7				1.9
1850–1854			1.3				1.6
1855–1859			1.3				1.6
1860–1864		0.9	1.6			1.4	1.8
1865–1869		1.4	1.6 <sup>a</sup>			2.2	1.8 <sup>a</sup>
1870–1874		0.9	1.0 <sup>a</sup>			1.2	1.2 <sup>a</sup>
1875–1879		1.4	1.1 <sup>a</sup>			1.8	1.3 <sup>a</sup>
1880–1884		1.3	1.6 <sup>a</sup>			1.7	2.0 <sup>a</sup>
1885–1889	1.4	1.2	0.7 <sup>a</sup>	3.5	1.8	1.8	1.1 <sup>a</sup>
1890–1894	1.5	1.2 <sup>a</sup>	0.8	3.7	1.9	1.7 <sup>a</sup>	1.1
1895–1899	1.7	1.3 <sup>a</sup>	0.9	3.8	2.4	1.8 <sup>a</sup>	1.1
1900–1904	1.6	1.1 <sup>a</sup>	0.5	3.9	2.4	1.5 <sup>a</sup>	0.6
1905–1909	1.4	0.9 <sup>a</sup>	0.5	4.1	2.4	1.0 <sup>a</sup>	0.7
1910–1914	1.0	0.6 <sup>a</sup>	0.4	4.1	1.9	0.5 <sup>a</sup>	0.4
1915–1919	0.6 <sup>a</sup>	0.3		4.0 <sup>a</sup>	1.6 <sup>a</sup>	0.6	
1920–1924	0.5 <sup>a</sup>	0.3		3.4 <sup>a</sup>	1.5 <sup>a</sup>	0.5	
1925–1929	0.4 <sup>a</sup>	0.4		3.6 <sup>a</sup>	1.5 <sup>a</sup>	0.3	
1930–1934	0.1 <sup>a</sup>	0.3		3.6 <sup>a</sup>	1.1 <sup>a</sup>	0.5	
1935–1939	0.7 <sup>a</sup>	0.3		3.8 <sup>a</sup>	2.1 <sup>a</sup>	0.5	
1940–1944	0.5			3.8	1.5		
1945–1949	0.7			3.4	1.5		
1950–1954	0.7			3.2	1.3		
1955–1959	0.6			2.7	1.1		
1960–1964	0.5			2.3	0.9		

<sup>a</sup>Cohorts of the baby boom generation.

<sup>b</sup>Information not available; CEB is fixed to the average of the 1920–1934 cohorts.

<sup>c</sup>Cell sizes are less than 30.

simulated granddaughters. Overall, tracking the Mexican 1910–1914 immigrant birth cohort shows that the number of CEB declined by 1.9 between the first and third immigrant generations, which is markedly different from the stagnation/reversal suggested by a cross-sectional data array (see Table 1).

The trend toward declining fertility, however, is not uniform or linear. Fluctuations in fertility levels are connected to broader period conditions, including increases in fertility during the baby boom years. As a result, comparing intergenerational fertility decline based on the average number of CEB can be somewhat misleading. Consider, for instance, the

changes across generations for the cohort of immigrant Hispanic and Mexican women born between 1905 and 1909. For first-generation immigrants, the average number of CEB is 3.8 for Hispanic women and 4.8 for Mexican women. It remains almost the same for their simulated daughters (4.0 and 4.1, respectively), but then declines considerably among their simulated granddaughters (2.5 and 2.6, respectively).

A clearer trend emerges from first differences in fertility levels between cohorts of Hispanic and white women reported in Panel b of Table 2. In general, there is a pattern of convergence toward the fertility levels of whites across all immigrant generations over time. Moreover, the convergence becomes more pronounced across generations. For instance, considering the same cohort of immigrant Hispanic and Mexican women born between 1905 and 1909, the difference in fertility with whites was 1.4 and 2.4, respectively, among the first generation, 0.9 and 1.0 among the second generation, and a much lower 0.5 and 0.7 among the third generation of immigrants. In fact, for nearly all cohorts, fertility differences between Hispanic/Mexican women and white women were reduced across generations—again, a pattern very different from the one emerging from cross-sectional comparisons.

As we discussed earlier, however, convergence in the number of CEB for whites and Hispanics might mask variations in processes of fertility decline. Table 3 reports ratio-of-ratios calculations that compare the decline in fertility across generations for Hispanic women and Mexican women to the one experienced by whites. Panel a shows rows taken directly from Table 2 for those cohorts for which we can reconstruct the number of CEB for the three generations of Hispanic and Mexican women and adds simulated intergenerational change resulting from lagging cohorts by 25 years among white women.<sup>4</sup> Panel b calculates the first ratio of CEB from one generation to the next (second/first, for instance) for Hispanics, Mexicans, and whites. Panel c calculates the ratio-of-ratios estimates comparing change for Mexicans and Hispanics with change for whites by cohort. In general, estimates below unity are indicative of fertility convergence.

Comparing across groups in Panel b shows that even when fertility was increasing across generations of whites during the baby boom years, the ratio of CEB to younger and older Hispanic and Mexican immigrant generations was generally decreasing, with most estimates below 1. The ratio-of-ratios comparisons in Panel c accounts for the changes occurring in both groups. With only three exceptions, results show that fertility behavior among Hispanics and Mexicans converged with that of whites across cohorts. Together, the evidence for convergence from first-difference and ratio-of-ratios estimators is impressive.

### Intergenerational Responsiveness to Period Conditions

We investigate intergenerational responsiveness to period conditions in two ways. We first compare graphically the fertility behavior of Hispanics and whites to illustrate the effect of period conditions on fertility levels. We then reinforce this analysis by estimating the Pearson correlation coefficient to estimate the association in these CEB trends across groups.

Figure 1 plots cohort trends in CEB for first and third immigrant generations of Hispanic women, taking as a reference third-generation whites. This graph cannot be interpreted as representing intergenerational change in fertility levels, since the immigrant generations are not aligned to capture grandmothers and granddaughters; instead the graph illustrates how closely the fertility curves for each group follow the fluctuations evidenced among whites. The data for whites reflect clearly the baby boom years. For whites, the average number of CEB declined steadily until the 1910–1914 birth cohort. It then began to rise and peaked in the 1930–1934 birth cohort, which averaged 3.2 children. Since

4. To illustrate, the CEB among the cohort of white women born between 1885 and 1889 is 3.0. The cohort born 25 years later (1910–1914) simulates the experience of their daughters with 2.4 CEB. Finally, the cohort born another 25 years later (1935–1939) simulates the experience of their granddaughters with 2.9 CEB.

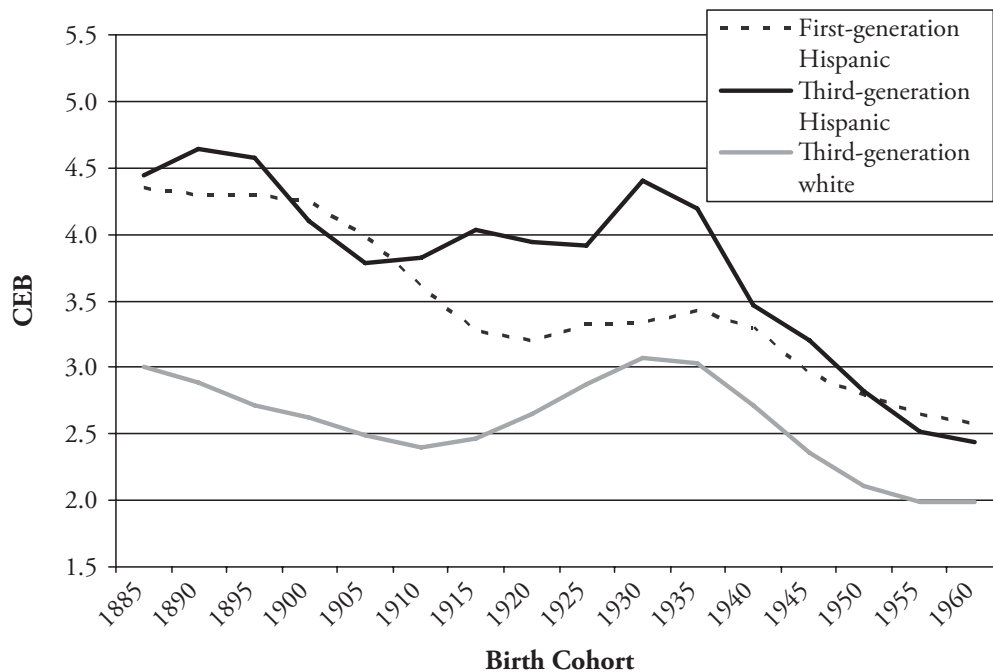
**Table 3. Intergenerational Change and Convergence: Ratio-of-Ratios Estimates for 1885–1914 Origin Cohorts and Their Descendants**

Birth Cohort	Hispanic			Mexican			White		
	First	Second	Third	First	Second	Third	First	Second	Third
Panel a. Estimated CEB									
1885–1889	4.4	3.5	3.6 <sup>a</sup>	4.8	4.2	4.0 <sup>a</sup>	3.0	2.4	2.9 <sup>a</sup>
1890–1894	4.3	3.7 <sup>a</sup>	3.3	4.7	4.2 <sup>a</sup>	3.6	2.8	2.5 <sup>a</sup>	2.5
1895–1899	4.4	4.1 <sup>a</sup>	3.1	5.1	4.5 <sup>a</sup>	3.3	2.7	2.8 <sup>a</sup>	2.2
1900–1904	4.2	4.1 <sup>a</sup>	2.5	4.9	4.5 <sup>a</sup>	2.6	2.6	3.0 <sup>a</sup>	2.0
1905–1909	3.8	4.0 <sup>a</sup>	2.5	4.8	4.1 <sup>a</sup>	2.6	2.4	3.2 <sup>a</sup>	2.0
1910–1914	3.4	3.5 <sup>a</sup>	2.4	4.3	3.5 <sup>a</sup>	2.4	2.4	2.9 <sup>a</sup>	2.0
	Second/ First	Third/ Second		Second/ First	Third/ Second		Second/ First	Third/ Second	
Panel b. Ratio Across Generations									
1885–1889	0.81	1.02 <sup>a</sup>		0.88	0.95 <sup>a</sup>		0.80	1.22 <sup>a</sup>	
1890–1894	0.87 <sup>a</sup>	0.89		0.90 <sup>a</sup>	0.86		0.92 <sup>a</sup>	0.99	
1895–1899	0.94 <sup>a</sup>	0.76		0.89 <sup>a</sup>	0.72		1.03 <sup>a</sup>	0.80	
1900–1904	0.99 <sup>a</sup>	0.62		0.91 <sup>a</sup>	0.58		1.16 <sup>a</sup>	0.67	
1905–1909	1.06 <sup>a</sup>	0.62		0.87 <sup>a</sup>	0.64		1.31 <sup>a</sup>	0.63	
1910–1914	1.02 <sup>a</sup>	0.69		0.80 <sup>a</sup>	0.69		1.22 <sup>a</sup>	0.69	
	Second/ First	Third/ Second		Second/ First	Third/ Second		Second/ First	Third/ Second	
Panel c. Ratio-of-Ratios Comparisons With Whites									
1885–1889	1.02	0.84 <sup>a</sup>		1.11	0.78 <sup>a</sup>				
1890–1894	0.95 <sup>a</sup>	0.91		0.99 <sup>a</sup>	0.87				
1895–1899	0.91 <sup>a</sup>	0.95		0.86 <sup>a</sup>	0.90				
1900–1904	0.86 <sup>a</sup>	0.92		0.78 <sup>a</sup>	0.87				
1905–1909	0.80 <sup>a</sup>	0.99		0.66 <sup>a</sup>	1.02				
1910–1914	0.84 <sup>a</sup>	1.00		0.66 <sup>a</sup>	0.99				
Mean difference	0.90	0.93		0.84	0.91				

<sup>a</sup>Cohorts of the baby boom generation.



**Figure 1. Cohort Trends in CEB for First and Third Immigrant Generations of Hispanic Women (two-year moving averages)**

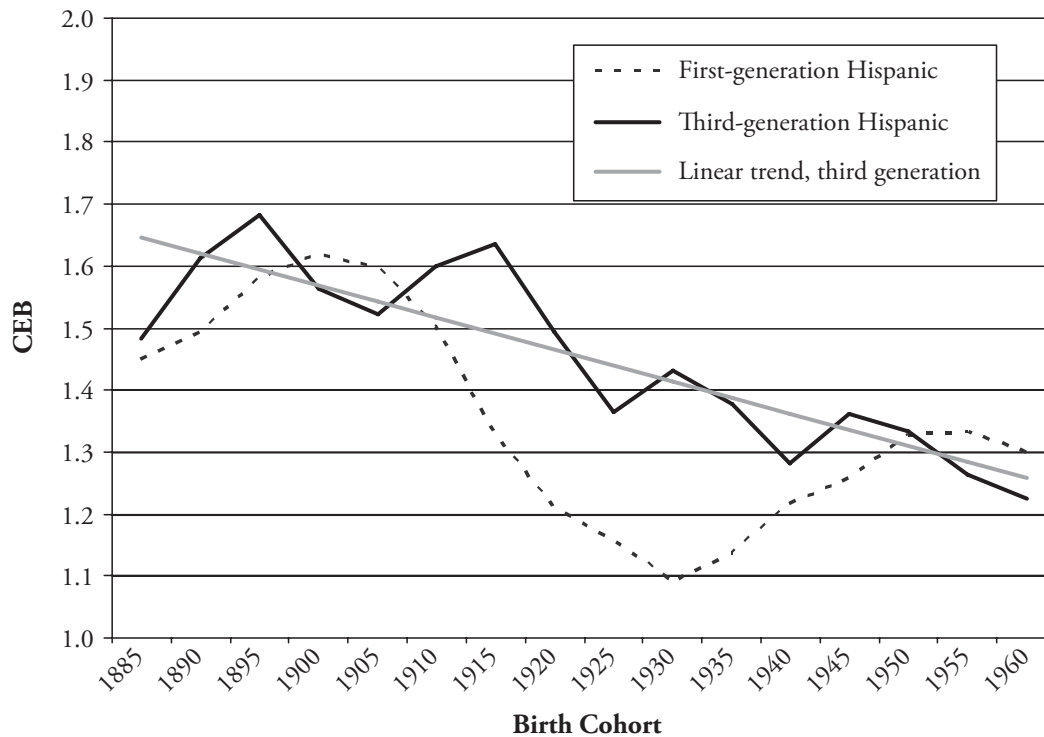


then, completed fertility has declined, reaching an average number of 2.0 CEB among the 1960–1964 birth cohort.

It is clear in Figure 1 that Hispanic fertility patterns differ across immigrant generations. Foreign-born Hispanics depict a more linear pattern of fertility decline, from 4.4 to 2.6 CEB. In fact, fertility levels remained nearly constant for foreign-born Hispanics during the baby boom period, when white fertility increased dramatically. A very different trend is evidenced for third-generation Hispanic immigrants, for whom fertility patterns more closely resemble those of whites. Even though small sample sizes likely add some “noise” to these estimates, the fertility of third-generation Hispanic immigrants declined until the cohorts born between 1905 and 1909; increased and peaked for the cohorts born between 1930 and 1934; and ultimately declined again in tandem with the fertility levels of whites.

Evidence in favor of assimilation among the third generation requires not only similar responses to period conditions but also a more or less continuous pattern of convergence with the fertility levels of whites over time. To investigate this issue, Figure 2 plots trends in the ratio of Hispanic to white fertility across cohorts and by generation. Results support the expectation of considerable differences in patterns of convergence across the first and third immigrant generations. Trends for the foreign-born population show that differences in fertility levels actually declined rapidly during the baby boom years, when the fertility of whites was increasing. Among subsequent cohorts, though, fertility differences increase again. Trends for the third generation, in turn, describe a more linear pattern of convergence with whites that does not systematically fluctuate across birth cohorts and is relatively well captured by the regression line included in the figure. Despite some erratic fluctuations, the pattern is clearly downward and more or less continuous. As a result, although the earlier

**Figure 2. Trends in the Ratio of Hispanic to White Fertility, by Cohort and Immigrant Generation (two-year moving averages)**



birth cohorts of third-generation immigrants had fertility levels that were around 1.8 times higher than those of whites, the most recent birth cohorts exhibited fertility levels that were only 1.2 times higher.<sup>5</sup>

These results are reinforced with differences in the Pearson correlation coefficients across groups. Results show a consistent increase in the correlation between white and Hispanic fertility across generations from .62 to .86 among the first and third generations, respectively; the corresponding figures for the correlation between white and Mexican fertility are .75 and .86 (not shown).

### The Impact of Education on Fertility for White and Hispanic Women

The next analysis assesses the responsiveness of women's fertility to educational attainment across groups. If a lack of assimilation prevents Hispanic fertility decline, then we would expect less responsiveness to education among this group than among white women. To assess these relationships, Table 4 reports estimates from negative binomial regression models predicting the average number of CEB. These models include fixed-effect controls

5. Figures for Mexicans are not reported but are available upon request. Overall, Mexicans show patterns similar to those evidenced by Hispanics as a whole, although the fertility trends for the foreign-born are somewhat different. Rather than steadily declining across cohorts, fertility levels for first-generation Mexican immigrants remained more or less stable. The difference in trends between all foreign-born Hispanics and Mexicans in particular likely results from the different timing of fertility transitions across Latin America. Although most of the region experienced rapid declines in fertility starting in the 1960s, reproductive levels in Mexico did not attenuate until the mid-1970s.

**Table 4. Effect of Years of Education on CEB, by Immigrant Generation (estimates from negative binomial models)**

	Coefficient	SE
White Women	-0.056	0.000
Hispanic Women <sup>a</sup>		
First generation	-0.063	0.002
Second generation	-0.066	0.003
Third generation	-0.070*	0.002
Mexican Women <sup>b</sup>		
First generation	-0.054	0.003
Second generation	-0.060	0.003
Third generation	-0.067*	0.003

*Note:* Models include fixed-effect controls for cohort and generational status.

<sup>a</sup>Estimates from model pooling data for white and Hispanic women.

<sup>b</sup>Estimates from model pooling data for white and Mexican women.

\*The difference in the education coefficient between white and Hispanic/Mexican women is statistically significant at  $p < .05$ .

for cohort membership, generational status (not reported), and years of education, as well as interaction terms between Hispanic/Mexican and generational status and between generational status and education (Long and Freese 2003). Table 4 shows the net effect of years of education on the number of CEB by generational status.

As could be expected, fertility levels are significantly lower among women with higher levels of education. For white women, the estimated coefficient (-0.056) indicates that each additional year of education decreases the average number of CEB by 5.5% ( $1 - \exp(-0.056) = 0.055$ ). Among first-generation Hispanic and Mexican immigrants, the effect of education on CEB does not differ significantly from that of whites: -0.063 and -0.054, respectively. The same applies to the second generation of Hispanic and Mexican immigrants. However, results suggest a significantly stronger effect of education among third-generation Hispanic and Mexican women as compared with whites. Among the third generation, every additional year of education decreases completed fertility by 6.8% ( $1 - \exp(-0.070) = 0.068$ ) for Hispanic women and by 6.5% for Mexican women.

Overall, these results contradict the idea that Hispanic fertility could be less responsive to socioeconomic change, due to either blocked opportunities or a cultural preference for larger families. Hispanic women who are third-generation immigrants have experienced very rapid gains in educational attainment across cohorts, from around 5 to well above 12 years of completed schooling (Smith 2003). These educational trends directly affected their fertility levels. In fact, if third-generation Hispanic immigrants born between 1960 and 1964 had the educational credentials of the cohorts born between 1885 and 1889, their average number of CEB would have been 1.7 times higher (4.3 instead of 2.5 CEB).

### ACCOUNTING FOR THE DISPARITY BETWEEN CROSS-SECTIONAL AND COHORT RESULTS

The contrast between the cross-sectional results (Table 1) and those obtained from aligning biological and immigrant generations (Tables 2 and 3) begs an important question: what produces these apparently divergent substantive results? That is, why would a third-generation immigrant woman average higher fertility than a second-generation immigrant woman of the same age? We argue that in this particular case, the cross-sectional results are a mathematical artifact of examining multiple trends in fertility with data from a single

point in time. Specifically, fertility is falling both *within* immigrant generations over time (i.e., across successive waves of immigrants as fertility has fallen rapidly in Latin America) and *across* immigrant generations as Hispanics assimilate into U.S. society. By presenting four different scenarios of intergenerational change, Table 5 illustrates how these trends can produce misleading cross-sectional results.

All four simulated scenarios start with a simplified linear description of the process of fertility decline within the first generation. Specifically, among first-generation immigrants, fertility levels start at 4.4 for the cohort born in 1885–1889 and decline by 3% across cohorts to reach a level of 2.7 among the cohort born in 1960–1964. In terms of biological generations separated by 25 years, this implies a 15% intergenerational fertility decline (e.g., from 4.4 to 3.7 among the cohorts born in 1885–1889 and 1910–1914, respectively) *within* the first immigrant generation. These initial values reflect the fertility patterns observed among first-generation Hispanic immigrants in Table 2 if we ignore period fluctuations.

Scenario 1 assumes a 10% *decline* in fertility *across* immigrant generations, which is lower than the fertility decline occurring *within* the first immigrant generation (15%). Highlighted estimates show that in a cross-sectional comparison of CEB to women born in 1960–1964, the resulting CEB would appear to increase from 2.7 to 2.8 and to 3.0 among the first, second, and third generations, respectively, even though this scenario required a 10% *decline* across aligned generations. Additional tabulations (not shown) demonstrate that if we were to assume a 15% decline across generations, which is the same change we assigned within the first generation, then the cross-sectional estimates would be identical, suggesting stable fertility levels across immigrant groups. Only an intergenerational fertility decline that is larger than the 15% registered within the first generation would yield evidence of fertility decline in the cross section. We illustrate this in Scenario 2, which assumes a 20% decline in CEB across immigrant generations. Thus, these scenarios show that if changes *across* immigrant generations are less pronounced than changes over time *within* immigrant generations, cross-sectional comparisons will show no decline across generations *even when fertility is in fact declining consistently across immigrant generations*.

To approximate the actual observed cross-sectional results, Scenarios 3 and 4 apply observed average fertility declines to our simulation. Table 6 shows that for Hispanics, the observed rate of decline in CEB across generations was 14% between the first and the second generation and 23% between the second and the third generation. Applying these estimates in Scenario 3 (Table 5) shows that in cross-sectional comparisons, fertility levels would have remained the same between the first and second generation (2.7) and then declined among the third generation (2.5). Applying these overall averages does not reproduce the reversal of fertility decline registered among the third generation in cross-sectional analyses and reported in Table 1, and suggests that period fluctuations could be affecting fertility estimates. Scenario 4 separates fertility changes among baby boom and non-baby boom cohorts. For Hispanics, estimates in Table 6 show that between the first and the second generation, fertility declined only 2% among baby boom cohorts and actually increased 2% between the second and third generations. After the baby boom, fertility declined very rapidly, falling 25% across the first and second generations and 28% across the second and third generations. Applying these estimates in Scenario 4 very closely approximates the cross-sectional results shown in Table 1. Highlighted numbers show that CEB declined from 2.7 to 2.4 between the first and second generations of immigrant women born in 1960–1964 but then increased again, to 2.6, among the third generation. Similar results are obtained if we apply observed averages for Mexican women. Together, these simulations indicate that cross-sectional differences in fertility across immigrant generations can produce misleading results, especially in periods of rapid and pervasive fertility change.



**Table 5. Simulation of the Diverse Forces Generating Cross-Sectional Differences**

Immigrant Birth Cohort	Uniform Trend Over Time and Across Generations			Different Rates Across Generations			Baby Boom Variation					
	Scenario 1: 10% Decline			Scenario 2: 20% Decline			Scenario 3: Observed Averages			Scenario 4: Slower Decline Baby Boom Cohorts, Faster Decline Later Cohorts		
	First Generation	Second Generation	Third Generation	First Generation	Second Generation	Third Generation	First Generation	Second Generation	Third Generation	First Generation	Second Generation	Third Generation
1885–1889	4.4	4.0	3.6 <sup>a</sup>	4.4	3.5	2.8 <sup>a</sup>	4.4	3.8	2.9 <sup>a</sup>	4.4	4.3	4.4 <sup>a</sup>
1890–1894	4.3	3.8 <sup>a</sup>	3.4	4.3	3.4 <sup>a</sup>	2.7	4.3	3.7 <sup>a</sup>	2.8	4.3	4.2 <sup>a</sup>	3.0
1895–1899	4.1	3.7 <sup>a</sup>	3.3	4.1	3.3 <sup>a</sup>	2.6	4.1	3.5 <sup>a</sup>	2.7	4.1	4.0 <sup>a</sup>	2.9
1900–1904	4.0	3.6 <sup>a</sup>	3.2	4.0	3.2 <sup>a</sup>	2.5	4.0	3.4 <sup>a</sup>	2.6	4.0	3.9 <sup>a</sup>	2.8
1905–1909	3.8	3.5 <sup>a</sup>	3.1	3.8	3.1 <sup>a</sup>	2.5	3.8	3.3 <sup>a</sup>	2.5	3.8	3.8 <sup>a</sup>	2.7
1910–1914	3.7	3.3 <sup>a</sup>	3.0	3.7	3.0 <sup>a</sup>	2.4	3.7	3.2 <sup>a</sup>	2.5	3.7	3.6 <sup>a</sup>	2.6
1915–1919	3.6	3.2	3.2	3.6	2.9	3.1	3.6	3.1	3.6	3.6	2.7	2.7
1920–1924	3.5	3.1	3.1	3.5	2.8	3.0	3.5	3.0	3.5	3.5	2.6	2.6
1925–1929	3.4	3.0	3.0	3.4	2.7	2.9	3.4	2.9	3.4	3.4	2.5	2.5
1930–1934	3.3	2.9	2.9	3.3	2.6	2.8	3.3	2.8	3.3	3.3	2.4	2.4
1935–1939	3.1	2.8	2.8	3.1	2.5	2.7	3.1	2.7	3.1	3.1	2.4	2.4
1940–1944	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
1945–1949	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
1950–1954	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
1955–1959	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
1960–1964	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7

Note: Highlighted estimates are cross-sectional results.

<sup>a</sup>Cohorts of the baby boom generation.

**Table 6. Observed Rates of Decline Between Successive Generations**

	Hispanics (%)		Mexicans (%)	
	Between First and Second Generations	Between Second and Third Generations	Between First and Second Generations	Between Second and Third Generations
All Cohorts	14	23	27	26
Baby Boom Cohorts	2	-2	13	5
Post-Baby Boom Cohorts	25	28	40	30

## SUMMARY AND DISCUSSION

The rapid growth of the U.S. Hispanic population has brought new urgency to the study of immigrant adaptation. While numerous studies have found encouraging signs of assimilation and socioeconomic progress across immigrant generations, a growing body of work portends significant hurdles to advancement for Hispanics. Segmented assimilation and downward mobility have been observed in a number of areas, and previous research on Hispanic fertility could be interpreted in this light. Fertility declines registered across first- and second-generation immigrants have been found to stagnate or even reverse among Hispanic women who are third-generation immigrants. A serious limitation of previous analyses of fertility decline, however, is that cross-sectional comparisons of immigrant generations may not adequately capture intergenerational change.

In this paper, we reexamine the issue of assimilation in Hispanic and Mexican fertility. Our theoretical framework integrates the literature on fertility and social mobility to test four hypotheses about changes in fertility behavior across Hispanic and Mexican immigrant generations. Combining data from multiple U.S. censuses and the CPS as well as Mexican censuses, we build on Smith's (2003) empirical approach to intergenerational change that aligns cohorts to better match biological as well as immigrant generations. Contrary to cross-sectional results, our study shows that when birth and immigrant generations are aligned properly, Hispanic and Mexican fertility levels follow a pattern that is broadly consistent with the social mobility and assimilation perspectives.

First, the social mobility-fertility framework predicts that the fertility levels of socially mobile groups would lie somewhere between those of nonmobile groups (i.e., nonmigrants) and those of the host society. Consistent with that expectation, we find that Mexican immigrant women in the United States have considerably lower fertility than women in Mexico and that the pattern holds for all cohorts in our analysis, including the most recent cohorts who migrated after 1965.

Our second hypothesis predicted intergenerational fertility change—specifically, that the fertility level of Hispanic-origin women would converge toward the fertility level of whites across immigrant generations. In fact, in line with expectations from the assimilation perspective, we found a clear pattern of convergence in fertility levels between Hispanic (and Mexican) and white women across immigrant generations. Unlike previous research, our results show no reversal in convergence in fertility level for any of the cohorts in our analysis.

To account for the disparity between cross-sectional and generation-aligning methodologies, we illustrate that the reversal of fertility decline reported in cross-sectional comparisons is a mathematical artifact resulting from inferring intergenerational change at a single point in time. Using a straightforward simulation, we show that in situations in which fertility is falling more slowly *across* immigrant generations than *within* immigrant generations over time, cross-sectional comparisons will produce misleading results.

Third, because fertility levels are subject to period fluctuations, an additional test of assimilation is the extent to which the fertility behavior of Hispanic women who are first-, second-, and third-generation immigrants mimics the period patterns observed among whites, especially during the baby boom years. Here again results show that fluctuations in fertility increasingly (across generations) approximate those found among whites. Specifically, Hispanic women who are third-generation immigrants experienced increases in fertility during the baby boom years that are not evident among those who are first-generation immigrants.

Finally, a central factor fueling the convergence in fertility levels across groups has been the considerable improvements in educational attainment across immigrant generations. Contrary to the idea that Hispanic fertility may be less responsive to improvements in human capital or socioeconomic conditions, due either to a cultural proclivity toward high fertility or to blocked opportunities in the United States, we find a strong negative effect of years of education on the number of CEB among Hispanic women that is actually slightly larger than that found among white women. This is especially the case among the third immigrant generation.

The intergenerational patterns identified in our study do not deny the higher contemporary fertility evidenced among Hispanic immigrants (compared with whites). Nor can we conclude that the offspring of recent immigrants will show similar intergenerational convergence. More recent waves of immigrants face a context of reception that is decidedly different from earlier immigrants. Among other factors, today's labor market may be less hospitable to low-wage workers, and the magnitude of immigration has heightened anti-immigrant sentiment. Both of these factors could potentially foster a more segmented rather than traditional assimilation experience in the future.

What will happen with the children and grandchildren of the current wave of immigrants is currently beyond empirical study, with either cross-sectional or generationally aligned methods (Alba and Nee 2003). Many more years will be required in order to observe the actual behavior of the second and third generations of today's migrants.<sup>6</sup> However, our work shows that convergence has occurred consistently in the past, and trends toward educational convergence (Smith 2003) portend further fertility convergence given the strong association between the two. Ultimately, only future research can examine the impact of the changing economic and social milieu on Hispanic assimilation. Future work should also examine whether convergence is occurring with other aspects of fertility behavior. For instance, the impact of segmented assimilation could be stronger on such factors as the timing of childbearing (especially teenage childbearing) or out-of-wedlock births. Both of these aspects of fertility have implications for Hispanic adaptation and well-being.

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6. For instance, if immigrants arriving in the 1990s were born in the 1970s, we will not be able to assess their completed fertility until 2010. The completed fertility of the second generation will not be registered until 2035, and that of the third generation cannot be assessed until 2060.

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