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The Wealth of Mexican Americans

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The Wealth of Mexican Americans*

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Abstract

This paper analyzes the sources of disparities in the relative wealth position of Mexican Americans. Results reveal that wealth gaps are in large part not the result of differences in conditional expected wealth functions. Similarly, income differentials are important, but do not play the primary role in explaining the gap in median net worth. As much or more of Mexican Americans' wealth disadvantage is attributable to the fact that these families have more young children and heads who are younger. Furthermore, Mexican Americans' low educational attainment has a direct effect in producing a wealth gap relative to other ethnic groups (even after differences in income are taken into account) though education does not significantly affect the nativity wealth gap. Finally, geographic concentration is generally unimportant, but does contribute to narrowing the wealth gap between wealthy Mexican Americans and their white and black counterparts.

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1 Introduction

Over the decade of the 1990s, more than 2.2 million immigrants to the United States—approximately one in four—came from Mexico. Many other Mexicans entered the U.S. as temporary residents, while the Mexican population illegally resident in the U.S. has been estimated to be increasing by just over 150,000 individuals each year (USINS, 2002).¹ This large-scale migration of Mexicans in conjunction with relatively high fertility rates has made Mexican Americans one of the fastest growing ethnic groups in the United States. Between the 1990 and 2000 censuses, the Mexican American population grew by 52.9 percent, while the overall U.S. population increased by 13.2 percent and the white, non-Hispanic population grew by just 3.4 percent.²

With an average household income that is more than 40 percent below that of non-Hispanic whites, Mexican Americans are one of the most economically disadvantaged groups in the United States (Grogger and Trejo, 2002). The low income of Mexican American families appears to stem primarily from low wages—as opposed to lower participation rates, higher unemployment rates, or shorter work weeks (Reimers, 1984; Trejo, 1997)—and many authors point to a relative lack of formal education as the primary cause of the wage gap between Mexican Americans and other workers (Trejo, 1997; Grogger and Trejo, 2002). As a group, Hispanics also have lower levels of net worth (for example, Hao, 2003; Wakita, et al, 2000; Wolff, 2000; Choudhury, 2001; Smith, 1995), are more likely to live in poverty (U.S. Census Bureau, 1995) and are less likely to hold their wealth in the form of housing, financial assets or business capital (for example, Borjas, 2002; Bertaut and Starr-McCluer, 1999; Osili and Paulson, 2003; Smith, 1995).

Though the source of the racial wealth gap has been a matter of debate (see Blau and Graham, 1990; Gittleman and Wolff, 2000; Menchik and Jianakoplos, 1997; Chiteji and Stafford, 1999), less is known about the factors driving the

wealth position of Mexican Americans. While it seems reasonable to expect that low wealth levels and low earnings are related, this link has not been formally established in the literature. Indeed, there are many other factors that might also lead the wealth of Mexican Americans to be lower than that of other groups. Hispanics as a group are younger³, less likely to be married, and have larger numbers of children than other groups (U.S. Bureau of the Census, 1995; 2001a; 2001b). These demographic differences—which are directly related to stage of the life cycle—are likely to be important in determining the net worth position of Mexican Americans. Furthermore, although becoming more geographically diffuse over time (Guzma'n and Diaz McConnell, 2002), two thirds of Mexican Americans live in just two states—California and Texas (U.S. Bureau of the Census, 2001b)—raising the possibility that it is geographic clustering and the characteristics of specific housing markets that lie behind a lower propensity to hold wealth in the form of housing.⁴

There may also be a cultural basis to savings behavior and the propensity to hold particular assets. Chiteji and Stafford (1999), for example, postulate that portfolio choices are influenced by a “social learning process” whereby parental decisions to hold certain kinds of assets influence the subsequent choices of their children.⁵ Similarly, there are clear ethnic differentials in both expenditure patterns (Paulin, 2003; Bahizi, 2003) and attitudes toward money (Medina, et al, 1996) that are not solely the result of differences in the demographic composition of various groups. Finally, Mexican Americans are themselves a heterogeneous group. Approximately one in two Mexican Americans is foreign-born and the evidence suggests that foreign- and U.S.-born Mexican Americans are two distinct groups with very different skills and labor market opportunities (Grogger and Trejo, 2002).⁶ Disparity in earnings potential and differential incentives to save and consume out of current income imply that both the level of wealth and the

portfolio choices of immigrants are likely to differ from those of the native born (Amuedo-Dorantes and Pozo, 2001; Cobb-Clark and Hildebrand, 2002).

This paper analyzes the sources of disparities in the relative wealth position of Mexican Americans using the Survey of Income Program Participation (SIPP) data. These data are unique in providing information on both household wealth holdings and immigration history allowing us to separately consider the wealth of foreign- and U.S.-born Mexican Americans. This level of disaggregation is a significant advantage over previous research that tends to consider Hispanics as a single group. We pursue a semi-parametric decomposition approach proposed by DiNardo, et al. (1996) which – unlike the standard Oxacca-Blinder approach – allows us to consider the entire wealth distribution. This enables us to decompose the wealth gap into its various components at multiple points (in our case, deciles) of the distribution and to consider a decomposition of the relative spread (i.e, the 50-10 gap) of wealth.

Our results reveal that wealth gaps are in large part not the result of disparities in conditional expected wealth functions which, in many cases, serve to narrow rather than widen wealth gaps. Similarly, income differentials are important, but do not play the primary role in explaining the gap in median net worth. As much or more of Mexican Americans' wealth disadvantage is attributable to the fact that these families have more young children and heads who are younger. Furthermore, Mexican Americans' low educational attainment has a direct effect in producing a wealth gap relative to other ethnic groups (even after differences in income are taken into account) though education does not significantly affect the nativity wealth gap. Finally, geographic concentration is generally unimportant, but does contribute to narrowing the wealth gap between wealthy Mexican Americans and their white and black counterparts.

The details of the SIPP data are discussed in Section 2, while information

about the relative wealth of Mexican Americans is provided in Section 3. Section 4 lays out our decomposition approach, while estimation results are presented in Section 5. Our conclusions and suggested directions for future research are discussed in Section 6.

2 The Survey of Income and Program Participation

This paper exploits data drawn from the 1984, 1985, 1987, 1990, 1991, 1992, 1993 and 1996 surveys of the Survey of Income and Program Participation (SIPP). Each survey is a short, rotating panel made up of 8 to 12 waves of data – collected every 4 months – for approximately 14,000 to 36,700 U.S. households. Thus, a typical survey year covers a time span ranging from 2 1/2 to 4 years. Most SIPP panels did not sample different subpopulations at different rates, however, the 1990 and 1996 panels are exceptions in which low-income households were over sampled.⁷ Each wave of the survey contains both core questions that are common to each wave and topical questions about a particular topic (for example, household assets and immigration history) that are not updated in each wave. In our case, immigration information (including region of origin and year of immigration) is collected in the second wave of each survey⁸. Household wealth information is generally collected in Wave 4 or Wave 7.⁹

SIPP data are not usually thought of as the best source of information for studying trends in wealth holdings in the United States. The Survey of Consumer Finance (SCF) inarguably provides a more comprehensive picture of the wealth distribution of American households than do alternative data sources – such as SIPP – which measure the upper tail of the wealth distribution particularly poorly (see Juster and Kuester, 1991; Wolff, 1998; Juster, et al., 1999). Unfortunately, SCF data do not identify foreign-born individuals. The Panel Survey of Income Dynamics (PSID) is an alternative data source which does collect information

about immigration histories. Given its sampling frame, however, the PSID is not particularly useful for studying the foreign-born population in the United States before 1998 when a representative sample of 491 immigrant families was added to the survey. As only one wealth module has been collected since then – in 1999 – examining the wealth holding of immigrants in the United States using PSID data is limited to cross-sectional evidence from a relatively small sample.¹⁰ The Health and Retirement Survey (HRS) provides wealth information and identifies immigrants. However, HRS data lack region of origin information and are restricted to households whose head was between 51 and 62 years in 1992 the initial year of data collection. Similarly, National Longitudinal Survey (NLS) and National Longitudinal Survey of Youth (NLSY) data shed light only on the wealth holdings of specific birth cohorts.

Given the heterogeneity within the Mexican American population it is important to control for nativity. By pooling data from all of the years in which the SIPP collected both wealth and immigration information, we are able to build a data set which contains a much larger number of native- and foreign-born Mexican American households than the PSID or NLSY. While our data will have little to say about the wealth holdings of the very rich, they are quite useful for studying the behavior of the middle class (Wolff, 1998).

The SIPP wealth data come from a topical module on household assets and liabilities. Specific asset variables contained in the SIPP data include: interest earning assets (held in banking and other institutions), equity in stocks and mutual fund shares, IRA and KEOGH accounts, own home equity, real estate equity (other than own home), business equity, net equity in vehicles, business equity and other assets not accounted for in previous variables (including total mortgages held, money owed for sale of business, U.S. savings bonds, checking accounts and other interest bearing assets). Liabilities include both debts secured by any assets and

unsecured debts (including liabilities such as credit card or store bills, bank loans and other unsecured debts). The SIPP wealth module, however, does not cover any future pension rights such equity in private pension plans or social security wealth.¹¹ The SIPP wealth module also does not specifically gather information about assets held off-shore.¹²

Our estimation sample includes couple-headed, native-born and foreign-born households in which the reference person is between 25 years and 75 years old. Native-born households in our sample are either white, black or Mexican American. A household is considered to be white if both partners self identify as being white of non-Hispanic origin (or descent).¹³ Black households include all households in which both partners are native-born and self identify as blacks. Native-born Mexican American households include all households whose respondents are native-born and identify themselves either as being of Mexican-American, Chicano or Mexican origin (or descent). Foreign-born Mexican American households are those households in which both partners are born in Mexico to non-U.S. parents. We have eliminated from our sample 1828 mixed, native-born households¹⁴ and 256 mixed, foreign-born Mexican American households¹⁵. The resulting sample contains a total of 55,231 native-born, couple-headed households and 1,157 Mexican-born, couple-headed households. Amongst the 55,231 native-born households 50,338 are white, 4,014 are black and 936 are Mexican American.

Table 1 reports for each ethnic group, mean and median household net worth, mean household current income and mean household demographic characteristics.¹⁶ As expected, the mean (and median) net worth of native-born households reveals a great deal of heterogeneity across ethnic groups. In particular, the mean net worth of white households (\$133,069) is more than twice that of both Mexican Americans (\$55,423) and black (\$45,445) households. Black households are the least well off among all native-born households with a median net wealth

(\$23,278) about three times lower than that of whites (\$76,685). However, Table 1 also reveals that black households are nevertheless doing significantly better than foreign-born, Mexican American households whose mean (\$29,702) and median net worth (\$6,276) are substantially lower than that of blacks. As expected, white households have the highest average current income (\$15,364) of all groups considered. Interestingly, the average current income of black households (\$11,758) is higher than that of both native-born (\$10,259) and foreign-born Mexican Americans (\$6,895). Foreign-born Mexican Americans are by far the most disadvantaged group both in terms of wealth holdings and current income.

To illustrate how wealth varies across the distribution, we plot the weighted kernel density estimates of the observed cumulative distribution of net worth for each group in Figure 1.¹⁷ These are the wealth gaps we are seeking to explain. The difference in the net worth position of white households at one extreme and foreign-born Mexican American households at the other is striking. The vast majority (more than 90 percent) of white households hold positive levels of net worth, while this is true of many fewer of those families that have migrated to the United States from Mexico. Native-born Mexican American and black households on the other hand have cumulative net worth distributions that appear much more similar. Native-born Mexican Americans have a wealth advantage over black households, though the difference is small—approximately \$5,000 at the median (see Table 1).

Households' demographic characteristics reveal that foreign- and native-born Mexican American households are on average younger, less educated and have more children (under the age of 18) than both white and black households. Foreign-born Mexican Americans have a particularly low level of educational achievement with an average of about 8 years for the head compared to averages of 13.3, 10.9 and 12.2 for white, native-born Mexican American and black households respec-

tively. In addition, native- and foreign-born Mexican Americans are more likely to hold blue collar jobs than both white and black households. Finally, not surprisingly, both native- and foreign-born Mexican Americans are mostly concentrated in the West South Central (including Texas) and the Pacific (including California) census regions while a large share of black households resides in the South Atlantic region.

3 Estimation Methodology

Our interest is in developing an estimation strategy that allows us to shed light on the source of the wealth gap between Mexican Americans and other groups. One obvious approach would be to use a standard Oaxaca-Blinder decomposition to assign the difference in the mean net worth of Mexican Americans and some comparison group into one or more components that are “explained” by the households’ observed characteristics and another “unexplained” component that arises from differences in accumulated wealth conditional on those observed characteristics. This is the approach that has widely been used in previous studies of the black-white wealth gap in the United States (see, for example, Blau and Graham, 1990; Gittleman and Wolff, 2000).

In our case, the Oaxaca-Blinder decomposition is less than ideal for two reasons. First, it would require that we specify a parametric model of the relationship between wealth and our independent variables—most notably income. Barski, et al. (2002), however, argue that the relationship between wealth and income is of unknown, non-linear functional form that is difficult to parameterize. Unfortunately, the Oaxaca-Blinder decomposition will not yield valid results unless we can adequately approximate the wealth function over the relevant income range. Second, the large proportion of individuals with nonpositive net worth and the overall skewness of the wealth distribution itself imply that decomposing the gap

in mean net worth may be less informative than decomposing other aspects of the gap in wealth distributions (for, example in the medians or in the proportion of individuals with positive net worth).

To avoid these difficulties, we pursue a semi-parametric decomposition approach proposed by DiNardo, et al. (1996). This approach is similar in spirit to the Oxacca-Blinder decomposition in that we will be constructing a series of counterfactual wealth distributions. The difference between the actual wealth distributions of various groups and these counterfactual wealth distributions form the basis of the decompositions underlying our empirical results.¹⁸

3.1 Decomposition of the Wealth Gap

We begin by defining M to be a dummy variable indicating group membership— which for convenience we shall refer to as “Mexican American status”. Further, w is wealth and z is a vector of wealth determinants. Each observation in our data is then drawn from some joint density function, f , over (w, z, M) . The marginal distribution of wealth for group j is given by:¹⁹

$$\begin{aligned} f^j(w) &\equiv f(w|M = j) = \int_z f(w, z|M = j)dz \\ &= \int_z f(w|z, M = j)f_z(z|M = j)dz \end{aligned} \tag{1}$$

where j equals 1 for Mexican Americans and 0 otherwise.

In order to consider the source of disparities in the net worth of different groups, we will partition the vector of household wealth determinants (z) into four components: 1) income (y); 2) educational attainment (e); 3) geographic concentration (r); and 4) household demographic composition (d). These factors align closely with our review of the potential explanations for Mexican Americans’ relatively low level of net worth. (See Section 1.) Thus, $z = (y, e, r, d)$ and given

this portioning, we can write the wealth distribution of group j as follows:

$$\begin{aligned}
f^j(w) &\equiv f(w|M = j) \\
&= \int_y \int_e \int_r \int_d f(w, y, e, r, d|M = j) dydedrdd \\
&= \int_y \int_e \int_r \int_d f(w|y, e, r, d, M = j) \cdot f_{y|e,r,d}(y|e, r, d, M = j) \cdot \\
&\quad f_{e|r,d}(e|r, d, M = j) \cdot f_{r|d}(r|d, M = j) \cdot f_d(d|M = j) dydedrdd
\end{aligned} \tag{2}$$

Equation (2) involves five conditional expectations. The first (f) is the conditional expected wealth function given our wealth determinants (z) and group membership (M), while the second ($f_{y|e,r,d}$) is the conditional expected income function given education, geographic concentration, household demographics and group membership. Similarly, $f_{e|r,d}$ and $f_{r|d}$ are the conditional expected education and geographic concentration functions respectively. Finally, f_d captures the distribution of demographic characteristics conditional on group membership. When the conditional expectation function is linear in its relevant arguments, these conditional expectations are closely related to regression functions (see Butcher and DiNardo, 1998). We can, therefore, loosely think of f as reflecting a set of wealth determinants and $f_{y|e,r,d}$ as reflecting a set of income determinants, etc.²⁰

Expressing the wealth distributions as we have in equation (2) leads quite naturally to a series of interesting “counterfactual” wealth distributions. In particular, we can define the wealth distribution (f^A) that would prevail if Mexican Americans retained their own conditional income function ($f_{y|e,r,d}$), but had the same conditional distributions of wealth, education, geographic concentration and demographic characteristics as the comparison group. Specifically,

$$\begin{aligned}
f^A(w) &= \int_y \int_e \int_r \int_d f(w|y, e, r, d, M = 0) \cdot f_{y|e,r,d}(y|e, r, d, M = 1) \cdot \\
&f_{e|r,d}(e|r, d, M = 0) \cdot f_{r|d}(r|d, M = 0) \cdot f_d(d|M = 0) dydedrdd \quad (3)
\end{aligned}$$

Equation (3) will be useful in isolating the effect of income disparities on the wealth gap. It in effect answers the following question: what would the Mexican American wealth distribution look like if Mexican Americans faced their own conditional income distribution, but otherwise had the same distribution of the remaining wealth determinants and (conditional on z) accumulated wealth in the same way as others? This can then be compared to another wealth distribution (f^B) that would result if Mexican Americans retained both their own conditional expected income and education distributions, but had the same conditional geographic concentration, demographic characteristics, and wealth functions as the comparison group.²¹ Similarly, f^C and f^D are the counterfactual wealth distributions that result when—in addition—we also allow Mexican Americans to retain their own geographic concentration and geographic concentration along with demographic characteristics respectively.

Using these counterfactual distributions, we can decompose the wealth gap between our comparison group and Mexican Americans in the following way:

$$\begin{aligned}
f^0(w) - f^1(w) &= [f^0(w) - f^A(w)] + [f^A(w) - f^B(w)] + [f^B(w) - f^C(w)] + \\
&[f^C(w) - f^D(w)] + [f^D(w) - f^1(w)] \quad (4)
\end{aligned}$$

In the equation (4), the first right-hand-side term captures the effect of disparities in conditional income distributions on the wealth gap. Similarly, the second

term reflects the effect of differences in educational background, while the third and fourth capture the effects of geographic concentration and demographic composition respectively. Finally, the fifth term arises from differences between the conditional (on z) wealth functions of Mexican Americans and the comparison group.

In order to implement the decomposition given in equation (4) it is necessary to have estimates of counterfactual distributions f^A through f^D . DiNardo, et al. (1996) provide a method for obtaining these and other counterfactual distributions by “reweighting” the wealth distribution of our comparison group. Specifically, our first counterfactual wealth distribution can be constructed as follows:

$$f^A(w) = \int_y \int_e \int_r \int_d \psi_{y|erd} f(w|y, e, r, d, M = 0) \cdot f_{y|e,r,d}(y|e, r, d, M = 0) \cdot f_{e|r,d}(e|r, d, M = 0) \cdot f_{r|d}(e|d, M = 0) \cdot f_d(d|M = 0) dydedrdd$$

where

$$\psi_{y|erd} = \frac{f_{y|erd}(y|e, r, d, M = 1)}{f_{y|erd}(y|e, r, d, M = 0)} \quad (5)$$

In effect, the wealth distribution of the comparison group is simply reweighted by the ratio of conditional expected income functions of the two groups. Following DiNardo, et al. (1996), we can write the reweighting factor required to produce the counterfactual wealth distribution f^A as

$$\psi_{y|erd} = \frac{P(M = 1|y, e, r, d)P(M = 0|e, r, d)}{P(M = 0|y, e, r, d)P(M = 1|e, r, d)} \quad (6)$$

Counterfactual distributions f^B , f^C and f^D are constructed similarly.

3.2 Alternative Decompositions

As with the standard Oaxaca-Blinder decomposition, the decomposition given by equation (4) is not unique. Ultimately, choices about which decompositions are more useful depend on our ability to sensibly interpret the resulting components and to use them to better understand the source of the wealth gap. In our case, there are two separate issues. The first is whether we generate our counterfactual distributions by reweighting the wealth distribution of the comparison group or that of Mexican Americans. The second is the order in which we choose to consider the specific components of the vector of wealth determinants (z). We will discuss each of these issues in turn.

It is well-known that the results of the standard Oaxaca-Blinder decomposition are often quite sensitive to whether one evaluates the difference in coefficients—the “unexplained” component—using the characteristics of the first group, the second group, or some weighted combination (see, Cotton, 1988).²² The same issue arises here. In equation (4) the difference in conditional expected wealth distributions (the fifth right-hand side term) is evaluated using the conditional expected income and demographic distributions of Mexican Americans.²³ We could also have chosen to estimate our counterfactual distributions by reweighting the Mexican American wealth distribution rather than by reweighting that of the comparison group. This would have resulted in a decomposition in which the disparity in conditional expected wealth distributions was evaluated using the conditional expected income and demographic functions of the comparison group.

In our data, the income distribution of Mexican Americans is often considerably narrower than that of the comparison groups we will be considering.²⁴ Barski, et. al. (2002) point out, however, that in this case reweighting the Mexican American wealth distribution would involve extrapolating the Mexican American conditional expected wealth function beyond the income range actually observed

in the data. In other words, while equation (4) involves observable quantities, the alternative decomposition would require considerable extrapolation. Given this, we have chosen in all cases to follow the procedure outlined in Section 3.1 and create our counterfactual distributions by reweighting the wealth distribution of the comparison group.²⁵

The second issue arises because we have explicitly accounted for several different components of the wealth gap.²⁶ The difficulty is that the proportion of the wealth gap accounted for by each of these factors will depend on the order in which we consider them (DiNardo, et al., 1996). Furthermore, the number of possible sequences to be considered increases dramatically as we add components to the vector of wealth determinants. Using equation (4) to decompose the wealth gap between groups into four components leads to 24 (4!) relevant orderings. We have no particular preference for one ordering over another. Consequently we will calculate each in turn and present results averaged across all possible orderings. This corresponds to the Shapley decomposition rule advocated by Shorrocks (1999).²⁷

3.3 Estimation

The remaining practical issue is how best to obtain the reweighting factors corresponding to $\hat{\psi}_{y|e,r,d}$ which are required to calculate the counterfactual distributions of interest.²⁸ Barski, et al.(2002) propose a non-parametric method of reweighting the non-Mexican American wealth distribution to obtain the counterfactual distribution of interest. However, their model focuses exclusively on the effect of earnings on wealth, and with a more elaborate specification of z we quickly run into a curse of dimensionality problem. Therefore, we have chose to follow DiNardo, et al. (1996) and Zhang (2002) in using a parametric specification—specifically a logit model—to estimate the necessary reweighting factors.

These parametric estimates of the reweighting factors are incorporated into our non-parametric kernel density estimates of the counterfactual wealth distributions of interest. We utilize an adaptive kernel density estimation procedure which allows the bandwidths to vary along the support of the sample data (x_i) . This procedure is particularly flexible in that it reduces the variance of estimates in areas where there are few observations, but reduces the bias in areas with many observations (Van Kerm, 2003).²⁹ In particular, the adaptive kernel density estimate is given by:

$$\hat{f}(x) = \frac{1}{\sum_{i=1}^n w_i} \sum_{i=1}^n \frac{w_i}{h_i} K\left(\frac{(x - x_i)}{h_i}\right)$$

where

$$h_i = h\lambda(x_i) = h\sqrt{\frac{G}{\hat{f}(x_i)}}$$

so that the local bandwidths are proportional to the square root of the underlying density function at the sample points (see Van Kerm, 2003 for details). The weights w_i are equal to the product of the sampling weights and the relevant reweighting factor (see Section 3.1).³⁰

4 Understanding the Source of the Wealth Gap

Our interest is in understanding the source of the wealth gap between Mexican Americans and other groups. Four separate factors are considered: 1) income; 2) educational attainment; 3) geographic concentration; and 4) demographic composition related to stage of the lifecycle. SIPP data do not provide a measure of permanent income so our focus will be on current income. Robustness testing (see Section 4.4) suggests that our substantive conclusions are not driven by the

choice of income measure.³¹ Given the differences in their labor market skills and economic opportunities, we will consider foreign- and U.S.-born Mexican Americans separately. These two groups of Mexican Americans will be compared to each other and to two native-born comparison groups: non-Hispanic, white and black households.

One of the advantages of the approach outlined by DiNardo, et al. (1996) is that by estimating counterfactual wealth distributions it is possible to decompose differences in summary measures of these wealth distributions. We consider three alternative types of measures which are useful in describing disparities in the distribution of wealth. These measures include: 1) the wealth gap at different deciles of the distribution (including the median); 2) the gap in proportion of households with positive net worth; and 3) differences in wealth dispersion in the two distributions as measured by the wealth gap between the 90-10, 90-50, and 50-10 percentiles. The results presented here are arrived at by calculating each of the relevant counterfactuals and then averaging the results over all of the possible 24 decompositions (see Shorrocks, 1999). Bootstrapping methods were used to calculate standard errors.³²

4.1 Mexican Americans versus Whites

We begin by considering how those factors producing wealth disparities differ across ethnic and racial groups. To that end, decompositions of the wealth gap between native- and foreign-born Mexican Americans on the one hand and white households on the other are presented in Tables 2 and 3 respectively.

Consistent with previous evidence (Hao, 2003), white households are wealthier than Mexican American households.³³ The wealth gap between native-born Mexican American and white households is sizable, almost \$48,000 at the median and more than \$164,000 in the 90th percentile of the distribution. (See Table

2.) Not surprisingly, the wealth gap faced by households which have migrated from Mexico is even larger. For them the gap in median net worth is more than \$70,000, whereas the gap in households' wealth at the 90th percentile approaches a quarter of a million dollars. (See Table 3.)

In both cases, most of the gap stems from differences in the current income levels and background characteristics of households, rather than from differences in the way in which—conditional on their incomes and characteristics—households have accumulated wealth in the past. At the median, for example, only 9 percent of native-born and 12 percent of foreign-born Mexican Americans' wealth disadvantage is due to differences in these conditional wealth functions themselves. This effect is not significantly different from zero. Differences in conditional wealth functions lead the white/Mexican American gap in the proportion of families holding positive net worth to be significantly smaller. These results are striking in light of research suggesting that relatively educated Mexican Americans have more present-oriented attitudes towards money and are less inclined to delay spending than are their white counterparts (Medina, et al, 1996). Such differences in attitudes (which are unaccounted for in our analysis) would be expected to increase the role of the conditional wealth functions themselves in explaining the wealth gap. However, we find no evidence of such an effect and indeed for households at the bottom of the wealth distribution, differences in wealth determinants narrow (rather than widen) the wealth gap.

Income disparities also explain relatively little of Mexican Americans' wealth disadvantage, even at the top of the wealth distribution where the magnitude of the wealth gap is very large.³⁴ While differences in conditional income functions explain somewhat more—as much as one third—of the wealth gap between foreign-born Mexican Americans and whites, it remains the case that as much or more of Mexican Americans' relative wealth disadvantage is accounted for by differences

in education and the demographic composition of households.

Specifically, between one third and one half of the wealth gap between Mexican Americans and non-Hispanic whites arises because of differences in the conditional (on geographic concentration and demographic characteristics) education distributions of groups. In other words, given the same geographic distribution and household demographic composition, Mexican Americans—both native- and foreign-born—obtain less education. This relative lack of educational attainment contributes to producing a gap in net worth—even after controlling for differences in current income—that is quite large throughout the wealth distribution. Disparity in conditional education functions explains approximately two-thirds of the gap in the proportion of households with positive net worth and approximately half the gap in the dispersion of net worth within the two populations. These results are consistent with previous research documenting the strong, positive relationship between education (net of income) and wealth levels (see, Hurst, et al, 1998; Altonji and Doraszelski, 2001; Kapetyn, et al, 1999; Kiester, 2000; Amuedo-Dorantes and Pozo, 2001) on the one hand and between education and the propensity to hold riskier (higher-return) assets on the other (Chiteji and Stafford, 1999; Rosen and Wu, 2003).

Differences in the demographic composition (in particular, in the age of the household head and the number of children present) also contribute to significantly widening the wealth gap, particularly for foreign-born Mexican Americans. At the median, fully 21 percent of native-born and 32 percent of foreign-born Mexican American's wealth disadvantage is attributable to the fact that these households have more young children and heads who are younger. In both cases, the wealth gap stemming from differences in demographic characteristics is larger in magnitude than that stemming from differences in conditional income functions. Demographic characteristics are also important in explaining the wider dispersion

of wealth amongst white households.

Finally, the differential in geographic concentration plays a much smaller role than these other factors in generating the wealth gap between Mexican Americans and non-Hispanic whites. At the same time, it is interesting that for both native- and foreign-born Mexican Americans geographic concentration serves to widen the gap in net worth at the bottom of the wealth distribution, but narrow it at the top of the wealth distribution leading to a narrowing of the relative wealth dispersion. This may suggest that geographic clustering in states such as California benefits those wealthier Mexican Americans who can access the relatively expensive homeownership market, but is detrimental to those who cannot.

4.2 Mexican Americans versus Blacks

The wealth gap between native-born Mexican Americans and blacks is negative (though relatively small and occasionally insignificant) throughout the entire wealth distribution, indicating that Mexican American households hold higher levels of net worth than do black households. (See Table 4.)³⁵ Differences in conditional wealth functions more than account for the lower net worth of black households. We calculate, for example, that if black households had the same conditional income, education, and geographic functions and the same demographic characteristics as native-born Mexican American households, they would have a wealth disadvantage of \$16,470 at the median. In short, differences in conditional wealth functions imply that black households hold substantially less wealth than otherwise similar native-born Mexican American households.

Foreign-born Mexican Americans hold lower levels of net worth than their native-born counterparts leading to a wealth disadvantage with respect to blacks of approximately \$17,000 at the median. (See Table 5.) As is the case for native-born Mexican Americans, differences in conditional wealth functions also work to

the advantage of foreign-born Mexican Americans by substantially narrowing the median wealth gap and reducing the difference in proportion of households with positive net worth. These effects are generally not significant, however.

Examination of our dispersion measures indicates that net worth is more unequally distributed amongst native-born Mexican American households than amongst black households. As the difference in the two groups' relative wealth levels at the median and at the 10th percentile is not significant, the gap in wealth dispersion stems from wealth differences in the top half of the distribution. Divergence in conditional wealth functions more than explain the higher wealth disparity amongst native-born Mexican Americans. Although the gap in wealth dispersion is positive in the case of foreign-born Mexican American and black households, here too disparity in conditional wealth functions serve to increase the wealth inequality of Mexican Americans relative to blacks.

Consistent with results for white households, differences in the conditional education functions and in the distribution of demographic characteristics each lead black households to have a net worth advantage over native-born Mexican American households which would be—in isolation—large enough to completely overcome the observed negative gap in median wealth. For example, at the median, differences in the conditional education functions lead black households to have a net worth level that is \$9077 higher than that of native-born Mexican Americans, while differences in the age composition of households generate a wealth advantage of \$5446. Education differences between the two groups are important in increasing the wealth dispersion of blacks relative to native-born Mexican Americans. Similar results are observed for foreign-born Mexican Americans.³⁶ Thus, differences in education have a direct and important effect on the relative wealth position of Mexican Americans.

Disparity in the income levels of blacks and Mexican Americans (conditional

on geographic distribution and household composition) occasionally worsens the relative wealth position of foreign-born Mexican Americans, but in some cases improves the wealth position of native-born households slightly. Specifically, at the median, differences in conditional income functions lead to a reduction in the wealth gap between native-born Mexican American and black households of approximately \$878. This effect, though small (and significant at 10 percent) implies that (conditional on characteristics) native-born Mexican Americans have more income than otherwise similar blacks.

Finally, the geographic concentration of wealthier, native-born Mexican American households leads to a substantial improvement in their net worth position relative to black households. This effect is striking in both its magnitude and consistency. For example, at the 90th percentile of the wealth distribution, differences in conditional geographic functions reduce the relative wealth gap by approximately \$12,000. For foreign-born and less wealthy Mexican Americans disparity in geographic concentration has no significant effect on the overall wealth gap. Thus, while geographic concentration works to the disadvantage of poorer Mexican Americans relative to poorer non-Hispanic white households, this is not the case when our focus is on black households.

4.3 Native- versus Foreign-Born Mexican Americans

The decomposition of the wealth gap between native-born and foreign-born Mexican American households is presented in Table 6. This comparison is of particular interest because it allows us to focus specifically on the role of nativity holding ethnic origin constant. At the median, native-born Mexican Americans have just over \$22,000 more in net worth than their foreign-born counterparts. Most of this nativity gap in median wealth can be explained by differences in the income and background characteristics of households, with differences in the conditional

wealth functions of the two groups having an insignificant effect on the wealth gap.³⁷ This result is somewhat surprising in light of the different incentives that foreign- and native-born Mexican Americans may have to accumulate U.S.-specific net worth. For example, Amuedo-Dorantes and Pozo (2002) conclude that many Mexican migrants use remittances to insure against risky labor earnings. Unfortunately, standard wealth data sets (including the SIPP) do not contain information about household remittances and our inability to account for this would be expected to drive a wedge between the conditional wealth functions of native- and foreign-born Mexican Americans. We do not see any evidence of this, however.

Not surprisingly, income differences are a key factor in producing the nativity wealth gap. Disparities in current household income explain, for example, 28.0 percent of the overall wealth gap at the median, an effect that is roughly the same throughout the distribution. Education differences between native- and foreign-born Mexican Americans also contribute to the wealth gap, though the magnitude of the education effect varies substantially across the different deciles of the wealth distribution and—unlike the previous cases—is never significant.

What is more striking is the importance of households' demographic composition in understanding wealth differentials between foreign- and native-born Mexican Americans. Fully, 40 percent—by far the largest share—of the wealth gap is attributable to differences in the age of the head and the numbers of children under the age of 18 living in the household. The effect of demographic characteristics becomes increasingly important as one moves up the wealth distribution, accounting for almost half the gap in the 90th percentile. Thus, foreign-born Mexican Americans have less wealth than their native-born counterparts in large part because they are younger and have more young children.

Finally, although relative to their native-born counterparts, foreign-born Mexican Americans are more likely to live in California rather than Texas, this geo-

geographic concentration has no significant effect on the relative wealth position of the two groups.

4.4 Robustness Testing: The Role of Permanent Income

Our results are striking in that current income—while important—typically is less important than education in explaining the wealth gap between Mexican Americans and other groups. One possible interpretation of these results is that current income is simply less important than permanent income in explaining wealth. After all, life cycle theory suggests that it is the permanent component of income upon which savings and consumption decisions—and ultimately wealth accumulation—are based. Similarly, the relatively large education effect might arise because education is more closely related to permanent (as opposed to current) income. Since we do not take permanent income into account, some of the education effect we are measuring might be attributable to a permanent income effect.

Unfortunately, given the shortness of the SIPP panel, the data do not provide a particularly good measure of permanent income. In other work using SIPP data we have used predicted income as a proxy for permanent income when estimating wealth equations (Cobb-Clark and Hildebrand, 2002). Here using predicted income (based on factors such as age, education, geographic location, etc.) tends to confound the interpretation of the decomposition itself. Consequently, we have chosen to present decompositions based on current household income. At the same time, if predicted income is a reasonable proxy for permanent income then replicating the decomposition analysis using a predicted income measure can shed light on the extent to which the effect of the education component might be overstated (and the income component understated) because of the omission of a permanent income measure.

We find that using predicted rather than current income reduces the education-related wealth disadvantage that both native-and foreign-born Mexican Americans face relative to blacks.³⁸ At the median, for example, the education component for foreign-born Mexican Americans falls from 88.8 percent of the gap (Table 5) to 70.7 percent of the gap, whereas for native-born households the proportion of the gap accounted for by education changes from -167.8 percent (Table 4) to -131.6 percent. Similar results are observed when we compare foreign- to native-born Mexican Americans. These results are consistent with the hypothesis that the education component may partially reflect permanent income differences not accounted for by the current income measure.

At the same time, although the income component of the wealth gap between foreign-born Mexican American and white households is somewhat larger at the median (as we might expect) when we consider predicted income, the education effect is also somewhat larger. Furthermore, when comparing native-born Mexican Americans and whites, the income component of the wealth gap actually falls and the education component increases slightly if we take predicted income into account.

Thus, it does not seem to be the case that a permanent income story completely explains the large role of education in explaining relative wealth positions. In all cases, the results using the two income measures are remarkably consistent and there remains a large direct role for education in producing wealth gaps even when we consider predicted rather than current income. This is perhaps not surprising given the direct role that education plays in driving wealth levels (see, Hurst, et al, 1998; Altonji and Doraszelski, 2001; Kapetyn, et al, 1999; Amuedo-Dorantes and Pozo, 2001) and portfolio allocations (Chiteji and Stafford, 1999) even when permanent income is controlled for.

5 Conclusions

Racial and ethnic disparities in wealth levels are much larger than corresponding disparities in income levels. Yet despite decades of research directed towards understanding the processes which give rise to racial and ethnic income differentials, we know relatively little about how these income differentials are in turn reflected in the immense wealth disparities between groups. Taxing data requirements and the inherent complexities in the underlying earnings, savings, and consumption decisions that form the wealth accumulation process have traditionally made it difficult to advance our understanding of the causes of racial and ethnic wealth disparities. This is unfortunate because wealth provides the resources necessary to maintain consumption levels in the face of economic hardship and consequently is an important measure of overall economic well-being.

Our goal has been to shed light on the sources of the disparity in the relative wealth position of Mexican Americans. As one of the fastest growing and most economically disadvantaged groups in the U.S., Mexican Americans make a particularly interesting case for studying the relationship between income and wealth. The ability to focus attention directly on a single ethnic group (Mexican Americans) while controlling for nativity is an advantage over previous research which treats Hispanics as a single, homogenous group. Our results indicate that any wealth disadvantage faced by Mexican American households is in the main attributable to the fact that these families have more children and heads who are younger. Similarly, low educational attainment amongst Mexican Americans has a direct effect in producing a wealth gap relative to other groups (even after differences in income are taken into account) though education does not significantly affect the nativity wealth gap. Mexican Americans' relative wealth disadvantage is in large part not the result of differences in the way in which households (conditional on their characteristics) accumulate net worth. Similarly, income dif-

ferences, while important, are generally not the key factor driving relative wealth positions.

These results are at odds with much of the previous literature which points to a larger role for divergence in conditional wealth functions in explaining the racial wealth gap (see Blau and Graham, 1990; Gittleman and Wolff, 2000). In the case of Mexican Americans, the story seems to largely be one of differences in family structure, educational attainment, and household income all combining to produce divergence in net worth. Low education plays a particularly important role in generating lower levels of wealth, lending even more weight to the previously documented link between relatively low educational attainment and poor economic outcomes amongst Mexican Americans.

References

- [1] Altonji, Joseph G. and Ulrich Doraszelski, 2001. "The Role of Permanent Income and Demographics in Black/White Differences in Wealth", NBER working paper, 8473.
- [2] Amuedo-Dorantes, Catalina and Susan Pozo, 2002. "Precautionary Savings by Young Immigrants and Young Natives" *Southern Economic Journal*, 69(1): 48-71.
- [3] Bahizi, Pierre, 2003. "Retirement Expenditures for Whites, Blacks, and Persons of Hispanic Origin", *Monthly Labor Review*, 126(6): 20-22.
- [4] Barsky Robert, Bound John, Kofi C. Kerwin and Lupton Joseph P., 2002. "Accounting for the Black-White Wealth Gap: a Nonparametric Approach", *Journal of the American Statistical Association*, 97(459): 663-673.
- [5] Bertaut, Carol and Martha Starr-McCluer, 1999. "Household Portfolios in the United States", Working Paper, Federal Reserve Board of Governors, November 30, 1999.
- [6] Blau, Francine D. and John W. Graham, 1990. "Black-White Differences in Wealth and Asset Composition", *Quarterly Journal of Economics*, 105(2): 321-339.
- [7] Borjas, George J., 2002. "Homeownership in the Immigrant Population", NBER Working Paper 8945.
- [8] Butcher, Kristin F. and John DiNardo, 1998. "The Immigrant and Native-Born Wage Distributions: Evidence From United States Censuses", NBER Working Paper 6630.

- [9] Cameron, Stephen V. and James J. Heckman, 2001. "The Dynamics of Educational Attainment for Black, Hispanic, and White Males", *Journal of Political Economy*, 109(3): 455-499.
- [10] Carroll, Christopher D., Byung-Kun Rhee, and Changyong Rhee, 1994. "Are There Cultural Effects on Saving? Some Cross-Sectional Evidence", *Quarterly Journal of Economics*, 109(3): 685-699.
- [11] Carroll, Christopher D., Byung-Kun Rhee, and Changyong Rhee, 1998. "Does Cultural Origin Affect Saving Behavior? Evidence from Immigrants", NBER Working Paper 6568.
- [12] Charles, Kerwin Kofi and Erik Hurst 2003, "The Correlation of Wealth Across Generations", *The Journal of Political Economy*, Vol. 111(6):1155-1182.
- [13] Chiteji, Ngina S. and Frank P. Stafford, 1999. "Portfolio Choices of Parents and Their Children as Young Adults: Asset Accumulation by African-American Families", *American Economic Review*, Vol. 89(2): 377-380.
- [14] Choudhury, Sharmila, 2001. "Racial and Ethnic Differences in Wealth and Asset Choices", *Social-Security-Bulletin*, Vol. 64(4): 1-15.
- [15] Cobb-Clark, Deborah A. and Vincent Hildebrand, 2002. "The Wealth and Asset Holdings of U.S.-Born and Foreign-Born Households: Evidence from SIPP Data", Forschungsinstitut zur Zukunft der Arbeit (IZA), Discussion Paper, no. 674.
- [16] Cotton, Jeremiah, 1988. "On the Decomposition of Wage Differentials", *Review of Economics and Statistics*, 70(2): 236-243.
- [17] D'Ambrosio, Conchita and Edward N. Wolff, 2001. "Is Wealth Becoming More Polarized in the United States?", unpublished working paper.

- [18] DiNardo, John, Fortin, Nicole, M., and Lemieux Thomas, 1996. "Labor Market Institutions and the Distribution of Wages, 1973-1992: A Semiparametric Approach", *Econometrica*, 64: 1001-1044.
- [19] Gittleman, Maury and Edward N. Wolff, 2000. "Racial Wealth Disparities: Is the Gap Closing?", Levy Economics Institute Working Paper No. 311.
- [20] Grogger, Jeffry and Stephen J. Trejo, 2002. *Falling Behind or Moving Up? The Intergenerational Progress of Mexican Americans*, Policy Institute of California: San Francisco, CA.
- [21] Guzman, Betsey and Eileen Diaz McConnell, 2002. "The Hispanic Population: 1990 - 2000 Growth and Change", *Population Research and Policy Review*, 21: 109-128.
- [22] Hao, Lingxin, 2003. "Immigration and Wealth Inequality in the U.S.", Russel Sage Foundation Working Paper #202.
- [23] Hurst Erik, Ming Ching Luoh, and Frank Stafford, 1998. "The Wealth Dynamics of American Families, 1984-94", *Brookings Papers on Economic Activity*, 1: 267-337.
- [24] Hyslop, Dean R. and David C. Maré 2003, "Understanding New Zealand's Changing Income Distribution 1983-1998: A Semiparametric Analysis", unpublished working paper, July 2003.
- [25] Juster, F. Thomas and Kathleen A. Kuester, 1991. "Differences in the Measurement of Wealth, Wealth Inequality, and Wealth Composition Obtained from Alternative U.S. Surveys", *Review of Income and Wealth*, 37(1): 33-62.
- [26] Juster, F. Thomas, James P. Smith, and Frank Stafford, 1999. "The Measurement and Structure of Household Wealth", *Labour Economics*, 6: 253-275.

- [27] Kapteyn, Arie, Rob Alessie, and Annamaria Lusardi, 1999. "Explaining the Wealth Holdings of Different Cohorts: Productivity Growth and Social Security", unpublished working paper, August, Tilburg University.
- [28] Keister, Lisa A., 2000. "Family Structure, Race, and Wealth Ownership: A Longitudinal Exploration of Wealth Accumulation Processes", unpublished working paper, Department of Sociology, Ohio State University.
- [29] Long, James E. and Steven B. Caudill, 1992. "Racial Differences in Homeownership and Housing Wealth", *Economic Inquiry*, Vol. XXX, January, pp. 83-100.
- [30] Medina, Jose' F., Joel Saegert, and Alicia Gresham, 1996. "Comparison of Mexican-American and Anglo-American Attitudes Toward Money", *The Journal of Consumer Affairs*, Vol. 30(1): 124- 45.
- [31] Menchik, Paul L. and Nancy Ammon Jianakoplos, 1007. "Black-White Wealth Inequality: Is Inheritance the Reason", *Economic Inquiry*, Vol XXXV, April, 428-442.
- [32] Osili, Una Okonkwo and Anna Paulson, 2003. "The Financial Assimilation of Immigrants in the U.S.", unpublished working paper.
- [33] Paulin, Geoffrey D., 2003. "A Changing Market: Expenditures by Hispanic Consumers, Revisited", *Monthly Labor Review*, Vol. 126(8): 12-35.
- [34] Reimers, Cordelia W., 1984. "Sources of Family Income Differentials Among Hispanics, Blacks, and White Non-Hispanics", *The American Journal of Sociology*, 89(4): 889-903.
- [35] Rosen, Harvey S. and Stephen Wu, 2003. "Portfolio Choice and Health Status", NBER Working Paper 9453.

- [36] Shorrocks, Anthony F. 1999 "Decomposition Procedures for Distributional Analysis: A United Framework Based on the Shapley Value", unpublished working paper University of Essex, June 1999.
- [37] Smith, James P., 1995. "Racial and Ethnic Differentials in Wealth in the HRS", *Journal of Human Resources*, 30(Supplement): S158-S183..
- [38] Trejo, Stephen J., 1997. "Why Do Mexican Americans Earn Low Wages?", *Journal of Political Economy*, 105(6): 1235-1268.
- [39] U.S Bureau of the Census, Economics and Statistics Administration, 1995. *The Nation's Hispanic Population – 1994, Statistical Brief*, SB/95-25, September 1995, U.S. Government Printing Office: Washington, DC.
- [40] U.S. Bureau of the Census, Economics and Statistics Administration, 2001a. *The Hispanic Population in the United States: Census 2000 Brief*, Current Population Reports, P20-535, (by Melissa Therrien and Roberto R. Ramirez), March 2001, U.S. Government Printing Office: Washington, DC.
- [41] U.S. Bureau of the Census, Economics and Statistics Administration, 2001b. *The Hispanic Population: Census 2000 Brief*, (by Betsy Guzma'n), May 2001, U.S. Government Printing Office: Washington, DC.
- [42] U.S. Immigration and Naturalization Service (USINS), 2002. Statistical Yearbook of the Immigration and Naturalization Service, 2000, September 2002, U.S. Government Printing Office: Washington, DC.
- [43] Van Kerm, Philippe, 2003. "Adaptive kernel density estimation", *The Stata Journal*, Vol. 3(2): 148–156.
- [44] Wakita, Satomi, Vicki Schram Fitzsimmons, and Tim Futing Liao, 2000. "Wealth: Determinants of Savings Net Worth and Housing Net Worth of

Pre-Retired Households", *Journal of Family and Economic Issues*, 21(4): 387-417.

[45] Wolff, Edward N., 1998. "Recent Trends in the Size Distribution of Household Wealth", *Journal of Economic Perspectives*, 12(3): 131-150.

[46] Wolff, Edward N., 2000. "Recent Trends in Wealth Ownership, 1983 - 1998", Jerome Levy Economics Institute, Working Paper No. 300.

[47] Zhang, Xuelin, 2002. "The Wealth Position of Immigrant Families in Canada", unpublished working paper, Statistics Canada.

Notes

¹These statistics are reported in Tables 2 and N. Note that U.S. immigration law defines “immigrants” as individuals lawfully admitted for permanent residence in the United States. Many others (“non-immigrants”) are lawfully admitted on a temporary basis, while undocumented migrants are individuals who entered the United States illegally (“without inspection”) or who entered legally on temporary visas, but then failed to depart (“overstayers”) (USINS 2002).

²These statistics are calculated from Table DP-1, “Profile of General Demographic Characteristics for the United States” for 1990 and 2000 (see <http://www.census.govprod/www/abs/decenal.html>).

³The median age of Mexican Americans is 24.2, while that of the entire U.S. population is 35.3 (U.S. Bureau of the Census, 2001b).

⁴Previous research suggests that location decisions are important in explaining the homeownership gap between immigrants and natives (Borjas, 2002) and between blacks and whites (Long and Caudill, 1992).

⁵Charles and Hurst (2003) find evidence of intergenerational similarity in the propensity to own certain assets. This relationship persists even after controlling for the income, wealth, and risk tolerance of parents and children suggesting that children 1) mimic the behavior of their parents or 2) have similar preferences. In related research, Carroll, et al., (1994; 1998) investigate whether there is a cultural basis to the saving behavior of immigrants to Canada and the United States.

⁶A further 20 percent of Mexican Americans have at least one parent born outside the United States. In contrast, only about 13 percent of whites and 9 percent of blacks are first or second generation Americans (see Grogger and Trejo, 2002).

⁷See the SIPP web page (<http://www.sipp.sensus.gov/sipp/>).

⁸The exceptions are the 1984 and 1985 surveys in which migration histories

were collected in Waves 8 and 4, respectively.

⁹In the 1985 and 1996 surveys the wealth module was collected in Wave 3.

¹⁰The core sample of the PSID collects socio-economic information on U.S. households since 1968. As a result, the core sample of the PSID does not include any immigrants who arrived in the United States after 1968. In 1990 the PSID added 2,000 Latino households consisting of families originally from Mexico, Puerto Rico, and Cuba.

¹¹Choudhury (2001) discusses the pension and Social Security wealth of Hispanic households captured in the Health and Retirement Survey.

¹²While respondents are not explicitly told to exclude any off-shore assets when reporting their asset holdings, it is likely off-shore assets are disproportionately under-reported. This may be particularly relevant for foreign-born households and is a limitation shared by all of the aforementioned data sources.

¹³Each SIPP respondent is asked to identify which of white, black, American Indian, Aleut or Eskimo, Asian or Pacific Islander best describes his or her race. A separate question asks individuals to identify their ethnic origin or the ethnic origin of their ancestors. We have used this ethnic background variable to identify whether the respondent is of Hispanic origin (Mexican or others).

¹⁴We have categorized native-born households as belonging to one of the three “ethnic groups”—white, black or Mexican American. A couple-headed, native-born household is considered “mixed household” when each partner belongs to a different ethnic group. Using this definition, in our sample, about 2.5 percent of white, 8 percent of black and 17 percent of Mexican American households are mixed. Both mean net worth and mean family income of these “mixed” households differ significantly from those of the reference person’s ethnic group. In particular, preliminary analysis suggests that Mexican American “mixed” households are very similar to white, native-born households.

¹⁵A foreign-born, Mexican American household is considered to be a “mixed household” when one partner is U.S.-born and the other is Mexican born. In our sample about 18 percent of Mexican-born household are mixed. Preliminary analysis also suggests that these households have wealth holdings which are very similar to that of white households.

¹⁶Sampling weights have been used in these calculations.

¹⁷In this case, only the sampling weights are used.

¹⁸This approach has also been used to evaluate, for example, immigrant wages (Butcher and DiNardo, 1998), immigrant wealth (Zhang, 2002), wealth inequality (Hao, 2003) and wealth polarization (D’Ambrosio and Wolff, 2001).

¹⁹To see this note that the definition of a conditional probability implies that $f(w, z) = f(w|z)f_z(w)$.

²⁰We could—for example—also express the wealth distribution in terms of the distribution of demographic characteristics conditional on income, education, and geographic concentration, i.e. $f_{d|yre}$, etc. However, the conditional expectation of demographic characteristics given income and other factors is of less interest than the conditional expectation of income given these same characteristics. As we shall argue below, the choice between alternative decompositions should be guided by our interest in and ability to interpret the various components. Equation (2) allows us to consider relationships which closely parallel income, educational attainment, and migration regressions and are of inherent interest to us. Consequently we will only consider decompositions of this form.

²¹In other words,

$$f^B(w) = \int_y \int_e \int_r \int_d f(w|y, e, r, d, M = 0) \cdot f_{y|e,r,d}(y|e, r, d, M = 1) \cdot$$

$$f_{e|r,d}(e|r, d, M = 1) \cdot f_{r|d}(r|d, M = 0) \cdot f_d(d|M = 0) dydedrdd$$

²²Gittleman and Wolff (2000) estimate, for example, that 80 percent of the black-white wealth gap is explained when white coefficients are used in the decom-

position, but less than one third of the gap is explained when black coefficients are used. Blau and Graham's (1990) results are similar.

²³Note that:

$$f^D(w) - f^1(w) = \int_y \int_e \int_r \int_d [f(w|y, e, r, d, M = 0) - f(w|y, e, r, d, M = 1)] \\ \cdot f_{y|e,r,d}(y|e, r, d, M = 1) f_e(e|r, d, M = 1) f_r(r|d, M = 1) f_d(d|M = 1) dydedrdd$$

²⁴The exception is the comparison between native-born Mexican Americans and blacks. In this case, Mexican Americans have a slight income advantage.

²⁵Barski, et. al (2002) estimate the reweighting factors nonparametrically. Consequently, they are unable to extrapolate beyond the observed range of the data because the common support condition fails. Zhang (2002), however, estimates the reweighting factors using a parametric (logit) functional form which does allow him to extrapolate the conditional expected wealth function of immigrants into the wider native-born income distribution. Although we will also estimate the reweighting factors parametrically, we have chosen to follow Barski, et. al (2002) and consider the range of the data where the common support condition holds.

²⁶Other authors—see for example, Zhang (2002) and Butcher and DiNardo (1998)—have investigated the relative role of specific sets of observable characteristics in producing a wealth gap in an ad hoc way by altering the factors included in the logit equation used to estimate the reweighting factors. Unfortunately, this strategy does not present a satisfactory way of summarizing the relative importance of different factors.

²⁷More specifically, Shorrocks proposes a general method of assessing the contributions of a set of factors in producing the observed value of some aggregate statistic in which the marginal impact of each factor is calculated as they are eliminated in succession. These marginal effects are then averaged over all the elimination sequences. Shorrocks notes that the resulting formula is identical to the Shapley value in co-operative game theory, hence the name Shapley decompo-

sition rule. This strategy has also been adopted by Hyslop and Maré (2003) and we thank them for pointing us to this solution to the problem.

²⁸In addition to $\psi_{y|e,r,d}$, we also require $\psi_{e|r,d}$, $\psi_{r|d}$, and ψ_d which are similarly defined. There are 15 unique counterfactual distributions based on equation (2) that can be constructed using the above (or products of the above) reweighting factors. These 15 counterfactual distributions can be then combined to form the 24 relevant decompositions of the wealth gap we will consider.

²⁹All estimation will be preformed in STATA 8. Kernel density estimates are produced using the Epanechnikov kernel in the akdensity procedure (see Van Kerm, 2003).

³⁰Weights are rescaled to sum to 1.

³¹Specifically, we focus on the current income level of households, while the education vector includes the years of education of both partners. Geographic concentration is captured by a series of eight dummy variables based on disaggregated U.S. Census regions. Finally, our demographic vector includes the age of the head of the household as well as the number of children less than 18 living in the household.

³²Specifically, we use a normal approximation with 1000 replications.

³³For both groups, the gap in net worth relative to white households is significant at all deciles.

³⁴Differences in conditional income functions do contribute to explaining the higher wealth dispersion amongst white households.

³⁵Smith (1995) finds similar results for Hispanic households in the HRS.

³⁶It is interesting that this occurs despite other evidence that by age 24 there is more variation in educational attainment amongst Hispanic men as a whole than amongst black men (Cameron and Heckman, 2001).

³⁷Differences in conditional wealth distributions are significant only at the 30th

and 80th percentiles.

³⁸Specifically, we used a detailed, group-specific model of income (including education of both partners, occupation, geographic concentration, household composition, etc.) to predict income. These results are not presented here, but are available upon request.

6 Figures, Tables and Regression Results

Table 1: Descriptive Statistics by Ethnic Grouping

	Whites	Native Born Mexicans	Blacks	Foreign-Born Mexicans
Net Worth				
Mean	133069	55423	45445	29702
Median	76685	28690	23278	6276
%>0	95	91	88	84
Current income	15364	10259	11758	6895
Demographics				
Age	47.29	44.52	46.21	40.01
Kids<18	0.90	1.36	1.08	2.19
Education	13.30	10.86	12.16	7.96
Spouse Education	13.08	10.66	12.41	7.94
Occupations				
Professional	0.258	0.094	0.136	0.032
Tech., Sales, Admin.	0.172	0.161	0.153	0.061
Service	0.049	0.093	0.109	0.130
Farm, Forestry	0.029	0.048	0.020	0.126
Precision Prod, Craft	0.147	0.183	0.110	0.198
Operators-Laborers	0.127	0.210	0.217	0.273
Military	0.006	0.004	0.019	0.002
Region				
New England	0.056	0.000	0.014	0.000
Middle Atlantic	0.148	0.003	0.115	0.008
East North Central	0.191	0.040	0.159	0.081
West North Central	0.104	0.010	0.032	0.008
South Atlantic	0.172	0.009	0.328	0.023
East South Central	0.066	0.000	0.128	0.000
West South Central	0.093	0.485	0.145	0.219
Mountain	0.049	0.095	0.012	0.050
Pacific	0.116	0.355	0.063	0.611
Year of Entry				
<1965				0.131
1965-1974				0.263
1975-1984				0.382
>1985				0.224
N	50338	936	3957	1157

Note: Own calculation on SIPP 1984, 1985, 1987, 1990, 1991, 1992, 1993 and 1996 panels. Weighted sample means reported unless otherwise indicated. The Mountain Census region (Division 8) includes Alaska. The Pacific Census region (Division 9) does not include Alaska.

Figure 1: Cumulative Distribution of Net Worth by Ethnic Group

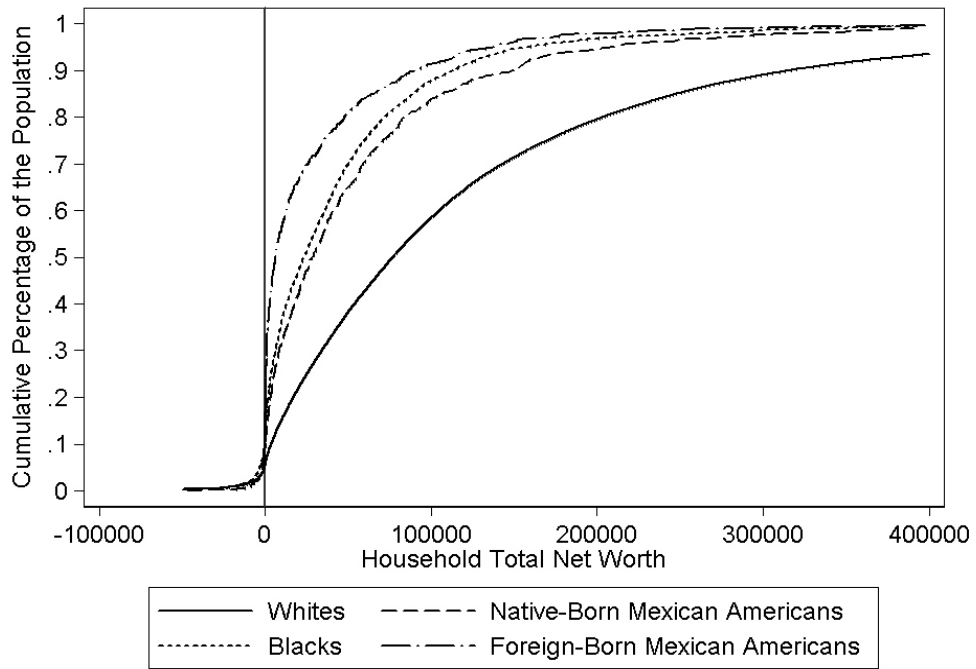


Table 2: Native-Born Mexican Americans to Whites

	Raw Gap	Income	Education	Region	Demographics	Unexplained
10 th	3170.39 [307.16]	501.10 [85.66] (16)	1617.84 [176.50] (51)	599.58 [184.31] (19)	942.63 [120.41] (30)	-490.76 [307.07] (-15)
20 th	13653.69 [692.23]	1699.11 [214.15] (12)	6953.75 [517.02] (51)	2128.51 [504.05] (16)	3509.56 [314.11] (26)	-637.24 [764.96] (-5)
30 th	25446.71 [1294.52]	3167.66 [314.97] (12)	12417.43 [926.44] (49)	3458.22 [890.16] (14)	6276.95 [520.41] (25)	126.44 [1500.94] (1)
40 th	35759.32 [1786.96]	4443.48 [492.69] (12)	17780.71 [1249.18] (50)	4061.69 [1177.26] (11)	8088.64 [725.51] (23)	1384.79 [2091.51] (4)
50 th	47994.89 [2467.09]	5941.48 [550.29] (12)	24852.22 [1636.70] (52)	2887.29 [1490.28] (6)	9992.05 [836.99] (21)	4321.87 [3000.33] (9)
60 th	63174.75 [2834.38]	7862.52 [695.33] (12)	33503.63 [1919.56] (53)	1301.72 [1718.38] (2)	11537.95 [968.63] (18)	8968.92 [3300.20] (14)
70 th	84152.58 [3000.08]	11676.21 [834.99] (14)	43925.86 [2382.07] (52)	-1322.46 [2335.19] (-2)	13081.56 [1114.71] (16)	16791.40 [3887.14] (20)
80 th	117978.17 [5030.24]	17352.67 [1264.82] (15)	62796.28 [3505.12] (53)	-7221.81 [3338.41] (-6)	15744.70 [1469.52] (13)	29306.33 [6063.57] (25)
90 th	164836.46 [9421.77]	28365.64 [2495.99] (17)	91303.34 [5512.43] (55)	-14613.43 [5191.35] (-9)	20335.06 [2319.69] (12)	39445.85 [10079.38] (24)
%>0	3.10 [0.98]	0.63 [0.08]	2.63 [0.57]	1.12 [0.49]	1.56 [0.24]	-2.85 [1.26]
P90-P10	161666.07 [9386.43]	27864.54 [1945.88]	89685.49 [5322.41]	-15213.01 [5508.75]	19392.43 [3072.92]	39936.61 [10054.14]
P90-P50	116841.56 [9047.19]	22424.16 [2285.08]	66451.12 [4418.12]	-17500.71 [5053.68]	10343.02 [3548.43]	35123.98 [9668.23]
P50-P10	44824.50 [2393.05]	5440.38 [1382.92]	23234.37 [1242.95]	2287.71 [1448.58]	9049.41 [1074.67]	4812.63 [2932.90]

Note: Percent of total variation explained in parenthesis. Standard errors of explained variation are reported in brackets

Table 3: Foreign-Born Mexican Americans to Whites

	Raw Gap	Income	Education	Region	Demographics	Unexplained
10 th	3732.89 [253.27]	1341.42 [410.36] (36)	1214.49 [720.63] (33)	274.77 [472.66] (7)	1475.85 [418.47] (40)	-573.63 [439.25] (-15)
20 th	16457.81 [327.13]	5264.63 [1169.01] (32)	5635.40 [2225.51] (34)	662.47 [1350.97] (4)	5343.45 [1272.36] (32)	-448.15 [484.03] (-3)
30 th	33013.45 [442.10]	8723.88 [2553.42] (26)	11651.97 [4636.04] (35)	975.55 [2783.01] (3)	10652.38 [2717.30] (32)	1009.67 [1380.08] (3)
40 th	50756.38 [725.81]	12738.96 [3574.04] (25)	17553.15 [5786.80] (35)	1365.09 [3746.00] (3)	16777.85 [3889.22] (33)	2321.33 [3199.48] (5)
50 th	70408.48 [962.47]	14120.73 [4519.26] (20)	26523.12 [6884.48] (38)	-1177.01 [4343.51] (-2)	22586.21 [4733.87] (32)	8355.44 [4433.20] (12)
60 th	91777.43 [1513.57]	15223.03 [5504.06] (17)	37001.50 [9154.30] (40)	-2908.14 [5586.13] (-3)	29931.15 [6480.15] (33)	12529.90 [4501.25] (14)
70 th	117501.99 [3221.45]	23901.72 [6256.76] (20)	52762.81 [11588.81] (45)	-5506.46 [6372.46] (-5)	37070.08 [7305.65] (32)	9273.83 [6708.23] (8)
80 th	156010.06 [3581.76]	30764.13 [9746.98] (20)	84307.11 [15198.25] (54)	-12189.92 [8481.18] (-8)	50191.33 [9151.35] (32)	2937.41 [6571.62] (2)
90 th	225964.66 [7244.72]	47607.86 [11769.85] (21)	130972.10 [22678.91] (58)	-23558.45 [12436.91] (-10)	56825.57 [13588.65] (25)	14117.58 [12150.39] (6)
%>0	10.73 [1.29]	4.54 [0.97]	5.54 [4.51]	0.27 [2.96]	4.50 [2.51]	-4.12 [5.41]
P90-P10	222231.77 [7222.21]	46266.45 [10377.60]	129757.62 [20016.02]	-23833.22 [15256.48]	55349.72 [15910.91]	14691.21 [12261.76]
P90-P50	155556.18 [6990.74]	33487.13 [13028.01]	104448.98 [15449.21]	-22381.44 [15409.91]	34239.36 [15171.04]	5762.14 [12035.28]
P50-P10	66675.59 [904.68]	12779.31 [9218.19]	25308.63 [6281.54]	-1451.78 [5074.63]	21110.35 [4886.68]	8929.07 [4448.97]

Note: Percent of total variation explained in parenthesis. Standard errors of explained variation are reported in brackets

Table 4: Native-Born Mexican Americans to Blacks

	Raw Gap	Income	Education	Region	Demographics	Unexplained
10 th	-465.07 [272.14]	-28.87 [63.83] (6)	113.41 [185.20] (-24)	-227.14 [231.30] (49)	142.60 [138.94] (-31)	-465.07 [312.49] (100)
20 th	-1425.62 [665.98]	-187.08 [116.24] (13)	1232.37 [479.34] (-86)	-455.74 [496.21] (32)	772.02 [252.63] (-54)	-2787.19 [1029.80] (196)
30 th	-2393.21 [1329.51]	-479.48 [196.03] (20)	2941.54 [854.78] (-123)	-383.78 [799.35] (16)	1576.23 [558.62] (-66)	-6047.73 [1837.90] (253)
40 th	-4842.43 [1867.99]	-652.30 [317.22] (13)	5741.68 [1450.32] (-119)	-362.39 [1664.06] (7)	3380.14 [883.80] (-70)	-12949.57 [2737.29] (267)
50 th	-5411.25 [2552.52]	-877.88 [471.69] (16)	9077.49 [2528.87] (-168)	-2586.66 [2884.48] (48)	5445.93 [1473.85] (-101)	-16470.13 [5146.55] (304)
60 th	-5252.44 [2956.58]	-1173.20 [539.30] (22)	10445.16 [3156.38] (-199)	-4742.26 [3475.55] (90)	5989.65 [1911.54] (-114)	-15771.79 [6843.93] (300)
70 th	-8842.80 [3241.79]	-786.95 [613.05] (9)	12179.32 [2970.23] (-138)	-8062.96 [3847.91] (91)	5003.98 [1773.04] (-57)	-17176.18 [6004.84] (194)
80 th	-13789.10 [5197.23]	-1352.04 [778.16] (10)	17071.25 [3515.75] (-124)	-13232.51 [4510.10] (96)	6179.44 [2167.23] (-45)	-22455.23 [8057.91] (163)
90 th	-37761.61 [9662.31]	-1237.19 [1059.63] (3)	25275.76 [4132.52] (-67)	-12053.63 [4971.75] (32)	5739.92 [2613.63] (-15)	-55486.47 [11464.72] (147)
%>0	-3.90 [1.15]	-0.55 [0.15]	5.07 [3.34]	-2.23 [2.34]	3.30 [1.79]	-9.49 [6.69]
P90-P10	-37296.55 [9629.10]	-1208.33 [686.66]	25162.35 [3665.37]	-11826.49 [5182.56]	5597.32 [3331.87]	-55021.40 [11409.66]
P90-P50	-32350.36 [9301.22]	-359.31 [1762.52]	16198.27 [2637.62]	-9466.97 [4947.50]	293.99 [2814.07]	-39016.34 [10302.13]
P50-P10	-4946.18 [2475.44]	-849.01 [1791.56]	8964.08 [1445.40]	-2359.52 [2650.72]	5303.33 [1726.24]	-16005.06 [5050.70]

Note: Percent of total variation explained in parenthesis. Standard errors of explained variation are reported in brackets

Table 5: Foreign-Born Mexican Americans to Blacks

	Raw Gap	Income	Education	Region	Demographics	Unexplained
10 th	97.43 [215.25]	136.43 [159.92] (140)	-236.12 [400.56] (-242)	-299.76 [348.96] (-308)	399.45 [267.78] (410)	97.43 [231.05] (100)
20 th	1378.49 [264.88]	368.54 [295.37] (27)	1178.39 [562.04] (85)	-391.18 [685.22] (-28)	670.88 [343.25] (49)	-448.15 [617.61] (-33)
30 th	5173.53 [508.08]	820.84 [387.22] (16)	3778.97 [1156.14] (73)	-978.89 [1341.03] (-19)	2580.33 [839.17] (50)	-1027.72 [1413.01] (-20)
40 th	10154.63 [929.24]	1451.97 [589.98] (14)	8136.44 [2042.69] (80)	-2158.84 [2123.54] (-21)	5653.81 [1649.73] (56)	-2928.74 [1903.97] (-29)
50 th	17002.34 [1289.65]	2032.05 [967.88] (12)	15095.66 [3618.52] (89)	-4004.49 [3338.43] (-24)	10155.68 [2736.27] (60)	-6276.57 [3323.32] (-37)
60 th	23350.24 [1728.68]	2776.96 [1524.04] (12)	23913.89 [6822.23] (102)	-7595.52 [5531.45] (-33)	17108.62 [4263.48] (73)	-12853.70 [8073.97] (-55)
70 th	24506.61 [3320.17]	2928.97 [2094.08] (12)	34054.34 [10814.90] (139)	-12024.87 [7464.44] (-49)	25231.12 [7093.32] (103)	-25682.95 [16287.04] (-105)
80 th	24242.79 [3732.67]	4569.67 [2561.48] (19)	47222.80 [14593.76] (195)	-16210.56 [7935.45] (-67)	35823.79 [11004.84] (148)	-47162.90 [24431.48] (-195)
90 th	23366.59 [7218.40]	6878.90 [3379.62] (29)	68974.34 [18216.82] (295)	-11352.46 [10469.42] (-49)	42718.79 [15198.87] (183)	-83852.99 [32184.22] (-359)
%>0	3.74 [1.34]	0.38 [1.05]	41.39 [20.27]	-3.40 [6.27]	28.61 [13.37]	-63.25 [34.88]
P90-P10	23269.16 [7209.45]	6742.47 [2728.80]	69210.47 [15938.08]	-11052.70 [15558.01]	42319.34 [15827.23]	-83950.42 [32182.54]
P90-P50	6364.25 [6960.02]	4846.85 [9255.23]	53878.68 [10567.83]	-7347.97 [15134.67]	32563.11 [10472.56]	-77576.43 [29495.71]
P50-P10	16904.91 [1266.36]	1895.62 [10974.78]	15331.79 [3127.16]	-3704.73 [3839.07]	9756.23 [2147.25]	-6374.00 [3333.28]

Note: Percent of total variation explained in parenthesis. Standard errors of explained variation are reported in brackets

Table 6: Foreign- to Native-Born Mexican Americans

	Raw Gap	Income	Education	Region	Demographics	Unexplained
10 th	562.50 [335.98]	171.63 [268.49] (31)	169.21 [314.35] (30)	47.62 [230.32] (8)	76.61 [261.74] (14)	97.43 [417.38] (17)
20 th	2804.11 [613.31]	859.73 [435.97] (31)	-16.17 [632.98] (-1)	209.17 [408.25] (7)	602.44 [481.06] (21)	1148.95 [657.22] (41)
30 th	7566.74 [1245.02]	1527.26 [822.15] (20)	937.51 [1053.20] (12)	380.66 [688.27] (5)	1830.35 [952.19] (24)	2890.97 [892.75] (38)
40 th	14997.06 [1785.83]	4234.72 [1690.81] (28)	3271.82 [2442.35] (22)	1122.65 [1582.87] (7)	4650.53 [2142.61] (31)	1717.34 [1530.04] (11)
50 th	22413.59 [2537.58]	6265.33 [2332.54] (28)	4455.22 [4148.42] (20)	-786.22 [2624.88] (-4)	8931.14 [2940.72] (40)	3548.12 [5060.79] (16)
60 th	28602.68 [3124.49]	6573.00 [3034.39] (23)	3288.19 [5023.08] (12)	-2860.40 [3460.31] (-10)	10612.54 [3519.41] (37)	10989.35 [7295.04] (38)
70 th	33349.41 [4265.73]	9190.83 [4049.72] (28)	4974.29 [6382.78] (15)	-7050.15 [4590.23] (-21)	11634.68 [4595.16] (35)	14599.76 [9259.85] (44)
80 th	38031.89 [6040.14]	9865.98 [4966.18] (26)	7463.27 [7330.68] (20)	-10176.43 [4780.79] (-27)	13984.54 [6302.50] (37)	16894.53 [7343.35] (44)
90 th	61128.20 [11450.20]	20173.88 [9782.94] (33)	22275.51 [14700.82] (36)	-16477.27 [9339.60] (-27)	29880.25 [12457.81] (49)	5275.84 [11853.71] (9)
%>0	7.63 [1.62]	1.83 [0.89]	1.75 [1.86]	-0.90 [1.15]	-0.01 [1.25]	4.96 [2.70]
P90-P10	60565.71 [11420.33]	20002.26 [8105.79]	22106.29 [13273.07]	-16524.89 [9896.08]	29803.64 [14205.73]	5178.41 [11852.66]
P90-P50	38714.62 [11002.86]	13908.55 [10476.88]	17820.29 [11596.02]	-15691.05 [10859.32]	20949.11 [8904.31]	1727.72 [11479.20]
P50-P10	21851.09 [2468.14]	6093.70 [10191.53]	4286.00 [3679.55]	-833.84 [3297.40]	8854.53 [2555.03]	3450.69 [5033.04]

Note: Percent of total variation explained in parenthesis. Standard errors of explained variation are reported in brackets

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