The National Asset Scorecard for Communities of Color (NASCC)

Race, Phenotype, and Economic Disparities: Evidence from Los Angeles, California

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Abstract

This study builds on the "Color of Wealth: Los Angeles" report by studying the relationship between skin tone, physical attractiveness, and socio-economic outcomes both within and across racial groups in the city of Los Angeles. We use novel face-to-face survey data where interviewers use standardized scales to rate respondents' physical attractiveness and skin tone in addition to collecting detailed information on financial and health outcomes. We go further than similar studies that estimate racial gaps in socio-economic outcomes by studying racial-ethnic groups (i.e. U.S. blacks, African blacks, Mexicans, Koreans, and Cambodians) as opposed to only racial groups (i.e. blacks, Hispanics, and Asians). Our findings show that across African American, Vietnamese, Korean and Cambodian participants, lighter skin tone correlates with more favorable economic and social outcomes. The opposite pattern is found within the Mexican community in which darker-skinned Mexicans appear to have higher earnings than their lighter-skinned counterparts. This appears to contradict what has been observed about preferences for lighter skin in both the U.S. and Latin America. However, it could be explained based on the immigration patterns of dark-skinned Mexican immigrants who first settled in the Los Angeles area. In terms of physical

Executive Summary

- The respondents surveyed in the face-to-face interviews are younger than those surveyed by phone: the median age is on average ten years lower for each of the ethnic groups covered in both surveys. As a result, reported income, net worth, marriage rates, foreign-born rates, among other variables, are lower in the face-to-face survey. However, the relative ranks of each of the racial groups—in terms of key financial outcomes—were similar.

- We compare the face-to-face survey subsamples of those that consented to have the interviewer take a picture of their faces with those that did not. We use the Heckman two-stage selection model and find statistically significant selection bias. We show how to control for self-selection in OLS regression models to obtain unbiased results.

- Descriptive analyses on skin complexion rating show the face-to-face sample is skewed towards lighter skin tones, skin tones with rates of 3 and 4 account for 43 percent of the observations. We find that skin tone and wealth correlation to be positive only for Other Hispanics and Korean, and it is insignificant for all other groups. The correlation between skin tone and earnings is negative and only significant when accounting for the entire sample. Within-group correlation between earnings and skin tone is not statistically significant.

- OLS results show that the significance for skin tone disappears when controlling for racial-ethnic groups. However, it shows significance when interviewer fix effects are added in the regression – which means unobservables at the interviewer (a proxy employer) level influences the relationship between earnings and skin tone.

- Regression results indicate that darker skin colors are associated with lower earnings for whites and African Americans, while that was not necessarily the case for Hispanics or Asians.

- Descriptive analyses on appearance or attractiveness rating reveal that 93 percent of the respondents received a score of "About Average" or above – showing a skewed distribution. Also, skin tones with 3 or below ratings account for approximately 60 percent of the observations that received "Attractive" or "Very Attractive" scores – showing a statistically significant correlation between attractiveness and skin tone. The correlation is higher for Whites (-0.41), Other Hispanics (-0.23), Koreans (-0.20), Mexicans (0.15), and US Blacks (-0.11). We find no significant correlation between attractiveness and skin tone for Africans and Cambodians.

- We analyze skin color, attractiveness, and earnings together and find that when we control for both attractiveness and skin tone jointly, attractiveness is not statistically significant. In contrast, the coefficient for skin tone rating is significant. However, once we add the race variables as controls along with other demographic variables, skin tone loses its significance. We find that the interaction of skin tone and attractiveness is significant even when controlling for race and different demographics. However, its significance goes away if interviewer fixed effects are added. Thus, supporting the hypothesis that beauty is in the eyes of the beholder.

- Our wealth gap decomposition results show substantial differences in the average wealth (net worth) gap across races. For example, the difference between the average net worth of whites and US Blacks is 0.80 standard deviations, with 44 percent of this gap explained by group differences in age, education, and gender; and 66 percent unexplained, showing evidence of discrimination. On the other hand, for Africans and Mexicans, most of the gap can be explained by differences in the included covariates. For Africans, the gap is 0.67 standard deviations with 99.9 percent explained by group differences in observables. For Mexicans, the gap is 0.78 standard deviations with 96.8 percent of the gap explained by differences in observables.

- The wealth gap decomposition results based on skin tone differences within groups show no evidence of a skin-tone-driven wealth gap within racial-ethinic groups. For example, for U.S. Blacks, we find a wealth gap of 0.02 standard deviations, with lighter complexioned individuals having higher net worth than darker complexioned individuals. However, the wealth gap is not statistically significant. We find similar results for Koreans and Cambodians. Although we observe an opposite pattern with dark-complexioned individuals earning more than their light-complexioned counterparts for the two Asian groups, the observed wealth gaps of 0.15 and 0.11 standard deviations are statistically insignificant.

- The earnings gap decomposition results show substantial racial differences in average earnings for most racial/ethnic groups. The gap in average 2014 earnings between whites and U.S. blacks is $23,631, with only 31 percent of the gap explained by group differences in age, education, and gender. For Mexicans, the gap is $25,209 (45 percent of the gap explained). For Other Hispanics, the gap is $25,129 (46 percent of the gap explained). For Koreans, the gap is $19,237 (4 percent of the gap explained). For Cambodians, the gap is $24,434 (41 percent of the gap explained). For African Blacks, the income gap is $9,611, but it is not statistically significant. When comparing the unexplained part of the income gap, we see that Koreans face the most considerable income discrimination of the racial-ethnic groups, followed by US blacks, Cambodians, and Hispanics. Evidence shows no bias against African Blacks that affect their income.

- The results for the earnings gap decomposition by skin tone within racial-ethnic groups show an earnings gap of $11,280 for US blacks, with lighter complexioned US blacks earning more than darker complexioned individuals within the same group. We find that 88 percent of the skin-shade earnings gap is unexplained and statistically significant, providing evidence of discrimination or colorism affecting US Blacks. Interestingly, we find that for Mexicans, Koreans, and Cambodians there is a negative differential (-8,540, -$11,060, and -$7,960), which means that darker-skinned members of these racial-ethnic groups earn relatively more than their lighter-skinned compatriots. However, only the skin-shade earnings gap for Mexicans is statistically significant and driven mainly by unexplained factors.

- Our findings for the racial-ethnic group decomposition on self-reported health show significant differences in self-reported health only for Koreans and Cambodians. On average, Koreans report a health score of 0.50 points higher than whites, primarily due to unexplained factors. In comparison, Cambodians report a score 1.01 points higher than whites, as a result of both explained (43 percent) and unexplained (57 percent) drivers.

- The results for the health gap decomposition by skin tone within racial-ethnic groups show significant health differences among Mexicans only. On average, light-complexioned Mexicans report a health score 0.59 standard deviations higher than dark-complexioned Mexicans. This effect is driven mainly by unexplained factors.

1. Introduction

This report builds on *The Color of Wealth in Los Angeles* (De La Cruz-Viesca et al., 2016). It uses the National Asset Scorecard for Communities of Color (NASCC) data collected to improve understanding of the economic well-being of peoples of color in several major cities across the United States. The NASCC surveys collect detailed data on assets and debts among subpopulations, according to race, ethnicity, and country of origin. The survey instruments were designed primarily to gather information about a respondent's specific assets, liabilities, financial resources, and personal savings and investment activity at the household level.

The importance of this study is further highlighted not only because Los Angeles, CA is the second-largest city in the US, after New York City. But also because given its location and industrial hubs, it makes the city a natural magnet for commerce and people, making it one of the most diverse cities globally – particularly in terms of racial and ethnic diversity. As a result, Los Angeles is the first metropolitan area in the US for which NASCC has conducted both telephone and face-to-face surveys. Unlike the other NASCC instruments, the in-person, face-to-face survey also collects information on skin tone, attractiveness, and other phenotypes (by including pictures of the respondents).

The NASCC surveys collect detailed data on assets and debts among subpopulations, according to race, ethnicity, and country of origin. For example, in the telephone Los Angeles survey instead of examining the extent of aggregate assets among Asians collectively, the NASCC study examines Chinese, Japanese, Korean, Vietnamese, Filipino, and Asian Indian ancestry groups separately, as well as separating native black Americans from recent black African or Caribbean immigrants. Before the NASCC study, little was known about detailed assets and debts of these different Asian subgroups. Thus, NASCC's study design to address ethnic heterogeneity is unprecedented.

With the in-person survey, NASCC sought to replicate and extend the previous five-city telephone-based survey with a survey administered via face-to-face interviews conducted by RTI in Los Angeles because of its exceptional racial-ethnic diversity. It provides a shared context for identifying various ethnic subgroups, including blacks, Mexicans, and several Asian national origin groups. In addition, Los Angeles presents an urban context to study wealth both across and within racial/ethnic groups. For this study, we compare the asset and debt accumulation of white, native black, African black, Mexican, Korean, Cambodian households. We also include "Other Hispanic" households that include respondents with Salvadoran and other Central and South American ancestry. This allows us to ultimately make comparisons both within and across ethnic/racial groups.

The focus of this study is threefold: First, we aim to compare the NASCC phone survey data with the face-to-face dataset to investigate the robustness of the different datasets while making external comparisons to the American Community Surveys, another national dataset. Second, we aim to highlight the uniqueness of the face-to-face survey data. Notably, we exploit the different variables around skin tone, attractiveness, and highlight the availability of conducting additional studies related to other phenotypes (as shown in the respondents' pictures). We use this information to shed some light on different research questions to investigate the relationship between skin tone and attractiveness on socioeconomic outcomes such as net worth, earnings, and self-reported health. Third, we use the face-to-face survey data to conduct wealth, earnings, and health gap decompositions across and within racial-ethnic groups (based on skin tones).

The rest of this report is structured as follows. First, in Section 2, we begin by providing a historical perspective on demographics changes focusing on race and ethnicity in the Los Angeles MSA. Section 3 provides a brief discussion of recent literature on the intersection of race, ethnicity, skin tone, attractiveness, and socioeconomic outcomes to highlight the contribution of our study. Section 4 offers an overview of the NASCC methodology, compares both the telephone and the face-to-face survey, and corrects for selection in the subsample that agreed to take the pictures. Selection 5 discusses our findings of the analysis on the correlations between skin tone and attractiveness on wealth and earnings. Section 6 performs and discusses the results for the wealth, earnings, and health gap decompositions by racial-ethnic group and skin tone. Section 7, the last section, concludes with discussing some of the implications of our study on racial and skin tone disparities in the Los Angeles metro area.

2. A Historical Perspective: Race and Ethnicity in Los Angeles

Colorism, prejudice against individuals with darker skin tone among people of the same nationality, ethnic, or racial group, is prevalent in the US. The African-American experience is a key witness to this. Those lighter-skinned African-Americans who were largely the product of relations between white masters and their slaves often received support from masters, thus laying the groundwork for social and economic success in the aftermath of the Civil War and Emancipation. This pattern of success has been found to have endured for decades, becoming more challenging to observe as the census removed the designation of "mulatto" after 1930 (Reece, 2018). A central goal of NASCC is to understand how skin tone correlates with different socioeconomic outcomes across and within racial-ethnic groups. To understand the complexity of colorism in Los Angeles, it is essential to understand the city's demographic changes in the context of its racial and ethnic history.

Due to California's proximity to the Pacific region and the U.S.-Mexico border, Los Angeles attracts a sizable immigrant population from Asia, Mexico, and Central America. Consequently, the Los Angeles MSA has the highest concentration of Latinos and Asians in the nation. According to *The Color of Wealth in Los Angeles*, in 2014, Latinos made up the largest proportion of the population (45 percent), followed by whites (30 percent) in the Los Angeles MSA. The share of Asian residents was 15 percent, while for blacks was 6 percent of the total population. Among the Asian ethnic groups, Chinese (including Taiwanese) made up 4 percent of the total population, followed by Filipinos (3 percent), Koreans and Vietnamese (each 2 percent), and Japanese and Asian Indians (each 1 percent). See *The Color of Wealth in Los Angeles* for a more detailed discussion (De La Cruz-Viesca et al., 2016).

During 2000 through 2014, significant demographic changes occurred in terms of the city's population and its racial and ethnic composition. For example, while the non-Hispanic white population increased by 13 percent, the Mexican population grew by 25 percent, with the overall Hispanic population growing by 17 percent, and the Asian population grew by 34 percent. Of the six largest Asian ethnic groups (which include Chinese, Filipino, Korean, Vietnamese, Japanese, and Asian Indians), Asian Indians were the fastest-growing group (60 percent), followed by Vietnamese and Chinese, which both grew at 38 percent rates (De La Cruz-Viesca et al., 2016).

On the other hand, the black population in Los Angeles declined by 10 percent from 2000 through 2014, due to different factors including an outmigration of young people searching for jobs or educational opportunities somewhere else (Arax, 2004) and retiring away from the city in search for lower cost of living (Pfeiffer, 2011). Such decline was accompanied by an increase in black immigrants from Africa, the Caribbean, and other parts of the Americas who, collectively, have sustained small population growth of 1 percent since 2000 ("Black Population in L.A. County Declines," 2014). According to the 2013 American Community Survey's (ACS) five-year estimate sample, the three largest black immigrant groups in Los Angeles are from Belize (16 percent), Nigeria (14 percent), and Ethiopia (12 percent) (De La Cruz-Viesca et al., 2016).

What has driven Los Angeles to become such a melting pot? From the beginning, Los Angeles is an odd story of racial, ethnic, and national confluence. Making sense of Los Angeles' racial makeup requires looking into the effects different historical conflicts, such as geopolitical conflicts and civil wars, have on the inflow and outflow of migrants. In the case of Los Angeles, the end of the Mexican-American War, with its accompanying annexation of California as a state in the Union, had a tremendous influence on the city's ethnic and racial composition. The end of the Mexican-American War opened the Los Angeles river basin to occupation by Anglo-Americans from the Midwestern and Eastern states.

Before the end of the Mexican-American War, the Los Angeles river basin was first occupied by the "pobladores'' who founded the settlement between the San Gabriel mission and the Presidio of Santa Barbara by the governor of Alta California were mainly an "Afro-Mestizo" community, recruited from Sinaloa and Rosario, Mexico. (One-third of Sinaloa's residents were of African ancestry, and two-thirds of Rosario's residents were mulattoes.) El Pueblo de Nuestra Señora, Reina de Los Ángeles del Río de Porciúncula (now Los Angeles) was founded by eight mulattoes, two mestizo, two Blacks, and one Mexican in 1781. Enormous land grants were in the hands of Afro-Mexicans in the San Fernando Valley, Topanga Canyon, Eastern San Gabriel Valley, and Similar Valley up until the mid-nineteenth century. Thus while the Mexican-American war laid the groundwork for settlement, from the 1850s - 1880s, even as the population transferred from a combination

of indigenous, mestizo, and white creole Californian majority population to primarily Anglo, that same settlement was never so great to overtake or erase the roots of the existing population of that time (Deverell & Sitton, 7; Struthers, 20).

In the latter portion of the 19th Century, migrant labor to the West and Los Angeles was primarily Chinese due to large-scale labor opportunities. The influx of Chinese migrants was partially thinned by the Exclusion Act of 1882 but continued through Mexico and Hawaii (not then a state) to meet the agricultural sector's demands, which would advance ahead of manufacturing in the urban center (Struthers, 18-19).

The turn of the 20th Century was the defining period of population growth. From 1890 to 1910, Los Angeles went from 50,000 to 319,000 residents. During this period, we begin to see the kind of diversity of national origin in the demographic profile that mirrors today. In Los Angeles' fruit-growing groves and valleys of those decades' time were Chinese, Japanese, South Asian, Filipino, and white workers -- the latter often as convict labor (Struthers, 24).

Los Angeles takes on unique historical importance as a space of racial difference within an economic context in the era after World War II. Along with the building of the freeway infrastructure—a mainstay of urban-suburban Southwestern life—elected officials and city planners also formed new sites (like Dodger Stadium, razing to the ground the neighborhood of Boyle Heights occupied by Mexican-Americans (predominantly), but also European immigrants; city planners and officials also but sought ways to reduce interracial musical events so that blacks, Mexicans, Filipinos, and whites would not be dancing together on Central Avenue, or to curtail white visitors to the Black neighborhoods there. (Johnson, pp.xvi, 56, 2013)

While in Los Angeles, groups of varying national origins formed distinct cultural boundaries - such that we can call a place " Chinatown " or "Little Italy," the businesses and spaces of association within those boundaries can hardly be called "ethnic enclaves." Those businesses and spaces became considerable points of economic gain as a function of both support within and from without those boundaries. Interestingly, municipal leaders of the 1920s tried to keep inter-racial contact at a minimum, attempting to police the participation of whites at black events and the goings -between whites, blacks, and Mexican-Americans at their cultural festivities and stores. Even as they acquired definition, boundaries were also porous (Johnson, p.50, 2013).

The extent to which the wartime era was a boon in fortune for people of color is up for debate. Recall first and foremost, the internment of Japanese- Americans was still incredibly fresh. This makes it difficult to interpret the shift in legal privileges in 1952, which allowed Asian Americans to own land and housing; complicating the matter further is that African-Americans faced considerable discrimination in the housing market. Thus, while opportunities to earn wages were improved, this bore out unevenly in terms of wealth.

The passage of the Hart-Cellar Immigration Act of 1965 was a significant turning point in the immigration history of the US. The act abolished the national origins formula that had been in place since the 1924 Immigration Act (Chan, 1991). As a result, the United States and the city of Los Angeles experienced a surge of immigrants from Asia, Latin America, Africa, and the Caribbean that arrived to fill a range of jobs across different industries. This particularly benefited the Vietnamese and Cambodian communities, given the established refugee programs that followed the end of the Vietnam War and the passage of the Indochina Migration and Refugee Act of 1975. This prompted large-scale immigration from Southeast Asia, with most immigrants settling in the Midwest and California (Takaki, 1989; Chan, 1991; Ong, Bonacich, and Cheng, 1994).

The 1970s were also a difficult time for Mexican immigrants, who had become the largest population of migrants to the U.S. The political situation surrounding the migrant flows had changed rather drastically. The Bracero program, which actively encouraged Mexican labor to meet seasonal agricultural demand, was eventually replaced with a militarization policy of the border. Signaling this difficulty was the struggle of farm laborers of the 1970s (Garcia, 2012).

Additionally, political conflicts in Central America in the 1970s and 1980s increased migration to Los Angeles and the United States from El Salvador, Guatemala, Honduras, and Nicaragua (Chinchilla and Hamilton, 2004). For example, one of the largest communities of Salvadorans in the US resides in Los Angeles. Later in the 1990s, immigration from Mexico and Central America increased as the signing of the North American Free Trade Agreement in 1994 created favorable economic conditions and insourcing of immigrant labor from Mexico for U.S. firms (Kelly and Massey, 2006).

Since the 1970s, federal spending in defense has contributed to the Los Angeles economy. The city became a hub for the military-industrial complexes, helping create low-skilled assembly and manufacturing

firms alongside higher-tech firms linked to electronics and media (Pastor, 2001a,b). Given that most of these jobs that were generated were of lower quality, it attracted low-skilled immigration. The city's immigrant population multiplied during this period thanks to a combination of income differentials, social networks, and various state policies (Modares, 2003).

It is with the above considerations that we can return to the question of colorism. Studies that focus on racial rather than skin tone differences have produced myriad views on disparities within the economy. At first glance, skin tone has an unclear value-added. Colorism enters into analysis when we recognize that the category of race is not fixed but is itself liable to shift.

This contingency of race appears in debates over what different cultures seem to favor in terms of skin color and attractiveness. Often, said cultures or perspectives are influenced by colonialism, immigration, and assimilation into a new culture and can have social and economic implications.

Thus studying colorism within and across racial-ethnic groups can help shed light on how social preferences for fair-skinned members of a racial group or the adoption of a particular taste for light-skinned individuals (through Americanization, for example) have a long-lasting negative effect on people with certain skin tones that belong to a specific racial-ethnic group.

3. Recent Literature: Skin Tone and Attractiveness

Research has shown a robust empirical relationship between skin complexion, attractiveness, labor market outcomes, and health outcomes. Using various nationally representative datasets, it has been proven that lighter complexioned individuals earn more on average (Goldsmith et al., 2006; Goldsmith et al., 2007; Rosenblum et al., 2016; Monk et al., 2021) and are more likely to be employed in white-collar jobs (Monk, 2014). These gaps in outcomes can potentially be explained by two phenomena: The first is that people with darker skin tones experience higher rates of discrimination in labor markets when compared to individuals of the same race with a lighter complexion. This is supported by Monk's (2015, 2019) finding that reveals a negative relationship between skin shade and a self-reported measure of the amount of discrimination someone experiences. Second, people with lighter skin tones have higher educational attainment rates and other characteristics that increase productivity in labor markets, which leads to higher wages (Goldsmith et al., 2006; Monk, 2014; Monk, 2016). This could potentially be explained by differential access to education and other productivity-increasing resources from the time of slavery until now.

In addition to the relationship with labor market outcomes, research has also shown a relationship between skin shade and health outcomes. People with lighter complexions report higher self-reported mental and physical health measures and lower rates of depression and hypertension (Monk, 2015).

Similarly, research has shown that attractiveness pays across different dimensions including in the labor market, dating, social interactions, among others (Adam, 1977; Biddle and Hamermesh, 1998; Mobius and Rosenblat, 2006; Hamermesh and Biddle, 1994; Hamermesh, 2011; Scholz and Sicinski, 2015).

These studies highlight the role of complexion and attractiveness in the economic and health outcomes for racial and ethnic minority groups. While many studies have focused on racial gaps in outcomes, these studies highlight the importance of studying intra-racial inequalities driven by euro-centric ideals of physical appearance, which impact treatment in labor markets and health settings. It is imperative to measure the labor market and health premiums placed on lighter complexions and attractiveness when considering the racial and gender differences in the distribution of skin complexion and attractiveness. For example, in Monk (2021), the author reports the distribution of interviewer-rated physical attractiveness for various ethnic and racial groups. The paper finds an equal distribution of attractiveness for men but differing distributions for white, black, and Hispanic women. Specifically, the study shows that black women are, on average, rated less attractive than Hispanic and white women. Given the relationship between complexion, attractiveness, and labor market and health outcomes, it is important to investigate these characteristics as key drivers in racial-ethnic differences and intra-racial differences in economic and health outcomes.

4. Methodology: Telephone and Face-to-Face Surveys

This report builds on *The Color of Wealth in Los Angeles* (De La Cruz-Viesca et al. 2018). It uses the National Asset Scorecard for Communities of Color (NASCC) data collected to improve understanding of the economic well-being of peoples of color in several major cities across the United States. The NASCC surveys collect detailed data on assets and debts among subpopulations according to race, ethnicity, and country of origin. The survey instruments were designed primarily to gather information about a respondent's specific assets and liabilities - including financial resources, personal savings, and investment activities - at the household level. Los Angeles is the first metropolitan area in the US for which NASCC has conducted both telephone and face-to-face surveys. Unlike the other NASCC instruments, the in-person, face-to-face survey also collects information on skin tone, attractiveness, and other phenotypes (by including pictures of the respondents).

The NASCC data used in *The Color of Wealth in Los Angeles* report (De La Cruz-Viesca et al. 2018) was gathered through a telephone survey conducted in the Los Angeles Metropolitan Statistical Area (MSA) -- which includes Los Angeles and Orange counties. The dataset consists of data on several racial-ethnic subgroups: White, US Blacks (or African Americans), African, Mexican, Other Hispanics, Chinese (including Taiwanese), Japanese, Korean, Filipino, Vietnamese, and Asian Indian. While the in-person survey was also conducted in Los Angeles MSA, covering similar subgroups as in the telephone survey. It added a new subgroup, Cambodian, and excluded Chinese, Filipino, Vietnamese, and Asian Indian.

The asset and debt module of the questionnaire found in both survey instruments replicate questions used in the Panel Study of Income Dynamics (PSID), the longest-running national longitudinal household survey that collects data on employment, income, wealth, expenditures, health, marriage, education, and numerous other topics. For the non-asset and debt-based questions, the NASCC surveys replicated many questions found on the Multi-City Study of Urban Inequality (MCSUI) survey. The MCSUI was a cross-section survey of four cities—Atlanta, Boston, Detroit, and Los Angeles—collected from 1991 to 1994 to gather socioeconomic data across ethnic and racial groups.

The data collected includes key demographic characteristics, such as age, sex, educational attainment, household composition, nativity, income, and family background. In addition, financial assets (savings and checking accounts, money market funds, government bonds, stocks, retirement accounts, business equity, and life insurance) and tangible assets (houses, vehicles, and other real estate). Debts included credit card debt, student loans, installment loans, medical debt, mortgages, and vehicle debt. We estimate net worth by subtracting debts from assets. The data also tracks information on remittance behavior, the act of sending assets or other resources abroad, mostly characterized to support relatives and friends or for family investments.

While telephone interviews are effective and resource-saving, there are several reasons for conducting in-person interviews. First, face-to-face interviews will enable NASCC researchers to examine the phenomenon of colorism (a form of racism that involves prejudicial responses to an individuals' skin shade or other phenotypic attributes). Well-established theoretical and empirical literature in the social sciences demonstrates that phenotype and physical appearance relate to various political and socio-economic issues. Second, phone interviews, while effective, can result in under-sampling of specific subgroups – the targeting strategy will allow us to identify more precisely defined ethnic/racial groups within larger ethnic/racial (for example, Asians, Blacks, Latinos, and Whites). Third, individuals from different cultures might feel better at providing information in-person on sensitive topics such as race/ethnicity and detailed questions about household finances.

4.1 Comparison of the Phone and the Face-to-Face Surveys

Below we compare both survey instruments. The statistics in the samples used weights based on family characteristics in the U.S. Census Bureau's ACS to generate results representative of specific ethnic group characteristics in the respondent's metropolitan area of residence. In *The Color of Wealth in Los Angeles* report, it was found that overall, the results computed from the unweighted NASCC sample are not dissimilar from those using the weighted NASCC sample, suggesting that the specific ethnic group observations in the metropolitan areas covered by the study were fairly representative of their populations at large. We also incorporate the ACS-based weights in our analysis for consistency but focus on the comparison across the samples generated with the different instruments as opposed to a comparison to the ACS MSA population – the latter was studied in detail in *The Color of Wealth in Los Angeles* (De La Cruz-Viesca et al. 2018).

It is essential to highlight some of the limitations of the NASCC data. First, given the detailed data collected on assets and debt types, some variables have missing responses, presenting some challenges. Second, both surveys are cross-sections and not longitudinal panel data providing only a snapshot of the individual households interviewed. Therefore, historical comparisons cannot be made since only one year of data is available. Third, the surveys are not nationally representative because of their focus on comparisons within the Los Angeles metropolitan area.

Panel A in Table 1 shows the replicated descriptive statistics from the telephone sample used in *The Color of Wealth in Los Angeles* report. Although 733 interviews were conducted, 682 responses provided information for most, if not all, of the questions. In comparison, Panel B shows the descriptive for the in-person sample with 512 total responses.

The telephone sample (Panel A) shows that educational attainment rates varied significantly by race and ethnicity, with a higher proportion of African black (58.9 percent), Chinese (68.4 percent), Japanese (68.6 percent), Korean (57.1 percent), Filipino (76.7 percent), and Asian Indian (79.2 percent) heads of household having a bachelor's degree or higher compared to whites (56.9 percent). Only Mexican, other Hispanic, U.S. Black, and Vietnamese household heads were less likely than Whites to hold a bachelor's degree or higher—17.8 percent, 45.7 percent, 44 percent, and 36.5 percent, respectively. In comparison, in the in-person sample (Panel B), we find that all subgroups have lower educational attainment rates than in the telephone sample. Whites have the highest rate at 44.1 percent, and Other Hispanics the lowest rate at 2.5 percent.

TABLE 1. Table Telephone Survey: Color of Wealth Report

Ethnicity/ Variables	Number of Observations	Bachelor's Degree or Higher (%)	Married (%)	Median Age	Foreign Born (%)	Median Family Income	Median Household Wealth
PANEL A: TELEPHONE SURVEY							
White	56	56.90%	49.40%	63	10.80%	95,000	355,000
US Black	45	44.00%	28.00%	59	0.80%	53,500	4,000
African Black	23	58.90%	59.20%	54	100.00%	115,000	72,000
Mexican	100	17.80%	45.30%	45	64.20%	50,000	3,500
Other Hispanic	31	45.70%	37.00%	62	75.30%	40,000	42,500
Chinese	75	68.40%	54.20%	53	70.30%	70,000	408,200
Japanese	68	68.60%	48.50%	63	29.90%	75,000	592,000
Korean	77	57.10%	57.90%	57	90.50%	60,000	23,400
Filipino	42	76.70%	52.70%	59	87.60%	80,000	243,000
Vietnamese	124	36.50%	55.20%	51	92.60%	50,000	61,500
Asian Indian	41	79.20%	70.50%	50	96.80%	100,000	460,000
PANEL B: FACE-TO-FACE SURVEY							
White	90	44.30%	31.60%	50	21.90%	45,000	129,500
US Black	142	10.20%	15.10%	44	5.40%	15,000	2,500
African Black	24	17.90%	22.20%	48	47.20%	15,000	21,500
Mexican	86	4.10%	24.70%	34	41.80%	25,000	5,000
Other Hispanic	32	2.50%	33.10%	38	44.60%	17,000	600
Korean	71	26.40%	55.50%	55	97.20%	45,000	35,000
Cambodian	65	10.70%	38.60%	51	79.10%	23,000	3,020

In the telephone sample, African Black, Chinese, Korean, Vietnamese, Filipino, and Asian Indian households were more likely to include married couples than white households (49.4 percent). In contrast, only Korean homes in the face-to-face sample have a likelihood of over 50 percent to include married couples at 55.5 percent. US Black households had the lowest likelihood at 15.1 percent. The telephone sample is skewed toward those older in the life cycle with the predominant ages ranging from 45 to 63 years old -- these are persons who have had the opportunity to accumulate assets over time. Mexicans tend to be the youngest and whites, and Japanese the oldest in the telephone sample. While in the in-person sample, the range was 34-55 years old, approximately younger by ten years or so, with again Mexican households being the youngest and Koreans the oldest.

It is important to note that given that the respondents surveyed in the face-to-face interviews are younger than those surveyed by phone, by an average median age difference of 10 years for all groups, the reported education attainment rate, marriage rate, income, and net worth positions are reasonably lower in the face-to-face survey. However, despite these differences, we find that the subgroup rank order tends to remain reasonably consistent across both surveys.

The percentage of foreign-born within racial-ethnic subgroups can help paint a picture regarding convergence in socioeconomic measures. For example, the composition of new immigrants relative to US citizens within a subgroup can distort the average income, education attainment, health, and wealth factors. This is likely the case for Mexican households, for whom an increase of new immigrants with lower education levels than the Mexican American households brings the average down. We see a high percentage of foreign-born in the phone sample with over 90 percent for African, Korean, Vietnamese, and Asian India. In contrast, White and US Black households have the lowest foreign-born percentages, 10.8 percent and 0.8 percent, respectably. In the in-person sample, we see only Korean with over 90 percent foreign-born at 97.2 percent. In comparison, the percentage of foreign-born Whites increases to 21.9 percent. US Blacks have the lowest rate of foreign-born at 5.4 percent in the in-person sample.

TABLE 2. Comparing the Averages of the Two Surveys

	Phone Survey		Face-to-Face Survey		Difference	
Variables	**mean**	**sd**	**mean**	**sd**	**Difference**	**t-stat**
Bachelor's Degree or Higher	0.51	0.50	0.17	0.38	0.36***	(13.95)
Married	0.51	0.50	0.29	0.45	0.23***	(8.11)
Age	53.96	16.40	45.87	16.59	7.47***	(7.79)
Foreign Born	0.66	0.47	0.40	0.49	0.25***	(8.68)
Family Income	85358.38	92072.24	41912.12	58737.87	40269.86***	(8.34)
Household Wealth	387536.14	644474.48	218447.24	860896.77	209829.19***	(3.49)
White	0.08	0.27	0.17	0.38	-0.09***	(-4.72)
US Black	0.07	0.25	0.29	0.45	-0.21***	(-9.62)
African Black	0.03	0.17	0.05	0.21	-0.01	(-1.13)
Mexican	0.15	0.35	0.18	0.38	-0.02	(-1.09)
Other Hispanic	0.05	0.21	0.06	0.24	-0.02	(-1.28)
Korean	0.11	0.32	0.12	0.33	-0.03	(-1.32)
Observations	**682**		**510**		**1194**	

Typically, White households have higher incomes than nonwhite groups. However, we find some exceptions in the NASCC data – African Blacks and Asian Indians tend to earn more than Whites in the telephone sample. In the in-person sample, Whites and Korean households have the highest median family income. In terms of median household wealth, Japanese have the highest median wealth at $592,000, followed by Asian Indian ($460,000), Chinese ($408,000), White ($355,000), and Filipino ($243,000) in the phone sample. The rest of the groups have a median household wealth of less than $100,000, with Mexican having the lowest median household wealth at $3,500. Whites have the highest median wealth for the in-person sample at $129,500 and the only group with mean wealth above $100,000.

In Table 2, we perform some statistical tests to compare the means of the two surveys. We can confirm statistically that the phone survey includes households with higher education attainment rates, married couples, older, foreign-born rates, family income, and household wealth. In contrast, the face-to-face survey consists of a higher proportion of White and US Black households. Both surveys are similar in the composition of African Black, Mexican, Other Hispanic, and Korean.

4.2 Comparing the Face-to-Face Subsamples: Picture vs. No Picture Consent

A unique feature of the in-person survey is that it incorporates taking pictures of the respondents. Researchers find this useful to study questions related to skin tone, attractiveness, and other phenotypes on socioeconomic outcomes. Table 3 compares the subsamples of those that gave consent to take their pictures and those that did not in the in-person sample. We find that respondents who consented to have their photo taken had higher education attainment rates, lower family income, and were more likely to be White and Cambodian and less likely to be US Black.

TABLE 3. Comparing the Subsamples: Picture vs. No Picture Consent

	No Picture Consent		Picture Consent		Difference	
Variables	**mean**	**sd**	**mean**	**sd**	**difference**	**t-stat**
Bachelor's Degree or Higher	0.11	0.31	0.22	0.42	-0.11**	(-3.24)
Married	0.3	0.46	0.29	0.45	0.00	-0.07
Age	46.06	15.76	45.71	17.3	-0.15	(-0.10)
Foreign Born	0.41	0.49	0.39	0.49	0.01	-0.15
Family Income	33612.02	47657.54	49076.76	66095.99	-15585.76**	(-3.12)
Household Wealth	131646.09	330578.41	271967.08	1060967.63	-151500.33	(-1.85)
White	0.12	0.33	0.22	0.41	-0.10**	(-3.14)
US Black	0.37	0.48	0.22	0.41	0.15***	-3.85
African Black	0.07	0.25	0.03	0.17	0.04	-1.95
Mexican	0.17	0.37	0.18	0.39	-0.01	(-0.18)
Other Hispanic	0.08	0.28	0.04	0.21	0.04	-1.8
Korean	0.14	0.34	0.11	0.32	0.03	-0.95
Cambodian	0.05	0.22	0.2	0.4	-0.15***	(-5.30)
Observations	**239**		**271**		**512**	

The results in Table 3 highlights the selection issue of consenting to take a picture. Hence, to generate useful inferences about our subsamples, we would need to correct for selection. We can use several methods to accomplish this, including using the Heckman selection model and controlling for unobservables such as adding fixed effects (in our case, interviewer fixed effects). In Table 4, we conduct both.

Tables 4-5 show the application of the inverse Mills ratio (also known as the non-selection hazard) to take into account potential selection bias. Heckman (1976) proposed a two-step selection correction model (Heckman, 1976) using the inverse Mills ratio. In the first stage, a probit regression is modeled using the observed positive outcomes (in our case, a consent to take a picture). In the second stage, the estimated parameters are used to obtain the inverse Mills ratio, which is then included as an explanatory variable in the OLS estimation.

Table 4 shows the first step – probit regression results. Column (1) consists of the respondent characteristics such as demographics, education, income, wealth, among others, as controls. It also includes the respondent's opinions on the economy, the future economy, and personal finances. The assumption here is that these variables can influence the decision to opt to take the picture. Column (2) adds the interviewer's perception about the respondent, such as attractiveness, skin tone, friendliness, perception of how well the respondent understands English, and openness. Again, the assumption is that the interviewers' perception matters to the respondent and can influence the respondent's cooperativeness.

TABLE 4. Heckman Selection Correction – Step 1 for Picture Consent in the Face-to-Face Sample

	(1)	(2)	(3)
Inverse Mills Ratio			-0.541*** (0.035)
BA or Higher Degree	0.479** (0.222)	0.526** (0.256)	
Married	-0.102 (0.179)	-0.022 (0.197)	
Age	0.001 (0.005)	0.005 (0.006)	
Foreign Born	-0.475** (0.205)	-0.498** (0.236)	
Family Income	0.000 (0.000)	0.000 (0.000)	
Wealth	0.000 (0.000)	0.000 (0.000)	
U.S. Black	-0.381 (0.259)	-0.899*** (0.347)	
African	-0.420 (0.413)	-0.896* (0.494)	
Mexican	-0.015 (0.274)	0.022 (0.310)	
Other Hispanic	-0.124 (0.349)	-0.176 (0.399)	
Korean	-0.249 (0.292)	-0.517 (0.374)	
Cambodian	1.137*** (0.360)	0.786* (0.421)	
Female	0.341** (0.156)	0.407** (0.170)	
Positive View on Economy	-0.185 (0.172)	-0.180 (0.185)	

	(1)	(2)	(3)
Positive View on Next Year	0.150 (0.161)	0.022 (0.169)	
Positive View on Personal Finances	-0.136 (0.155)	-0.257 (0.170)	
Attractive		0.217 (0.190)	
Light Skin		-0.662*** (0.233)	
Friendly		0.683*** (0.224)	
Understands English Well		-0.090 (0.293)	
Openness		0.885*** (0.233)	
Observations	**334**	**334**	**334**
Adjusted R2			**0.299**

In Step 1 – the probit model shows that BA or higher degree, Cambodian (White are the reference group – hence, not shown), Female, friendliness, and openness increase the probability of agreeing to take the picture while foreign-born, US Black, African, and light skin decrease such likelihood. We use column (2) results to calculate the Inverse Mills Ratio and regress this measure against the picture consent binary dependent variable using OLS in column (3). As expected, the coefficient for the inverse Mills ratio is negative and statistically significant at the 99% level. The interpretation is that the selection bias causes respondents not to want to agree to take the picture. The group that does is statistically different from those that do not.

We use the inverse Mills ratio in our standard OLS model as one of the independent variables, as shown in Table 5. It is important to point out that we exclude both the respondent and interviewer's perception variables in our OLS model, as suggested by Heckman (1976). Column (1) is the same as column (3) in Table 4. Column (2) regresses the standard controls on the picture dummy; it shows consistent signs and significance as the respective column in Table 4. Column (3) adds the inverse Mills ratio and shows the coefficient still negative and statistically significant. Column (4) is the same as column (2) but now with interviewer fixed effects – since it is possible that unobservable from a researcher's point of view as it relates to the interviewer might affect the decision to consent to take the picture such as the tone of voice of the interviewer, personality, etc. When interviewer fixed effects are included, US Black, Cambodian, and Female lose statistical significance while Korean gains significant. In other words, for US Black, Cambodian, Korean, and Female interviewers' characteristics matter in deciding on whether to accept to take a picture.

TABLE 5. Heckman Selection Correction – Step 2 for Picture Consent in the Face-to-Face Sample

	(1)	(2)	(3)	(4)	(5)
Inverse Mills Ratio	-0.541*** (0.035)		-0.515*** (0.053)		-0.439*** (0.064)
BA or Higher Degree		0.141** (0.070)	0.016 (0.063)	0.139* (0.073)	0.024 (0.068)
Married		-0.026 (0.060)	0.010 (0.052)	-0.070 (0.062)	-0.025 (0.055)
Age		0.001 (0.002)	0.000 (0.002)	-0.001 (0.002)	-0.002 (0.002)
Foreign Born		-0.160** (0.070)	-0.009 (0.067)	-0.118* (0.067)	0.014 (0.067)
Family Income		0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Wealth		0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
U.S. Black		-0.159* (0.091)	-0.021 (0.083)	0.062 (0.085)	0.166** (0.081)
African		-0.163 (0.154)	0.002 (0.131)	-0.133 (0.163)	-0.023 (0.151)
Mexican		-0.024 (0.096)	-0.019 (0.083)	0.011 (0.095)	-0.008 (0.081)
Other Hispanic		-0.052 (0.133)	0.003 (0.114)	-0.003 (0.111)	0.034 (0.102)
Korean		-0.104 (0.104)	-0.044 (0.093)	-0.260* (0.136)	-0.190 (0.131)
Cambodian		0.311*** (0.093)	0.033 (0.087)	0.174 (0.143)	0.002 (0.137)
Female		0.107** (0.053)	0.013 (0.048)	0.059 (0.057)	-0.006 (0.054)
Interviewer FEs	**No**	**No**	**No**	**Yes**	**Yes**
Observations	**334**	**334**	**334**	**293**	**293**
Adjusted R^2	**0.299**	**0.100**	**0.273**	**0.282**	**0.395**

Column (5) adds the inverse Mills ratio to column (4). It shows that the coefficient for the Inverse Mills ratio remains negative and significant when adding interviewer fixed effects. Evidence that selection bias is present in the subsample of picture takers. Future researchers using this data should correct for such selection bias, as shown here.

A key takeaway is that both survey samples – the telephone and the face-to-face surveys – provide the opportunity to study the phenomenon of race, ethnicity, and colorism and its implications in one of the major cities in the US. For example, given the technological advances of the last decade, more and more decisions and transactions are made by a machine learning algorithm that sometimes amplifies the biases of the real world. Understanding the implication of race, ethnicity, and colorism and their challenges is important for equity in the US.

4.3 Potential Uses of the Photos in Research

Our results thus far have been informative for the direction researchers can plan to take in using the phone survey photos to analyze the effects of appearances on financial outcomes. A research idea with great potential is to recruit student volunteers to rate and categorize physical appearance, not only on appearance and skin shade but also on dimensions such as "Afrocentricity," and have machine learning algorithms do the same to identify potential human vs. machine learning bias. In addition to using the photos to rate appearances, photos will be used to test relationships between appearance-based and context-based perceptions of financial outcomes and actual financial outcomes. Pictures will be presented to different groups of students in various predetermined contexts, providing some groups with information on the respondent's attributes such as education or marital status, giving us opportunities to analyze the predictive power and effects of contextualized appearances. Data from such an experiment could explain why some financial outcomes are linked to appearances while others are not.

5. Analysis: Skin Tone and Attractiveness

One of the salient features of the face-to-face survey is the inclusion of information on skin tone, attractiveness, and other phenotypes (by including pictures of the respondents). Interviewers were asked to rate the respondent's skin color on a scale of 1 (lightest) to 10 (darkest), using the spectrum shown in Figure 1. We consider skin ratings of 1-3 as "light" skin, a rating of 4-6 as fair skin, and 7-10 as "dark" skin.

Table 6 presents the distribution of skin tone ratings by racial group. From a total of 512 cases, only six cases did not have a skin shade rating provided – out of these four were US Blacks, one Mexican, and one Other Hispanic. As seen on the matrix in Table 6, most whites have ratings of 1 or 2. In contrast, US Blacks tend to have a broader range (2-10 rating), with most US Blacks falling within the 4-7 skin tone ratings. African Blacks also have a wide range (3-9 rating), with most having ratings of 6-8, while Mexicans tend to fall in the lighter skin tones, ranging from 1-5, with a 3 rating as the median. This is similar for Other Hispanics.

FIGURE 1. Scale of Skin Color Darkness

Interestingly, for Koreans, the median rating is a 4, darker than the median for Mexicans, which goes against some of our ex-ante expectations given some of the stereotypical images in media outlets. On the other hand, Cambodians have a very similar distribution as Mexicans and Other Hispanics. In aggregate, we find that the average skin tone rating is 4, which also is the rating with the highest frequency counts with almost 25 percent of the cases. It is followed by rating number 3; jointly, these two skin tone ratings account for 43.2 percent of the cases.

TABLE 6. Skin Tone Rating

Racial Ethnicity / Skin Tone Rating	1	2	3	4	5	6	7	8	9	10	Total
White	48	28	11	2	1	0	0	0	0	0	**90**
US Black	0	1	12	33	34	26	22	7	2	2	**139**
African	0	0	2	2	1	5	6	5	2	0	**23**
Mexican	6	15	30	23	12	0	0	0	0	0	**86**
Other Hispanic	2	9	10	4	4	2	0	0	0	0	**31**
Korean	6	10	8	45	2	0	0	0	0	0	**71**
Cambodian	2	14	23	14	13	0	0	0	0	0	**66**
Total	**64**	**77**	**96**	**123**	**67**	**33**	**28**	**12**	**4**	**2**	**506**

	White	US Black	African	Mexican	Other Hispanic	Korean	Cambodian
Mean	1.69	5.34	6.46	3.2	3.11	3.38	3.33
Median	1	5	7	3	3	4	3
N	90	139	23	86	31	71	66

5.1 Skin Tone and Wealth

As found in *The Color of Wealth in Los Angeles*, wealth differentials across racial-ethnic groups are far more pronounced than income differentials. We explore the relationship between skin complexion and wealth, particularly household net wealth, measured as all assets minus all debts. Table 7 shows the linear correlations between skin tone and the natural logarithm of wealth. Note that correlation coefficients are obtained using a simple OLS model with wealth as the dependent variable and skin tone as the independent variable. Hence, the correlation coefficient measures a linear fit, and it could be higher than one. The findings show that the correlation between wealth and skin tone is negative but statistically insignificant when considering all cases. The coefficient within each racial-ethnic group reveals a positive and statistically significant correlation only for Other Hispanics and Koreans. For the other groups, we observe no statistical significance.

There are numerous reasons, both empirical and theoretical, why we might not see a correlation between wealth and skin tone in our sample. A set of reasons relate to our sample. For instance, the within group subsamples are smaller – these results are for a total of 242 cases for which the natural logarithm of net wealth values was able to be calculated (compared to the 512 observations in the full sample). Missing values and those with zero or negative net worth values were dropped when we take the natural log. Also, there is not enough skin color variation for whites to detect a relationship between skin shade and wealth. In addition, the sample size for African immigrants is small, with only three skin tone ratings receiving more than five cases. For African Americans, most were rated as having a medium or dark complexion, and the differences in wealth for them are small. However, it is noteworthy that light-skinned African Americans have a much higher median wealth than the other groups – but we have a small number of observations (a total of 6). The sample provides more variance in skin shades for Mexicans and Cambodians, but we did not find the correlation between wealth and skin shades to be statistically significant.

TABLE 7. Skin Tone and Wealth Correlations

	All	Whites	US Blacks	African	Mexican	Other Hispanic	Korean	Cambodian
Correlation	-0.074 (0.094)	-0.456 (0.355)	0.158 (0.201)	0.009 (0.384)	-0.043 (0.314)	1.045*** (0.230)	0.518* (0.267)	0.264 (0.380)
Observations	**242**	**50**	**43**	**10**	**45**	**10**	**47**	**37**
Adjusted R2	**-0.001**	**0.009**	**-0.010**	**-0.125**	**-0.023**	**0.556**	**0.036**	**-0.016**

Despite these shortcomings in our face-to-face survey data, we do find a correlation between skin tone and earnings (see discussion below). Consequently, what is it about wealth that makes it less likely to be correlated with skin tone? Therefore, another set of reasons is related to the measure of wealth itself that can serve to explain the lack of a statistically significant correlation between skin tone and wealth. Some of these reasons are the aggregation effect, the inheritances and bequests effect (including racial wealth destruction), the household risk appetite, and the household composition.

First, our wealth variable is calculated as the total household net worth, including different assets and debts. Hence the skin tone correlation might disappear when using an aggregate measure such as wealth. We calculate our wealth variable by subtracting each respondent's reported total household debts from total assets. Total assets include home equity, other real estates, vehicle equity, business equity, money in checking savings, and money market accounts, government bonds, stocks, mutual funds, retirement assets, and other assets. Total debt includes debts from credit cards, installment loans, student loans, medical bills, legal bills, money owed to friends and relatives, and other debts. Therefore, although we find a correlation between skin tone and earnings when it comes to building wealth, different factors affect the asset and debt composition that once aggregated as a net worth value might not be correlated with skin tone.

Second, recent economic literature (Hamilton and Chiteji, 2013) shows that inheritances, bequests, and intra-family transfers account for more of the racial wealth divide than any other demographic and socioeconomic indicators, including education, income, and household structure (see, e.g., Blau and Graham, 1990; Menchik and Jianakoplos, 1997; Conley, 1999; Charles and Hurst, 2003; Gittleman and Wolff, 2007). Thus, intra-family wealth transfers may confound the correlation between wealth and skin tone.

Along the same line, it is possible that lighter skinned blacks (if we can infer that those who were recorded as mulattoes were generally lighter complexioned), who historically had an advantage in business ownership (Kenzer, 1997, chapter 1), may have lost that business advantage via white terrorist actions or public policies like "slum" clearance and highway construction that gutted black business districts. If lighter skinned blacks disproportionately held wealth via business ownership they would have been disproportionate losers of wealth with the destruction of black businesses (Kenzer, 1997). Hence, confounding the skin-tone wealth differentiacials.

Third, the value of different assets and debts that influence total wealth is driven by the household's risk appetite and financial market behaviors that may not be correlated with skin tone. For example, investing in the stock market, mutual funds, retirement accounts, and business equity, etc., contributes significantly to total wealth, but market forces drive their values, minimizing the effects of certain biases (colorism or racism).

Fourth, we live in an increasingly diverse world in which it is now more common to see households made up of individuals of different skin tones, races, and ethnicities that contribute to the overall wealth of the household. Therefore, when we calculate a household level measure of wealth, the correlation of skin tones and wealth might be confounded.

These are some of the potential reasons why we may observe no correlation between skin tone and wealth. It is worth exploring further and testing these conjectures in future research.

5.2 Skin Tone and Earnings

In addition to questions relating to wealth, the NASCC survey also asked each respondent for their previous year's earnings, more specifically, the question asked: "How much did you earn from all jobs before taxes in 2014?" Note this question was asked of all respondents, regardless of employment status and approximately a third of the respondents answered $0. Since we use the natural log of net wealth, those observations with zero drop from our sample. Hence, the results of our analysis are conditional on having positive (non-zero) earnings. Those who refused to answer or answered "Don't know" are excluded from this part of our analysis.

TABLE 8. Skin Tone and Earnings Correlations

	All	Whites	US Blacks	African	Mexican	Other Hispanic	Korean	Cambodian
Correlation	-0.108** (0.043)	-0.042 (0.172)	-0.103 (0.095)	0.007 (0.215)	-0.030 (0.107)	-0.140 (0.298)	0.251 (0.173)	-0.003 (0.131)
Observations	**270**	**43**	**82**	**14**	**45**	**19**	**33**	**34**
Adjusted R2	**0.021**	**-0.023**	**0.000**	**-0.083**	**-0.022**	**-0.025**	**0.029**	**-0.031**
Female Subsample								
Correlation	-0.104 (0.067)	0.041 (0.340)	-0.221 (0.140)	0.053 (0.209)	-0.087 (0.198)	0.213 (0.109)	0.144 (0.267)	-0.150 (0.256)
Observations	**113**	**27**	**24**	**8**	**19**	**7**	**10**	**18**
Adjusted R2	**0.014**	**-0.039**	**0.031**	**-0.157**	**-0.054**	**0.371**	**-0.111**	**-0.042**

Table 8 shows the linear correlation coefficients between the natural log of earnings and skin tone for the sample broken down by racial-ethnic groups and a female subsample. It shows a negative and statistically significant relationship (-0.108) between skin tone and earnings when all cases are considered.

However, we observe no significance in the within-group relationships. When looking at the female subsample, there is no significant correlation for all females or within-group. The results for the female subsample should be taken as suggestive given the low number of observations for most of the groups.

It could be the case that such correlations are not statistically significant because we are not controlling for relevant variables that could affect the relationship between skin complexion and earnings. Therefore, in Table 9, we perform multiple regression analysis using OLS and interviewer fixed effects to control for potential unobservables and biases. Column (1) shows a negative and statistically significant correlation with no controls or interviewer fixed effects, as shown above. For example, it shows that an increase in the skin shade rating decreases earnings by 10.8 percent. Column (2) adds interviewer fixed effects and shows that the coefficient increases to 13 percent, demonstrating that relationship remains negative and statistically significant.

TABLE 9. Regression Earning and Skin Tone

	(1)	(2)	(3)	(4)	(5)	(6)
Skin Tone Rating	-0.108** (0.043)	-0.130** (0.050)	-0.044 (0.060)	-0.122 (0.080)	-0.036 (0.060)	-0.134* (0.077)
U.S. Black			-0.818*** (0.289)	-0.406 (0.363)	-0.586* (0.299)	-0.037 (0.373)
African			-0.289 (0.434)	0.114 (0.546)	-0.177 (0.402)	0.326 (0.486)
Mexican			-0.897*** (0.248)	-0.783*** (0.295)	-0.465 (0.299)	-0.219 (0.352)
Other Hispanic			-0.889*** (0.297)	-0.676** (0.325)	-0.563* (0.314)	-0.259 (0.339)
Korean			-0.728*** (0.278)	-0.338 (0.398)	-0.493 (0.330)	0.098 (0.451)
Cambodian			-0.830*** (0.242)	-0.435 (0.458)	-0.505* (0.260)	-0.022 (0.457)
Female					0.013 (0.157)	0.081 (0.189)
BA or Higher Degree					0.566*** (0.169)	0.856*** (0.208)
Married					0.251 (0.158)	0.151 (0.167)
Age					0.076** (0.035)	0.087** (0.037)
Age^(2)					-0.001** (0.000)	-0.001** (0.000)
Foreign Born					-0.252 (0.208)	-0.219 (0.235)
Interviewer FEs	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**
Observations	**270**	**244**	**270**	**244**	**270**	**244**
Adjusted R2	**0.021**	**-0.003**	**0.062**	**0.019**	**0.100**	**0.079**

When we control for racial-ethnic groups holding whites as the reference group, we find that the coefficient for skin tone rating loses significance in column (3). The same is true when we add interviewer fixed effects in column (4). This suggests that the relationship between skin tone and earnings is driven mainly by differences across subgroups. In particular, it implies that inter-racial differences in earnings cannot be explained by individual differences in skin color alone. Next, we add in column (5) other demographic characteristics such as gender, education, marriage, age, age squared, and foreign-born. Again, we find that skin tone rating is insignificant. However, when we corporate interviewers fixed effects in column (6), we observed that skin tone and earnings have a negative and statistically significant relationship – an increase in the skin shade rating decreases earnings by 13.4 percent. However, none of the racial-ethnic variables show significance. This is important because the information we control for in column (6) is similar to the information employers have available to them when deciding wage and compensation packages. The results suggest that the earning gap across racial-ethnic groups is driven by employer-specific biases.

For example, these results interestingly show that the coefficients for US Blacks and Cambodians are negative and significant when we do not control for interviewer fixed effects. Whenever we control for interviewer fixed effects, the coefficients for US Blacks and Cambodians become insignificant. This means that evaluator-specific unobservables drive biases against US Blacks and Cambodians. These effects are not found in any other racial-ethnic groups when comparing columns (3)-(6).

Mexicans, Other Hispanics, and Koreans show negative and statistically significant coefficients. However, the significance disappears when controlling for other demographics and interviewer fixed effects. Only Africans do not display any significance across all models, suggesting that African Blacks earn at a similar level as Whites, and they are less affected by evaluator-specific biases.

Females, married individuals, and foreign-born do not show any significance. On the other hand, holders of bachelor's or higher degrees and older individuals earn more. Although, older individuals see their earnings increase at a decreasing rate (the coefficient on age squared is negative). However, although skin color does not seem to affect earnings independent of race, the question remains whether skin color significantly affects earnings differences intra-race. We perform a Blinder-Oaxaca decomposition to shed some light on this question in the following section below.

5.3 Skin Tone and Attractiveness

At the end of each survey, interviewers were asked to rate the physical attractiveness of the respondent on a scale of 1 (Very Unattractive) to 5 (Very Attractive). The most frequently chosen rating was 3 (About Average), of which 60 percent (307/510) of the respondents were rated as such. Table 10 presents the distribution of the attractiveness ratings stratified by the respondent's racial group in the top panel and by skin tone in the bottom panel. Out of the total 512 observations, only two did not provide an attractiveness rating – one Mexican and one Other Hispanic. As expected, across all groups, the average attractiveness rating was "About Average." Approximately a quarter of the respondents also received an "Attractive" rating, with 93 percent receiving "About Average" or higher. The data also show that the attractiveness rating distribution is skewed to light skin tones, with skin tones of 3 or lower receiving 59 percent of the "Attractive" and "Very Attractive" ratings.

To get exact values on the strength of the correlations, we compute and analyze the linear correlation coefficients between the skin color ratings (1-10) and attractiveness ratings (1-5). As shown in Table 11, the coefficients confirm that skin color darkness is negatively correlated with attractiveness. Darker skin colors are associated with lower ratings of attractiveness (see the first column). The effect is modest when all respondents are analyzed together—the correlation is only -0.068 and statistically significant—but the correlation within some of the racial-ethnic groups is generally more robust.

TABLE 10. Attractiveness, Ethnicity, and Skin Tone

Race/Ethnicity	Very Unattractive	Unattractive	About Average	Attractive	Very Attractive	Total
White	3	4	50	25	8	**90**
US Black	4	6	92	25	15	**142**
African	0	1	11	10	2	**24**
Mexican	1	4	49	19	13	**86**
Other Hispanic	1	3	15	8	4	**31**
Korean	0	1	54	14	2	**71**
Cambodian	0	6	36	22	2	**66**
Total	**9**	**25**	**307**	**123**	**46**	**510**

Attractiveness / Skin Tone Rating	1	2	3	4	5	6	7	8	9	10	Total
Very Unattractive	0	1	2	2	2	0	0	1	0	1	**9**
Unattractive	2	3	7	5	1	2	1	2	0	0	**23**
About Average	31	38	54	85	47	22	22	5	1	1	**306**
Attractive	22	27	23	21	13	7	3	4	3	0	**123**
Very Attractive	9	8	10	10	4	2	2	0	0	0	**45**
Total	**64**	**77**	**96**	**123**	**67**	**33**	**28**	**12**	**4**	**2**	**506**

When the correlation analysis is stratified by race, the relationship is surprisingly strongest for White respondents (-0.406), followed by Other Hispanics, Koreans, Mexican, and US Blacks, who have significant correlation coefficients of -0.234, -0.195, -0.150, and -0.113, respectively. On the other hand, Africans and Cambodians show no statistically significant correlation between skin tone and attractiveness. Most noteworthy is that although the association is stronger or weaker for some groups, the correlation is negative for all groups. That is, lighter skin color is consistently associated with higher attractiveness.

TABLE 11. Skin Tone and Attractive Correlation by Racial Ethnic Groups

	All	Whites	US Blacks	African	Mexican	Other Hispanic	Korean	Cambodian
Correlation	-0.068*** (0.020)	-0.406*** (0.119)	-0.113** (0.050)	-0.053 (0.107)	-0.150* (0.085)	-0.234** (0.098)	-0.195*** (0.070)	-0.092 (0.078)
Observations	**504**	**90**	**139**	**23**	**85**	**31**	**71**	**65**
Adjusted R^2	**0.024**	**0.159**	**0.040**	**-0.027**	**0.027**	**0.076**	**0.134**	**0.008**

5.5 Skin Tone, Attractiveness, and Earnings Combined

So far, we have observed that skin tone is negatively correlated with earnings (but not with wealth) when including the entire sample. However, this does not hold when we look at within-group correlations (see Table 8). We also observe that skin tone and attractiveness are highly correlated within groups and weakly correlated (but highly significant) when using the total face-to-face sample (see Table 11). Therefore, we next analyze skin color, attractiveness, and earnings together using OLS.

Table 12 presents a set of regression models on the relationship between skin tone, attractiveness, and our dependent variable, the natural log of earnings. In column (1), we first include both the attractiveness and skin tone ratings without controlling for anything else. We see that attractiveness loses its statistical significance while skin tone is significant. We find that the relationship does not change when adding interviewer fixed effects as in column (2). Next, in columns (3) and (4), we control race and ethnicity and interviewer fixed effects. As found earlier, we see that the coefficient for skin tone loses its significance when controlling for race, ethnicity, and interviewer fixed effects.

TABLE 12. Relationship between Skin Tone, Attractiveness, and Earnings

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Skin Tone*Attractiveness							0.077**	0.048
							(0.032)	(0.037)
Attractiveness Rating	0.106	0.110	0.120	0.141	0.118	0.161	-0.166	-0.021
	(0.086)	(0.101)	(0.084)	(0.101)	(0.080)	(0.098)	(0.155)	(0.188)
Skin Tone Rating	-0.095**	-0.117**	-0.020	-0.094	-0.015	-0.106	-0.263**	-0.253*
	(0.041)	(0.049)	(0.060)	(0.079)	(0.058)	(0.074)	(0.114)	(0.133)
U.S. Black			-0.868***	-0.493	-0.628**	-0.119	-0.689**	-0.196
			(0.290)	(0.367)	(0.299)	(0.376)	(0.296)	(0.368)
African			-0.414	-0.028	-0.299	0.176	-0.434	0.044
			(0.441)	(0.558)	(0.405)	(0.493)	(0.399)	(0.494)
Mexican			-0.931***	-0.851***	-0.485	-0.268	-0.514*	-0.306
			(0.246)	(0.300)	(0.297)	(0.350)	(0.296)	(0.345)
Other Hispanic			-0.926***	-0.746**	-0.592*	-0.322	-0.601*	-0.352
			(0.296)	(0.328)	(0.312)	(0.339)	(0.316)	(0.336)
Korean			-0.752***	-0.404	-0.520	0.025	-0.537	-0.010
			(0.278)	(0.406)	(0.332)	(0.453)	(0.329)	(0.450)
Cambodian			-0.859***	-0.506	-0.531**	-0.075	-0.560**	-0.117
			(0.241)	(0.462)	(0.260)	(0.457)	(0.256)	(0.442)
Female					0.040	0.111	0.028	0.111
					(0.155)	(0.185)	(0.155)	(0.185)
BA or Higher Degree					0.546***	0.846***	0.561***	0.846***
					(0.170)	(0.206)	(0.169)	(0.206)
Married					0.235	0.120	0.230	0.122
					(0.159)	(0.169)	(0.157)	(0.169)
Age					0.075**	0.086**	0.075**	0.085**
					(0.035)	(0.037)	(0.035)	(0.036)
Age^(2)					-0.001**	-0.001**	-0.001**	-0.001**
					(0.000)	(0.000)	(0.000)	(0.000)
Foreign Born					-0.250	-0.213	-0.296	-0.237
					(0.206)	(0.232)	(0.210)	(0.236)
Interviewer FEs	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**
Observations	**270**	**244**	**270**	**244**	**270**	**244**	**270**	**244**
Adjusted R^2	**0.022**	**-0.002**	**0.064**	**0.022**	**0.102**	**0.085**	**0.111**	**0.085**

We see that all racial-ethnic groups, except for African, have negative and statistically significant coefficients. Evidence that they absorb some of the effects away from skin tone. In columns (5) and (6), we add other demographic variables to control for differences in education, gender, marital status, age, and whether the individual is foreign-born, plus interviewer fixed effects. Again, the results show that the coefficients for attractiveness and skin tone remain insignificant.

The relationship of skin tone and attractiveness may affect earning through an interaction term. In column (7), we add the interaction of skin tone and attractiveness to the regression. We find that, as suspected, the interaction is negative and statistically significant. The effect, however, drops its significance once the interviewer fixed effects are included in column (8). Not surprisingly, this suggests that beauty and skin tone are in the eyes of the beholder. In other words, once we control for unobservables such as potential biases and preferences of the interviewer, the effects go away, confirming our hypothesis that skin tone and attractiveness affect earnings through the biases and preferences of employers.

6. Decomposition Analysis: Wealth, Earnings, & Health

However, although skin color does not seem to affect earnings independent of race, the question remains whether skin color significantly affects earnings differences intra-race. If so, what are the driving forces for such differentials? We extend the questions to include not only the earnings gap but also the wealth and health gaps.

In this section, we estimate racial differences in wealth (or net worth), annual earnings, and health using the Blinder-Oaxaca decomposition to shed some light on these questions. Specifically, we use a twofold decomposition method with a pooled regression model. This method decomposes the gap in average outcomes (e.g., earnings, net worth, and health) into one component that can be explained by observable differences in age, education levels, and gender, and another component that differences in these covariates cannot explain. The unexplained component can be attributed to unobservable characteristics across racial and ethnic groups, including discrimination in various markets – labor, financial, healthcare, etc. (Oaxaca, 1973; Blinder, 1973; Card and Krueger 1992; Fortin et al, 2011)

TABLE 13. Summary Statistics for Key Decomposition Variables

	Whites	US Blacks	African Blacks	Mexicans	Other Hispanics	Koreans	Cambodians
Demographic Characteristics:							
Age	50.92 (17.51)	45.13 (15.68)	47.15 (15.49)	36.38 (14.99)	40.44 (15.10)	54.05 (14.40)	48.15 (15.74)
Some High School (No Diploma)	0.06 (0.236)	0.10 (0.305)	0.03 (0.177)	0.18 (0.386)	0.25 (0.441)	0.03 (0.160)	0.27 (0.450)
High School (Diploma)	0.15 (0.360)	0.35 (0.478)	0.28 (0.459)	0.42 (0.497)	0.30 (0.466)	0.20 (0.400)	0.20 (0.405)
Some College (No Degree)	0.35 (0.479)	0.44 (0.498)	0.51 (0.511)	0.34 (0.477)	0.42 (0.502)	0.51 (0.503)	0.33 (0.474)
Bachelor's Degree or Higher	0.44 (0.500)	0.10 (0.303)	0.18 (0.392)	0.04 (0.200)	0.03 (0.160)	0.26 (0.444)	0.11 (0.312)
Bachelor's Degree	0.22 (0.416)	0.07 (0.264)	0.09 (0.299)	0.03 (0.184)	0.03 (0.160)	0.19 (0.392)	0.07 (0.258)
Post-Graduate Work	0.22 (0.419)	0.03 (0.163)	0.08 (0.284)	0.01 (0.0829)	0.00 (0)	0.08 (0.269)	0.04 (0.189)
Married	0.32 (0.468)	0.15 (0.359)	0.22 (0.424)	0.25 (0.434)	0.33 (0.478)	0.56 (0.500)	0.39 (0.491)
Female	0.46 (0.501)	0.69 (0.462)	0.54 (0.509)	0.65 (0.479)	0.74 (0.448)	0.64 (0.483)	0.55 (0.501)
Born in U.S.	0.78 (0.416)	0.95 (0.227)	0.53 (0.510)	0.58 (0.496)	0.55 (0.505)	0.03 (0.165)	0.21 (0.409)
Earnings and Wealth:							
Household Income (2014)	73,084 (89,201)	26,820 (32,288)	55,256 (82,593)	33,230 (37,739)	25,304 (29,100)	51,697 (51,733)	39,838 (66,972)
Net Worth	772,090	63,399 (190,817)	181,711	80,782 (242,557)	28,729 (84,079)	220,841	71,962 (283,627)
Health:							
Self-Reported Health	2.33 (1.064)	2.29 (1.061)	2.19 (1.078)	2.42 (1.017)	2.48 (1.225)	2.83 (1.112)	3.34 (1.092)
N	**90**	**142**	**24**	**86**	**32**	**71**	**65**

Table 13 provides the summary statistics for our key variables used for our decomposition broken down by racial-ethnic groups. The variables for age, married, female, born in the US are the same as before. We add more detailed educational variables given the high correlation between education and earnings, wealth, and health. We add a variable for whether the respondent has some high school education (with no diploma), a high school diploma, some college (with no degree), a college degree, and any post-graduate work (with or without a degree). The top statistics are the means or the percentage of the within-group population. The standard errors are given in parenthesis. In terms of education, Whites tend to have the highest rate of college graduates and post-graduate work with 22 percent for both.

Earnings and wealth variables are shown in the second panel of the table. Whites are the group with the highest average household income and wealth of $73,084 and $772,090, respectively. In terms of income, Black Africans are the group in the sample with the second-highest income ($55,256), followed by Koreans ($51,697).

In comparison, Koreans are the groups with the second-highest accumulation of wealth ($220,841), followed by Black Africans ($181,711). Other Hispanics and US Blacks are the groups with the lowest income ($25,304 and $26,820, respectably) and wealth ($28,729 and $63,399, respectably). Finally, in the bottom panel, self-reported health is presented. This health measure is on a 1-5 scale where a score of one is "excellent health" and a score of five is "poor health." Surprisingly, African show the best self-reported health at 2.19, followed by US Blacks (2.29), Whites (2.33), Mexicans (2.42), Other Hispanics (2.48), Koreans (2.83), and Cambodians (3.34). Again, this is surprising given some of the national health statistics for blacks and African Americans.

6.1 Decomposition of the Wealth Gap

We start first by decomposing the racial wealth gap. Table 13.1 shows the average dollar amount for total net worth by racial-ethnic groups. Our wealth variable is measured as the total household net worth -- calculated by subtracting each respondent's reported total debts from total assets. The value of total assets includes home equity, other real estates, vehicle equity, business equity, money in checking, savings, and money market accounts, government bonds, stocks, mutual funds, retirement assets, and other assets. Total debt includes debts from credit cards, installment loans, student loans, medical bills, legal bills, money owed to friends and relatives, and other debts. Of note is that total net worth information was captured for only 335 out of the 512 observations in the sample. The number of observations by racial-ethnic group with the wealth variable non-missing is given in Table 13.1. We use these observations to perform our decompositions below.

TABLE 13.1. Total Net Worth by Race and Ethnicity

	Whites	US Blacks	African Blacks	Mexicans	Other Hispanics	Koreans	Cambodians
Mean Household Net Worth	772,090	63,399	181,711	80,782	28,729	220,841	71,962
N	**59**	**74**	**13**	**65**	**20**	**56**	**47**

Tables 13.2 and 13.3 give a breakdown of total assets and total debt for each racial and ethnic group. Home equity and other real estate investments are the main contributors to total assets across all groups. Retirement assets are also an important driver. Business equity seems to play an essential role in building wealth for African Blacks, Mexicans, and Cambodians. In contrast, stocks and mutual funds are critical contributors primarily for whites. Student loans are the leading debt category across all groups, followed by credit card debt and installment loan debt.

TABLE 13.2. Total Assets by Race and Ethnicity

	Whites	US Blacks	African Blacks	Mexicans	Other Hispanics	Koreans	Cambodians
Home Equity	220,128	51,681	124,777	34,046	7,679	114,538	24,681
Other Real Estate	82,446	12,015	113,980	12,859	1,060	48,903	383
Vehicle Equity	10,824	4,489	4,679	7,291	4,676	9,040	4,691
Business Equity	34,917	1,196	62,370	12,602	0	2,749	25,231
Checking, Savings, and Money Market	44,363	4,268	14,724	6,831	3,758	20,977	14,348
Stocks	47,712	1,806	1,523	1,881	301	1,155	3,304
Mutual Funds	87,353	2,082	5,587	2,746	800	1,798	722
Retirement Assets	235,006	9,259	19,516	7,303	3,920	17,456	5,970
Other Assets	7,526	2,414	10,484	2,606	83	2,698	11,065

TABLE 13.3. Total Debt by Race and Ethnicity

	Whites	US Blacks	African Blacks	Mexicans	Other Hispanics	Koreans	Cambodians
Credit Card Debt	4,034	2,003	2,782	1,237	1,702	1,837	9,057
Installment Loan Debt	16,605	1,336	0	281	659	0	119
Student Loan Debt	25,081	4,675	3,399	4,387	4,202	10,793	3,352
Medical Debt	284	1,304	288	40	320	177	923
Legal Debt	8,087	87	252	639	152	0	0
Debt to Friends and Relatives	0	886	54	130	7	2,683	1,157
Other Debt	0	0	0	313	0	0	0

For each of our Blinder-Oaxaca decompositions presented below, "group 1" denotes the comparison racial group (whites), and "group 2" represents the minority racial or ethnic group of interest. The rows titled "group 1" and "group 2" give the average outcome of each racial group, and the row titled "difference" shows the difference in outcome between the two groups. Positive differences mean that the average outcome for whites was higher than that for the comparison racial/ethnic group. The units for these estimates are standard deviations.

Table 14 gives the result of these decompositions of the wealth gap. We find substantial differences in the average net worth gap across races. For example, the difference between the average wealth of whites and US Blacks is 0.80 standard deviations, with 44 percent of this gap explained by group differences in age, education, gender, and marital status. This means that 56 percent of the wealth gap between whites and blacks is unexplained, which the literature attribute to different sources of discrimination (Oaxaca, 1973; Blinder, 1973; Card and Krueger 1992; Fortin et al., 2011).

TABLE 14. Decomposition of the Wealth Gap

	U.S. Blacks			African Blacks			Mexicans		
Variables	overall	explained	unexplained	overall	explained	unexplained	overall	explained	unexplained
Age		0.0498	8.697		0.424	7.021		-0.0102	9.118
		(0.21)	(6.35)		(0.80)	(6.57)		(0.68)	(5.91)
Age^2		0.0549	-3.101		-0.0814	-2.037		0.356	-3.592
		(0.20)	(3.07)		(0.69)	(3.03)		(0.62)	(2.71)
High School (Diploma)		0.00703	-0.119		0.00778	-0.198		-0.0649	-0.0474
		(0.02)	(0.11)		(0.03)	(0.15)		(0.05)	(0.12)
Some College (No Degree)		-0.0176	0.109		-0.102	0.316		-0.00531	0.126
		(0.03)	(0.18)		(0.10)	(0.24)		(0.04)	(0.17)
Bachelor's College or Higher		0.22	0.391		0.357	0.305		0.483*	0.132
		(0.15)	(0.28)		(0.26)	(0.27)		(0.26)	(0.20)
Married		0.0693	0.0789		0.0591	0.111		0.0281	0.101
		(0.07)	(0.13)		(0.09)	(0.14)		(0.04)	(0.15)
Female		-0.0272	0.186		0.0029	0.271		-0.0304	0.228
		(0.06)	(0.39)		(0.02)	(0.34)		(0.06)	(0.38)
group 1	0.604**			0.604**			0.604**		
	(0.27)			(0.28)			(0.27)		
group 2	-0.199***			-0.065			-0.178***		
	(0.02)			(0.10)			(0.03)		
difference	0.803***			0.669**			0.782***		
	(0.27)			(0.29)			(0.27)		
explained	0.356**			0.668*			0.757**		
	(0.15)			(0.38)			(0.31)		
unexplained	0.447**			0.000897			0.0248		
	(0.21)			(0.35)			(0.21)		
Constant			-5.795			-5.788			-6.041
			(3.70)			(3.98)			(3.68)
N	**133**	**133**	**133**	**72**	**72**	**72**	**123**	**123**	**123**

	Koreans			Cambodians					
Variables	overall	explained	unexplained	overall	explained	unexplained	overall	explained	unexplained
Age		-0.516	8.494		0.0281	8.333			
		(0.550)	(7.613)		(0.115)	(6.511)			
Age^2		0.268	-2.717		0.00347	-2.587			
		(0.435)	(3.916)		(0.077)	(3.201)			
High School (Diploma)		0.00167	-0.0329		-0.00623	-0.0704			
		(0.016)	(0.133)		(0.019)	(0.110)			
Some College (No Degree)		-0.0609	0.264		-0.0388	0.151			
		(0.063)	(0.238)		(0.066)	(0.187)			
Bachelor's College or Higher		0.138	0.57		0.493*	0.134			
		(0.120)	(0.389)		(0.271)	(0.202)			
Married		-0.12	0.203		-0.0202	0.102			
		(0.115)	(0.308)		(0.041)	(0.204)			
Female		-0.0553	0.159		-0.00533	0.192			
		(0.064)	(0.422)		(0.027)	(0.344)			
group 1	0.604**			0.604**					
	(0.290)			(0.273)					
group 2	-0.0206			-0.189***					
	(0.055)			(0.049)					
difference	0.625**			0.793***					
	(0.295)			(0.277)					
explained	-0.344**			0.454*					
	(0.170)			(0.273)					
unexplained	0.969***			0.340*					
	(0.349)			(0.206)					
Constant			-5.972			-5.915			
			(4.085)			(3.741)			
Observations	**115**	**115**	**115**	**106**	**106**	**106**			

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

In contrast, almost 100 percent of the wealth gap for Africans and Mexicans can be explained by differences in these covariates - age, education, gender, and marital status. The gap is 0.67 standard deviations for Africans, with 99.9 percent explained by group differences in observables. The gap is 0.78 standard deviations for Mexicans, with 96.8 percent of the gap explained by differences in observables.The findings offer a different picture for the two Asian groups. For Koreans, the wealth gap versus whites is 0.63 standard deviation. However, differences in age, education, gender, and marital status tend to reduce the wealth gap in benefit of Koreans by 55 percent of the current wealth gap. In comparison, the unexplained portion is 155 percent higher. This shows that there is a significant source of discrimination against Koreans. Similarly, the gap is 0.79 standard deviations for Cambodians, with 57.3 percent of the gap explained by differences in observables, showing a significant source of discrimination.

We also perform the within racial-ethnic group wealth gap decomposition by skin tone in which we compare light-skin respondents with other respondents from the same racial-ethnic group (see Table 15). Given the limited number of observations for some groups, we perform the decomposition for only US Blacks, Koreans, and Cambodians. We begin by classifying survey respondents into a binary category for light complexion versus non-light complexion. The threshold for "light" skin complexion differed across races and was selected by analyzing the distribution of complexion scores within each race.

TABLE 15. Decomposition of the Within Race Net Worth Gap by Skin Tone

	U.S. Blacks			Koreans			Cambodians		
Variables	overall	explained	unexplained	overall	explained	unexplained	overall	explained	unexplained
Age		-0.00293	-0.0796		0.139	2.68		0.0457	-1.392
		(0.018)	(0.642)		(0.159)	(4.367)		(0.097)	(1.778)
Age^2		-0.00046	-0.0728		-0.184	-1.068		-0.0595	1.004
		(0.007)	(0.360)		(0.182)	(2.154)		(0.117)	(1.117)
Bachelor's Degree or Higher		-0.00499	0.0584		-0.0175	0.208**		-0.00529	0.0616*
		(0.011)	(0.046)		(0.028)	(0.104)		(0.015)	(0.037)
Female		-0.00436	-0.0274		0.002	0.0238		-0.0476	0.0985
		(0.007)	(0.061)		(0.009)	(0.150)		(0.034)	(0.062)
Constant			0.156			-1.931			0.187
			(0.304)			(2.361)			(0.615)
group 1	-0.184***			-0.122			-0.231***		
	(0.052)			(0.102)			(0.029)		
group 2	-0.206***			0.0247			-0.123		
	(0.026)			(0.071)			(0.110)		
difference	0.0218			-0.147			-0.108		
	(0.058)			. (0.124)			(0.113)		
explained	-0.0127			-0.0607			-0.0667		
	(0.021)			(0.055)			(0.047)		
unexplained	0.0346			-0.0861			-0.0415		
	(0.054)			(0.112)			(0.091)		
Observations	**74**	**74**	**74**	**56**	**56**	**56**	**47**	**47**	**47**

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 15 gives the results of these decompositions for net worth. For U.S. Blacks, we find a wealth gap of 0.02 standard deviations, with lighter complexioned individuals having higher net worth than darker complexioned individuals. However, the wealth gap is not statistically significant. This is evidence that colorism does not necessarily correlate with the wealth gap within a racial group. We find similar results for Koreans and Cambodians. Although we observe an opposite pattern with dark-complexioned individuals earning more than their light-complexioned counterparts for the two Asian groups. The observed wealth gaps of 0.15 and 0.11 standard deviations, respectably, are statistically insignificant.

6.2 Decomposition of the Earnings Gap

We find substantial racial differences in average earnings for the majority of racial/ethnic groups. The gap in average 2014 earnings between whites and U.S. blacks is $23,631, with only 31 percent of this gap explained by group differences in age, education, and gender (see Table 16). The unexplained (69 percent) part of the income gap is also statistically significant, providing evidence of discrimination. For African Blacks, the income gap is $9,611, but it is not statistically significant.

TABLE 16. Decomposition of the Earning Gap

	U.S. Blacks			African Blacks			Mexicans		
Variables	overall	explained	unexplained	overall	explained	unexplained	overall	explained	unexplained
Age		13,511*	175,313*		19,762	-8,047		55,202***	95,562
		(7,599)	(91,519)		(20,667)	(126,844)		(14,998)	(85,630)
Age^2		-16,405*	-92,036**		-25,878	-2,061		-54,943***	-44,751
		(8,802)	(44,099)		(21,831)	(59,863)		(14,866)	(38,394)
High School (Diploma)		-2,280*	4,642		-3,555	-3,525		-6,812***	2,645
		(1,193)	(3,016)		(3,810)	(5,344)		(2,371)	(3,740)
Some College (No Degree)		-1,652	6,200		-3,756	-1,534		42.79	4,950
		(1,459)	(4,774)		(4,290)	(7,533)		(1,983)	(4,723)
Bachelor's Degree or Higher		13,126***	8,199*		12,588*	-6,325		18,015***	4,519
		(3,899)	(4,947)		(7,258)	(7,778)		(5,191)	(3,879)
Female		992	608.4		245.7	3,437		-49.42	-2,702
		(1,376)	(6,003)		(796)	(9,401)		(1,109)	(6,020)
group 1	42,989***			42,989***			42,989***		
	(6,300)			(6,477)			(6,283)		
group 2	19,357***			33,378***			17,780***		
	(2,009)			(9,555)			(2,469)		
difference	23,631***			9,611			25,209***		
	(6,613)			(11,544)			(6,751)		
explained	7,293*			-593.3			11,456*		
	(4,330)			(6,605)			(6,392)		
unexplained	16,339***			10,204			13,753**		
	(5,501)			(9,725)			(6,461)		
Constant			-86,588*			28,260			-46,469
			(49,256)			(71,854)			(50,697)
N	**208**	**208**	**208**	**96**	**96**	**96**	**148**	**148**	**148**

	Other Hispanics			Korean			Cambodian		
Variables	overall	explained	unexplained	overall	explained	unexplained	overall	explained	unexplained
Age		37,128**	129,147		-11,491	195,986		10,823	157,007
		(18,591)	(90,769)		(10,491)	(120,525)		(10,892)	(96,328)
Age^2		-40,021**	-54,216		9,719	-86,757		-14,186	-74,921
		(18,728)	(40,224)		(11,940)	(65,993)		(12,110)	(46,516)
High School (Diploma)		-3,148	6,202*		-655.8	6,237*		-1,288	5,329*
		(2,452)	(3,756)		(1,631)	(3,301)		(1,400)	(3,089)
Some College (No Degree)		-2,719	7,250		-3,262	12,940*		67	9,476**
		(2,987)	(5,459)		(2,787)	(6,724)		(1,734)	(4,771)
Bachelor's Degree or Higher		18,867***	5,475*		4,628	21,004***		14,280***	4,633
		(6,254)	(3,313)		(3,630)	(7,496)		(4,957)	(4,992)
Female		1,506	17,149*		1,811	7,417		346.4	2,019
		(2,303)	(8,971)		(2,194)	(11,945)		(789)	(5,794)
group 1	42,989***			42,989***			42,989***		
	(6,422)			(6,661)			(6,342)		
group 2	17,859***			23,751***			18,554***		
	(3,660)			(5,611)			(3,709)		
difference	25,129***			19,237**			24,434***		
	(7,392)			(8,710)			(7,347)		
explained	11,612			750.1			10,044*		
	(7,738)			(4,284)			(5,321)		
unexplained	13,518*			18,487**			14,391**		
	(7,009)			(8,180)			(6,486)		
Constant			-97,489*			-138,340**			-89,152*
			(53,252)			(60,939)			(52,532)
N	**105**	**105**	**105**	**132**	**132**	**132**	**132**	**132**	**132**

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

For Mexicans, the gap is $25,209, with 55 percent of the gap unexplained by the set of control variables. We find a similar income gap for Other Hispanics. For Koreans, the gap is $19,237 (96 percent of the gap is unexplained). For Cambodians, the gap is $24,434 (59 percent of the gap is unexplained). When comparing the unexplained part of the income gap, we see that Koreans face the most considerable income discrimination of the racial-ethnic groups, followed by US blacks, Cambodians, and Hispanics. Evidence shows no bias against African Blacks that affect their income.

TABLE 17. Decomposition of the Within Race Earnings Gap by Skin Tone

	U.S. Blacks			Mexicans		
Variables	overall	explained	unexplained	overall	explained	unexplained
Age		-3,116	-57,131		-6,666	26,366
		(4,032)	(49,559)		(8,648)	(50,724)
Age^2		3,611	31,360		6,182	-15,897
		(4,439)	(22,878)		(8,648)	(24,675)
Bachelor's Degree or Higher		560.1	4,894**		376.4	-2,358
		(1,182)	(2,109)		(1,241)	(1,560)
Female		255	-3,715		-21.29	-130.6
		(443)	(6,364)		(183)	(5,635)
group 1	27,291***			14,490***		
	(4,058)			(2,894)		
group 2	16,011***			23,029***		
	(2,169)			(4,104)		
difference	11,280**			-8,539*		
	(4,602)			(5,022)		
explained	1,310			-128.1		
	(1,525)			(2,148)		
unexplained	9,970**			-8,411*		
	(4,186)			(4,443)		
Constant			34,562			-16,390
			(26,648)			(26,901)
Observations	**129**	**129**	**129**	**72**	**72**	**72**

	Koreans			Cambodians		
Variables	overall	explained	unexplained	overall	explained	unexplained
Age		6,143	-31,474		7,869	-17,698
		(8,695)	(141,780)		(8,247)	(71,971)
Age^2		-13,719	56,779		-10,739	21,873
		(14,166)	(99,094)		(9,944)	(40,457)
Bachelor's Degree or Higher		-740	12,959		-6,011	9,359*
		(1,739)	(8,979)		(4,773)	(5,018)
Female		-1,046	24,009		-4,514	1,347
		(2,284)	(19,791)		(2,893)	(4,191)
group 1	16,928**			15,576***		
	(7,515)			(4,681)		
group 2	27,990*** (8,201)			23,536*** (5,225)		
difference	-11,063			-7,960		
	(11,123)			(7,015)		
explained	-9,362			-13,394*		
	(7,642)			(7,023)		
unexplained	-1,700			5,434		
	(9,688)			(7,279)		
Constant			-63,974			-9,446
			(50,683)			(35,349)
Observations	**56**	**56**	**56**	**56**	**56**	**56**

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

We also perform the within racial-ethnic group income decomposition by skin tone. We compare light-skin respondents with other respondents from the same racial-ethnic group (see Table 17). Given the limited skin shade variation for Whites, African Blacks, and Other Hispanics within the same racial-ethnic group, we perform the decomposition for US Blacks, Mexicans, Koreans, and Cambodians only. For U.S. Blacks, we find a skin shade income gap of $11,280, with lighter complexioned individuals earning more than darker complexioned individuals. We find that 88 percent of the skin-shade income gap is unexplained and statistically significant, providing evidence of discrimination or colorism affecting US Blacks. Interestingly, we observe an opposite pattern for Mexicans, Koreans, and Cambodians, with dark-complexioned individuals earning more than their light-complexioned counterparts. Respectively, we observe differences of $8,540, $11,060, and $7,960. However, only the skin shade income gap is statistically significant for Mexicans (with a 90 percent significance level) but not for Koreans and Cambodians.

6.3 Decomposition of the Health Gap

TABLE 18. Decomposition of the Health Gap, Part 1

	U.S. Blacks			African Blacks			Mexicans		
Variables	overall	explained	unexplained	overall	explained	unexplained	overall	explained	unexplained
Age		0.00412	-0.105		-0.06	2.341		-0.0188	-0.558
		(0.113)	(1.916)		(0.112)	(2.401)		(0.283)	(1.916)
Age^2		0.0913	-0.113		0.121	-1.584		0.158	0.155
		(0.116)	(0.935)		(0.144)	(1.175)		(0.249)	(0.914)
High School (Diploma)		0.0872	-0.258*		0.203	0.265		0.0494	-0.409**
		(0.065)	(0.136)		(0.169)	(0.183)		(0.087)	(0.163)
Some College (No Degree)		0.0449	-0.416*		0.2	0.276		-0.000202	-0.525**
		(0.043)	(0.232)		(0.161)	(0.326)		(0.022)	(0.224)
Bachelor's Degree or Higher		-0.185	-0.545**		-0.436**	0.214		-0.294**	-0.385**
		(0.115)	(0.218)		(0.198)	(0.155)		(0.146)	(0.191)
Female		-0.0123	-0.0336		-0.0154	-0.292		-0.0159	-0.139
		(0.034)	(0.163)		(0.027)	(0.208)		(0.031)	(0.183)
group 1	2.331***			2.331***			2.331***		
	(0.109)			(0.113)			(0.110)		
group 2	2.288***			2.186***			2.445***		
	(0.092)			(0.217)			(0.115)		
difference	0.0423			0.145			-0.115		
	(0.143)			(0.245)			(0.159)		
explained	0.0307			0.0127			-0.122		
	(0.081)			(0.119)			(0.144)		
unexplained	0.0116			0.132			0.00719		
	(0.151)			(0.202)			(0.201)		
Constant			1.482			-1.086			1.868
			(1.195)			(1.500)			(1.223)
N	**232**	**232**	**232**	**114**	**114**	**114**	**175**	**175**	**175**

	Other Hispanics			Koreans			Cambodians		
Variable	overall	explained	unexplained	overall	explained	unexplained	overall	explained	unexplained
Age		0.142	2.071		-0.0156	-1.156		0.0153	-1.817
		(0.262)	(2.056)		(0.087)	(2.922)		(0.064)	(2.626)
Age^2		0.0669	-2.082**		-0.0177	0.205		0.0233	0.746
		(0.233)	(1.010)		(0.060)	(1.535)		(0.070)	(1.371)
High School (Diploma)		0.191	-0.0958		0.0353	-0.388**		0.0536	-0.137
		(0.127)	(0.165)		(0.052)	(0.175)		(0.067)	(0.106)
Some College (No Degree)		0.11	-0.116		0.135	-0.926**		-0.0196	-0.0749
		(0.135)	(0.249)		(0.105)	(0.413)		(0.094)	(0.196)
Bachelor's Degree or Higher		-0.605***	-0.113		-0.232*	-0.452		-0.506***	-0.0555
		(0.181)	(0.152)		(0.133)	(0.289)		(0.141)	(0.199)
Female		0.00885	-0.636**		-0.0306	-0.217		-0.0049	-0.0498
		(0.055)	(0.282)		(0.032)	(0.181)		(0.015)	(0.155)
group 1	2.331***			2.331***			2.331***		
	(0.112)			(0.117)			(0.111)		
group 2	2.440***			2.829***			3.343***		
	(0.219)			(0.127)			(0.137)		
difference	-0.109			-0.499***			-1.012***		
	(0.246)			(0.172)			(0.176)		
explained	-0.0853			-0.126			-0.438***		
	(0.194)			(0.086)			(0.144)		
unexplained	-0.0237			-0.373**			-0.574***		
	(0.247)			(0.169)			(0.187)		
Constant			0.949			2.561			0.813
			(1.281)			(1.640)			(1.467)
N	**121**	**121**	**121**	**161**	**161**	**161**	**155**	**155**	**155**

Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Tables 18 give the results of these decompositions for self-reported health. This health measure is on a 1-5 scale where a score of one is "excellent health" and a score of five is "poor health." The results show statistically significant differences in self-reported health only for Koreans and Cambodians. On average, Koreans report a health score of 0.50 points higher than whites, primarily due to unexplained factors. In comparison, Cambodians report a score 1.01 points higher than whites due to both explained (43 percent) and unexplained (57 percent) factors.

Similarly, we perform the within racial-ethnic group decomposition by skin tone for self-reported health. Table 19 gives the results of these decompositions. We only find significant differences in self-reported health for Mexicans. On average, light-complexioned Mexicans report a health score 0.59 points higher than dark-complexioned Mexicans. Although the estimates are not statistically significant, we observe a similar pattern for U.S. Blacks and Cambodians, with light-complexioned individuals reporting better health. Respectively, the differences in self-reported health are 0.10 points and 0.06 points. Koreans display an opposite pattern, with dark-complexioned Koreans having a health score 0.15 points higher on average.

TABLE 19. Decomposition of the Within Race Health Gap by Skin Tone

	U.S. Blacks			Mexicans		
Variables	overall	explained	unexplained	overall	explained	unexplained
Age		0.0635	-2.297		0.0303	-1.806
		(0.101)	(2.143)		(0.084)	(2.510)
Age^2		-0.108	0.996		-0.0507	0.979
		(0.125)	(1.019)		(0.105)	(1.162)
Bachelor's Degree or Higher		0.000889	0.056		-0.016	0.0352
		(0.014)	(0.048)		(0.046)	(0.027)
Female		-0.00187	-0.424		-0.00284	0.634**
		(0.010)	(0.287)		(0.020)	(0.297)
group 1	2.230***			2.213***		
	(0.167)			(0.125)		
group 2	2.330***			2.799***		
	(0.109)			(0.186)		
difference	-0.0995			-0.586***		
	(0.199)			(0.224)		
explained	-0.0451			-0.0393		
	(0.056)			(0.066)		
unexplained	-0.0544			-0.546**		
	(0.195)			(0.216)		
Constant			1.615			-0.388
			(1.178)			(1.434)
Observations	**139**	**139**	**139**	**85**	**85**	**85**

	Koreans			Cambodians		
Variables	overall	explained	unexplained	overall	explained	unexplained
Age		0.108	-7.95		0.0673	1.355
		(0.294)	(5.066)		(0.180)	(5.811)
Age^2		0.0199	5.902**		0.0323	-1.162
		(0.345)	(2.779)		(0.182)	(2.985)
Bachelor's Degree or Higher		-0.157	0.014		0.0875	-0.116
		(0.113)	(0.191)		(0.086)	(0.106)
Female		0.0251	0.44		0.257**	-0.111
		(0.051)	(0.297)		(0.107)	(0.197)
group 1	2.925***			3.317***		
	(0.278)			(0.161)		
group 2	2.779***			3.382***		
	(0.142)			(0.238)		
difference	0.145			-0.0649		
	(0.312)			(0.288)		
explained	-0.00408			0.444**		
	(0.196)			(0.205)		
unexplained	0.149			-0.509**		
	(0.277)			(0.217)		
Constant			1.743			-0.475
			(2.298)			(3.033)
Observations	**71**	**71**	**71**	**65**	**65**	**65**

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

7. Implications and Conclusion

Our study builds on The Color of Wealth in Los Angeles by shedding some light on the correlation of skin tone and attractiveness on earnings, wealth, and health. It draws on face-to-face survey data to see how features such as skin tone and attractiveness affect the economic and social outcomes of racial groups in Los Angeles. It is beyond the scope of this report to identify the causal mechanisms influencing wealth disparity in Los Angeles. Still, the NASCC face-to-face data do help us identify the statistical correlation between skin tone and appearance and earnings, wealth accumulation, and health outcomes.

The findings show that lighter skin tone across African-American, Vietnamese, Korean, and Cambodian participants correlates with more favorable economic and social outcomes. Interestingly, the opposite pattern is found within the Mexican community in which darker-skinned Mexicans appear to have higher earnings than their lighter-skinned counterparts. This seems to contradict what has been observed about preferences for lighter skin in both the U.S. and Latin American countries. However, it can be explained by the fact that early Mexican settlers in the Los Angeles area were darker-skinned than the more recent Mexican immigrants. Hence the earlier immigrants tend to have higher incomes and wealth accumulations. However, it should also be noted that earnings are different from wealth, which this study breaks down into varying asset and debt categories.

Unlike measures of wealth, which asked about the entire household, earnings asked only about the respondent. Therefore, differences in earnings provide more direct assessments of the implications of skin color or attractiveness on financial outcomes. Since we do not have the skin color or attractiveness information of the other members of the household who contribute to household wealth, the correlation may be statistically robust.

Numerous reasons can explain the lack of a statistically significant correlation between skin tone and wealth. Some of these reasons are the aggregation effect, the inheritances and bequests effect, the household risk appetite, and the household composition. In summary, our results suggest a connection between skin color and financial outcomes and that some economic outcomes are more connected to appearances than others.

This analysis highlights the importance of collecting data not only on assets and debts across racial, ethnic groups at the local and disaggregated levels but also information on skin tone and phenotypes since these can contribute to disparities in economic and social outcomes. It is very important to further develop the understanding of the dynamics between skin tone and wealth disparity to comprehensively and effectively tackle the factors igniting the systemic wealth gaps in America.

Nevertheless, the main finding derived from our regression analysis indicates that darker skin colors are associated with lower earnings for whites and African Americans, while that was not necessarily the case for Hispanics or Asians. This finding has broader implications for implicit bias theories, stereotyping, and the human capital literature within the fields of management, applied psychology, sociology, and economics. Furthermore, this finding provides a stronger base for the conception and development of a new set of government approaches that include sensitive social and economic policies that aim at finding sustainable solutions to social equity, social justice, income gap, and wealth disparity.

It is the intention of the authors of this research paper to ignite and support the expanding literature and scientific research that illustrates the inadequacies inherent in our complex social systems, government, culture and economy.

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Appendix

Measuring Wealth

As in any company, families have to balance what they own with what they owe. Wealth, also called net worth, captures what families have at their disposal to use in case of emergencies or to invest for future gains. Wealth is measured by taking into account the difference between assets (financial assets that include liquid assets such as savings and checking accounts, government bonds, and stocks and other financial assets such as retirement accounts and nonfinancial assets including homes and vehicles) and liabilities (mortgages, auto loans, credit card debt, and family loans).

+ Assets	− Debts
Financial assets Liquid assets (assets that can be quickly converted into cash): Checking or savings accounts, money market funds, certificates of deposit, government savings bonds, stocks Other financial assets: Individual retirement accounts, private annuities value, business equity net value **Tangible assets** Home, vehicles, other real estate	Credit card debt Medical Debt Student loans Installment loans Loans from family and friends **Secured debt** Mortgage, Vehicle debt
Wealth (net worth) = Assets - Debts	

Three main surveys collect periodic information on wealth: the Survey of Consumer Finances (SCF), the Panel Study of Income Dynamics (PSID) and the Survey of Income Program Participation (SIPP). Wealth and wealth gap estimates vary depending on the source used.

The SCF provides detailed information on assets and liabilities and provides insights into changes in family income and net worth. The survey is conducted every three years; it includes detailed information on family balance sheets, on the use of financial services, on pensions, on labor force participation, and on demographic characteristics. The SCF is sponsored by the Federal Reserve Board. More information available at http://www.federalreserve.gov/econresdata/scf/scfindex.htm

The PSID is a longitudinal survey conducted every other year, which allows for intergenerational studies. This nationally representative panel oversamples lower-income families and provides a detailed inventory of real and financial assets and liabilities. PSID is directed by faculty at the University of Michigan.

The SIPP is administered by the U.S. Census Bureau. A major use of the SIPP has been to evaluate the use of and eligibility for government programs and to analyze the impact of options for modifying them. The entire sample was interviewed at four-month intervals. Its large sample size allows for detailed subgroup analysis.

The SCF is different from the PSID in that it oversamples higher income households, and it provides a more detailed picture of assets and debts including information on the current value of pension plans. Also, the PSID and SIPP provide longitudinal data on assets and liabilities, but they don't have the same level of detail as the SCF.

A major shortcoming of all these surveys has been the lack of detailed information by race and ethnicity. At the most, using these surveys, comparative analyses can be done for whites and nonwhites and, in some cases, for whites, Hispanics, and blacks.

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