New Measurements of Black and Indigenous Identities and Inequality in Mexico

Abstract

A central goal of modern ethno-racial statistics gathering is to measure discrimination and inequality. However, most Latin American countries only began consistently collecting such data in the 1980s and 1990s. Mexico has lagged behind this regional trend but is planning to enumerate its afrodescendant population (largely descended from slaves) for the first time in the 2020 national census. Mexico's black population has been invisible in national narratives, which reject the idea of racial differences in favor of cultural or "ethnic" discourses. Yet due to international pressure and a small but growing black movement, Mexico's National Statistical Office (INEGI) collected data on Afrodescendants for the first time ever on its 2015 Inter-Census Survey, using a question that emphasized cultural differences. It also allowed individuals to identify as both black and indigenous. A year later, another nationally-representative INEGI survey collected data on ethno-racial identification but used a question that referred explicitly to race. We find that INEGI's distinct ethno-racial questions yield widely different population estimates and socioeconomic outcomes for Mexico's black population. The cultural question returned the smallest population size and the least black disadvantage, while the race question resulted in a much larger black population, and significant disadvantage. Persons that identified as indigenous were the most disadvantaged across surveys. Finally, we engaged in a rare analysis of individuals identifying as black and indigenous based on the Inter-Census data. Overall, our findings contribute to conversations about ethno-racial measurements and their consequences, as well as the phenomenon of overlapping ethno-racial identities.

Introduction

A central goal of modern ethno-racial statistics is to measure discrimination and inequality (Del Popolo and Schkolnik 2012; Loveman 2014). While self-identification has become the international standard for collecting data on race and ethnicity (Del Popolo and Schkolnik 2012; United Nations 2017: 205), there are limits to using self-identification as a viable proxy for race as seen by others (Telles and Lim 1998, Roth 2016, López et al. 2017), which may better capture discriminatory treatment. This tension has been highlighted in recent work in the United States (e.g. Roth 2010; Strmic-Pawl et al. 2018), and in Latin America where discrepancies between self-identification and outside classification are particularly great (Telles and PERLA 2014; Villarreal 2014; Telles and Lim 1998). In recent decades, an increasing number of Latin American countries have included ethno-racial questions on their censuses (Ferrández and Kradolfer 2012; Loveman 2014; Telles and PERLA 2014), which has spawned new questions and conversations regarding the formulation of census questions based on race and ethnicity (Telles and PERLA 2014, Roth 2017), the consequences of different ethno-racial measurements on estimations of inequality (Bailey et al. 2013; Bailey et al. 2014; Bailey et al. 2015; Roth 2010, 2016; Telles and PERLA 2014; Telles et al. 2015; Villarreal 2014), and the politics behind ethno-racial measurements used in national censuses (Ferrández and Kradolfer 2012; del Popolo and Schkolnik 2012; Loveman 2014; Nobles 2000; Roth 2017).

In Mexico, however, these conversations have been stalled as the country has lagged behind most of its Latin American counterparts in the collection of racial statistics and particularly black enumeration. Since Independence, Mexico has only included a question specifically about “race” on one of its censuses (in 1921) and as of 2010, it was one of only three remaining Latin American countries that had never collected data on its black population

(Loveman 2014: 241, 253).[1] Mexico's reluctance to include a race question is tied to the powerful national ideology of *mestizaje,* which is premised on the belief that "races" have disappeared in Mexico through race mixture (Sue 2013). However, in response to pressure by international organizations and domestic social movements (Loveman 2014), for the first time in its nation's history Mexico collected data on its black population when, in 2015, the National Statistical Office (INEGI) included a question on black identification on its Inter-Census Survey (Encuesta Inter-Censal, hereafter EIC). Shortly after, in 2016, INEGI conducted the Intergenerational Mobility Module of the National Household Survey (MMSI) and included a race question with various ethno-racial options, including black/mulatto and indigenous. In stark contrast to its approach to race and blackness, Mexico has been at the forefront of regional trends regarding the recognition and enumeration of its indigenous population. It is the only Latin American country which has consistently collected data on the indigenous population since the 1890s (including in the EIC) and was the first Latin American country to become a signing member of the International Labor Organization Convention 169, which addresses the rights of indigenous and tribal peoples (Loveman 2014). Therefore, the Mexican case represents the regional extremes of statistical and symbolic visibility of the indigenous population and invisibility of the Afrodescendant population.

In this article we analyze INEGI's two new data sources on race and ethnicity to provide previously unavailable sociodemographic information on Mexico's black population. Moreover, because INEGI asked about black identification in different ways in the two surveys, we also

[1] The 1921 race question did not include a "black" option.

assess the consequences of distinct ethno-racial questions, showing how they yield widely different population estimates and socioeconomic outcomes for Mexico's black population. The EIC cultural question returned the smallest population size and the least black disadvantage, while the MMSI race question resulted in a much larger black population with significant disadvantage. In contrast, we find that persons that identified as indigenous are the most disadvantaged across both surveys. Finally, we use the rare opportunity afforded by the EIC to examine overlapping minority identities, in this case individuals who identify as both black and indigenous. We argue that the fact that two thirds of black individuals also identified as indigenous highlights the problems inherent in traditional empirical and theoretical approaches which treat these populations as separate.

Background

Historically, Mexico's population of African descent has been marginalized from Mexican national narratives – with the powerful post-Revolutionary national ideology of *mestizaje* only acknowledging the Spanish and indigenous contributions to the formation of the Mexican nation - despite the fact that Mexico was the destination for at least 200,000 enslaved Africans (Aguirre Beltrán 1944). A major policy consequence of the symbolic erasure of the African roots of Mexico's population has been the omission of a census question on race, and specifically on blacks. This omission not only reflects the invisibility of Mexican blacks but also their stigmatization and undesirability in many aspects of Mexican society (Gonzalez-El Hilali 1997; Hernández-Cuevas 2004; Sue 2013).

Despite this, the status of blacks in the Mexican national image has been changing. The inclusion of a black question on the EIC can be traced to a number of factors, including the new

Latin American ideology of multiculturalism (Hooker 2008; Loveman 2014), the increased attention to Afro-descended populations by international organizations (Loveman 2014), the hemispheric shift towards collecting data on race and ethnicity (Ferrández and Kradolfer 2012; Loveman 2014), the rise in scholarly research on Mexico's contemporary black population (e.g. Corona Orozca 2010; Cruz-Carretero 1989; Díaz Pérez 1995; Flores Dávila 2006; Hoffman 2013; Hoffman and Rinaudo 2014; Jones 2013; Lewis 2012; Meza Bernal 2003; Sue 2013; Vaughn 2001; Velazquez and Iturralde 2016), the creation of Mexican institutions and laws to combat discrimination, and the growing visibility of black movement organizations within Mexico, particularly in the states of Guerrero and Oaxaca. In recent years, the latter organizations' claims for recognition coalesced around one issue – the inclusion of a black question on the national census.

However, when the black question was finally introduced in 2015, INEGI defined blackness in cultural terms, which is generally consistent with the current state of "Afro-Mexican studies" (Hoffman 2013). This approach, however, is in the regional minority – in the 2010 census decade only three countries (including Mexico) identified their Afrodescendant populations through culture or "customs," compared to at least eight countries which used other measures such as identity, ancestry, physical appearance, or race (Loveman 2014: 254). INEGI's conceptualization of blackness is likely due to the dominance of ethnicity frameworks associated with the indigenous category in Mexico, which has been central to nation-building efforts (Gutiérrez 1999). However, as we will show, there are important consequences to defining blackness in cultural terms in the Mexican context.

Our research goes beyond traditional discussions of ethno-racial identity and socio-economic inequality in Mexico, which have focused fairly exclusively on the boundaries and

relationships between the indigenous and *mestizo* populations. Although a limited amount of ethnographic work has enhanced understandings of how Mexicans of African descent identify in everyday life contexts (e.g. Cruz Carretero 1989; Jones 2013; Lewis 2012; Meza Bernal 2003; Sue 2013; Vaughn 2001), there is almost no information on how they self-identify on official formats. Moreover, this literature generally focuses on select communities or regions, and thus does not provide information on how black identification may vary by region. The small comparative literature that does exist suggests a high degree of regional variation in black identities and ethno-racial inequality (e.g. Dávila and Lézé 2007; Jones 2013; Hoffman and Rinaldo 2014) as well as urban-rural differences (Jones 2013). The analysis of the large and nationally-representative EIC and MMSI surveys can speak to previously unanswered questions about black (and, for the EIC, black and indigenous) identification on official formats and provide new socio-demographic information about Mexico's black population.

Ethno-Racial Inequality in Mexico

Although there is no official data on black Mexicans prior to 2015, analysis using non-governmental survey data strongly suggest black marginalization (CONAPRED 2011a, 2011b; Dávila and Lézé 2007). Part of this can be explained by the fact that blacks in Mexico are concentrated in areas that are relatively poor such as Veracruz and especially Guerrero and Oaxaca (Dávila and Lézé 2007; Velázquez and Iturralde Nieto 2016), although this marginalization is likely due, in part, to historical processes of ethno-racial exclusion. Even today, there is ample evidence demonstrating that blacks suffer numerous forms of discrimination both within and outside of historically-black regions of the country (CONAPRED 2011a, 2011b; Cruz Carretero 1989; Velázquez and Iturralde Nieto 2016; Sue 2013; Vaughn

2001). Anti-black discrimination is almost certainly tied to the broader phenomenon of skin color discrimination (CONAPRED 2011c; Sue 2009) which helps to explain findings of color-based educational and socio-economic inequality in Mexico (Flores and Telles 2012; Martínez Casas et al. 2014; Telles et al 2015; Villarreal 2010). Finally, unlike their indigenous counterparts, black Mexicans generally do not have access to development programs and other institutional systems of support because they have not been recognized as a marginalized population or one in need of special assistance.[2] Thus, as Hoffman (2013) argues, there may be no political, ideological, or material incentives to identifying as black in Mexico.

Black-Indigenous Identities

The literature has largely treated black and indigenous peoples as separate groups, despite research suggesting much overlap between black and indigenous identities (Lewis 2012). The black-indigenous division, which exists not only in Mexico but across Latin America, can be attributed to colonial and postcolonial governance practices and structures, which treated these groups as separate populations, thus masking any interactions or blurring of boundaries (Wade 2018). The black-indigenous division has been further reproduced in academia and has spilled over into social movement politics and multiculturalist reforms (Wade 2018).

However, there is evidence suggesting that black-indigenous mixture has a long-standing history in Mexico (Carroll 2005; Lewis 2012; Wade 2018). In fact, Carroll (2005) argues that,

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[2] Despite these resources for indigenous persons, national statistics have demonstrated historical and continued inequality between indigenous peoples and the rest of the population. In particular, people who speak an indigenous language have been found to have less schooling, lower incomes, more precarious employment, and are more often victims of discrimination compared to other Mexicans (Martínez Casas et al. 2014; CONEVAL 2014).

contrary to traditional narratives, black-indigenous interactions during the colonial period were actually more harmonious than antagonistic. In terms of contemporary Mexico, the Costa Chica – a coastal region which runs through the states of Guerrero and Oaxaca – has been identified as disrupting the indigenous-black divide (Wade 2018). Laura Lewis (2012), who conducted her research in the Costa Chica of Guerrero, found that Mexicans of African descent identified as being of mixed black and Indian descent through the use of the term *moreno*. She argues that since blackness is not seen as compatible with Mexicanness, black Mexicans in her study asserted their indigenous ancestry as a way to nationalize themselves. In contrast, Vaughn (2001), who conducted research in the Costa Chica of Oaxaca, found that black Mexicans did not view indigeneity as a component of their identity. At this point, little is known about the prevalence or regional distribution of black-indigenous identities or how people who identify as black and indigenous are situated socioeconomically.

Ethno-Racial Self-Identification as Indicators of Population Size and Inequality

Ethno-racial population counts and estimates of ethno-racial inequality are dependent on how people choose to classify themselves on official formats, a classification which can be affected by multiple social forces. For example, strong discrimination against a group or a racial ideology that minimizes the idea of race or ethnicity may discourage individuals from identifying with a particular ethno-racial category. In contrast, cultural or identificational revitalization or institutional incentives tied to group membership may encourage a specific categorical identification. In addition to these social forces, the *way* in which a state defines and asks about race and ethnicity can affect levels of ethno-racial identification.

Ethno-racial population counts have been shown to vary depending on question wording and the measure of race being used, especially in contexts with high degrees of ethno-racial fluidity (e.g. Bailey et al. 2013; Bailey et al. 2014; Telles and PERLA 2014). For example, when the 1993 Colombian census asked people if they belonged to a black community, 1.5% answered affirmatively, but in 2005, when asked if they considered themselves black or mulatto based on cultural or physical features, 10.6% answered affirmatively (Telles and PERLA 2014). Similarly, the black population in Costa Rica increased from 2.0% to 7.8% between 2000 and 2011 likely based on a similar change in question wording. Certainly, the time between censuses may have also affected the extent of black identification. However, using only 2010 data, based on the Project on Ethnicity and Race in Latin America (PERLA), Silva and Paixão (2014) estimated that the size of the Afro-Brazilian population varied by a factor of ten, depending on the race question and response categories used. Similar variation has been anticipated surrounding attempts to measure the Afro- Mexican population (Hoffman and Rinaldo 2014).

Despite their subjective nature, ethno-racial self-identification data are crucial to understanding ethno-racial inequality, especially in the absence of other measures. However, there are reasons to believe that data based on self-identification as black in Mexico may not necessarily reveal socioeconomic disadvantage. For example, findings from Colombia, Ecuador and the Dominican Republic have shown that self-identified nonwhites have higher education than self-identified whites (Telles and PERLA 2014; Telles et al. 2015). Moreover, Bailey et al. (2014) found that only in four of the ten Latin American countries with large black populations were self-identified blacks at the bottom of the ethno-racial hierarchy. In general, studies which have used external classification as opposed to self-identification measures have found greater ethno-racial inequality (e.g. Bailey et al. 2013; Telles and Lim 1998; Telles and PERLA 2014),

although which measure best estimates inequality varies by country and ethno-racial group (Bailey et al. 2014, 2015). In contrast to self-identified blacks, self-identified indigenous people show consistent disadvantage throughout Latin America, regardless of the measure used (Telles et al. 2015).

One reason that self-identification measures may hide or underestimate the disadvantages for blacks is that lower status individuals socially viewed as black may opt out of the category because of associated stigma, to avoid discrimination, or as a strategy for upward mobility. Or, higher-status blacks may disproportionately opt into these categories, as is the case in the Dominican Republic, and to some degree Brazil, due to racial consciousness raising and institutional incentives to identify as black, such as affirmative action, which disproportionately resonates among higher status individuals (Telles and Paschel 2014). Although race-based social movements, racial consciousness, and race-based policies are weak in Mexico, the growing visibility and expansion of black movements, the ideology of multiculturalism, and the state-sponsored "I am Afro" campaigns, which informed people about the EIC and the black question and sought to de-stigmatize a black/Afro identity, could result in increasing black identification in the future.

Nevertheless, self-identification measures may not adequately capture inequality because these measures may largely reflect racial ideology, assimilation, political and cultural attachments, and social aspirations, as opposed to ethno-racial markers such as phenotype, which provide the basis of discrimination (Telles et al. 2015). Identification fluidity and color variation within a particular group can also compromise the ability of such measures to capture group-based inequality (Telles et al. 2015). Despite this, self-identification has been the main criterion for assessing membership in ethno-racial categories, a practice supported by international norms

that emphasize individuals' rights to self-recognition (Del Popolo and Schkolnik 2012; United Nations 2017: 205). Aside from the general self-identification standard, there is no standard or international guidance regarding how to ask about race and ethnicity. Thus, approaches to enumerating Afrodescendant populations in Latin America vary tremendously and have included identification through ancestry, customs, identity, group membership, physical appearance, and race, with no standard format for the questions or the response options (Loveman 2014).

Data and Methods

Data Sources and Comparison of Sociodemographic Profiles

The EIC sampled 6.1 million households in 2015 nationally and was designed to be representative for five different locality sizes within each of the 32 Mexican states (ranging from rural places with less than 2,500 to cities over 100,000 inhabitants). Samples of at least 1,300 households of every municipality and locality with more than 50,000 inhabitants permit population estimates for those areas (INEGI 2016)[3].

The MMSI, also conducted by INEGI, is a special module of the National Household Survey (ENH) and collected information on a sample of 32,000 households during the second half of 2016. The ENH sample was designed to be representative at national, state, and urban/rural levels (INEGI n.d.).[4] Since some households were "filtered out" of the main

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[3] Instituto Nacional de Estadística y Geografía [INEGI]. 2015. "Encuesta Intercensal 2015: Síntesis Metodológica y Conceptual." Retrieved from http://www3.inegi.org.mx/contenidos/proyectos/enchogares/especiales/intercensal/2015/doc/eic2015_sintesis.pdf. Last accessed September 1, 2017.

[4] Instituto Nacional de Estadística y Geografía [INEGI]. N.D. "Módulo de Movilidad Social Intergeneracional 2016 MMSI Diseño Estadístico." Retrieved from

questionnaire because they did not include any adults ages 25-64 (the target age for the survey), the final sample size was 25,500 individuals (one per household).

To make our EIC sample more comparable to the MMSI, we only use individuals aged 25-64, which totaled almost 14.4 million observations.[5] A comparison of both the EIC and MMSI weighted samples yielded very small and mostly non-significant differences between them across sociodemographic groups and regions (see Appendix I). As such, any discrepancies in the measurement or profile of black and/or indigenous populations should not be due to differential coverage across surveys.

Measures of Blackness Across Surveys

The EIC's question introduction referenced culture: "*In accordance with your culture, history, and traditions, does [name] consider themselves black, meaning Afromexican or Afrodescendant?*" We thus refer to the EIC question as a cultural question. There were two affirmative options - "yes" and "yes, in part" - which were not read, but deduced by the interviewers based on interviewee responses (INEGI n.d.). Roughly 30% of all self-identified blacks were classified by interviewers as "in part." Because our analyses revealed very small differences in the sociodemographic composition of people according to whether they were

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http://internet.contenidos.inegi.org.mx/contenidos/productos/prod_serv/contenidos/espanol/bvinegi/productos/nueva_estruc/promo/diseno_estadistico_mmsi_2016.pdf. Last accessed September 4, 2017.

[5] Note that the EIC asked sociodemographic and ethno-racial identification information about any and all household members, collected via "proxy" from an adult household member. While our estimates adjust for the clustering of individuals within households, the public-release version of the EIC does not allow for the identification of informants (to e.g., analyze ethno-racial self-identification relative to that of the proxies). However, our selection of individuals ages 25-64 should increase the likelihood that most of our sample is composed of proxy informants.

classified in either of these two response options (with the exception of region, see Appendix II), our EIC black categories henceforth always include those answering "yes" or "yes, in part." The EIC had a similar question and response options for a separate question on indigeneity: "*In accordance with your culture, does [name] consider themselves indigenous?*" We also combined the two affirmative responses as results similarly held when excluding the "in parts" from calculations for indigenous Mexicans (the share of all indigenous people classified as "in part" was 7.5%).

In contrast to the EIC, the MMSI's question introduction referenced race and offered six mutually-exclusive options: "*In our country there are people of multiple racial origins. Do you consider yourself to be a person who is . . . [read options] black or mulatto, indigenous, mestizo, white, or other race?*" We used these responses to create three categories: (1) black (black/mulatto), (2) indigenous and (3) non Afro/black, non-indigenous (henceforth "NANI"), which combines *mestizo,* white, and "other," accounting for 60%, 13%, and 0.4% of the full MMSI sample, respectively. We thus refer to the EIC question as a racial question.

To better compare the EIC and MMSI, we used the black and indigenous questions in the EIC to create four mutually exclusive groups: (1) non-indigenous black (closest to the MMSI black category), (2) black-indigenous (with no MMSI equivalent), (3) non-black indigenous (closest to the MMSI indigenous category) and (4) non-black, non-indigenous (henceforth, "NANI").

To further provide an assessment of compositional differences between groups across surveys, Table 1 presents the sociodemographic profile of individuals in the EIC and MMSI broken down by ethno-racial identification. We find little difference between the surveys for NANI's, with the exception of indigenous language (0.8% in the EIC vs. 3.0% in the MMSI),

despite the fact that the percent speaking an indigenous language for the full samples is similar at 6.7 and 7.0%, respectively (see Appendix I). We also find some differences between the surveys for indigenous Mexicans. In the EIC, the non-black indigenous are less likely to speak an indigenous language, have slightly higher schooling, and are more likely to live in urban areas and live in municipalities with slightly lower marginalization levels relative to those in the MMSI.

-TABLE 1 ABOUT HERE-

The discrepancies between the two surveys are largest, however, for blacks, especially between EIC non-indigenous blacks and MMSI blacks. Both black groups (indigenous and non-indigenous) in the EIC are slightly older, have higher schooling, and are much more likely to live in an urban locality and, for non-indigenous blacks only, in a less marginalized municipality than blacks in the MMSI. Further, the regional distribution of blacks in the EIC and MMSI differ considerably, with blacks in the EIC being particularly more likely to live in the Mexico City metro area than blacks in the MMSI, while blacks in the MMSI are more likely to be located in "other" regions of Mexico. Table 1 helps establish that the EIC and MMSI seem overall comparable in terms of the profile of NANIs, but not of indigenous and especially not of black Mexicans, suggesting possible differences in the propensity to identify as black and/or indigenous between surveys.

Findings

Estimating Ethno-racial Population Size in Mexico

The 2015 EIC estimates the percent black at 1.8% of Mexicans ages 25-64, while the 2016 MMSI's estimate is 2.6%, a figure 44% higher (see Table 2). Extrapolating to the entire

population, this difference implies that Mexico's black population is roughly one million people larger using the MMSI's racial question than when using the EIC's cultural question. To ascertain if differences between surveys are likely due to differences in question wording and response options, or survey year, we first compare estimates of the percent of individuals identifying as black and indigenous from the EIC and MMSI with other (unofficial) national surveys. Table 2 presents such estimates for Mexicans ages 25–64. To facilitate comparison, we grouped the ethno-racial questions by question framing since we believe that it the main factor driving the differences in identification levels: Panel A includes questions that use culture-based introductions, including the EIC; Panel B, those that use race-based introductions, including the MMSI; and Panel C, questions which have no specific introduction.

-TABLE 2 ABOUT HERE-

The few additional surveys that contain an ethno-racial question provide additional support for our argument that the EIC-MMSI gap in the percent black is mostly due to differences in question wording, particularly the introductory framing. Panel A shows that the EIC estimate (1.8%) is similar to that of PERLA1 (2.0%), which also references culture (ancestry and customs) in its introduction The PERLA data come from a nationally-representative survey of 1,000 Mexican adults that included various ethno-racial identification questions (Telles and PERLA 2014). Interestingly, these two estimates are similar despite the fact that they were taken five years apart and had different response options - the EIC had a yes/no format and PERLA-1 offered mutually-exclusive ethno-racial options - suggesting that question introduction may be more influential than response options and date of survey. This similarity also reduces the likelihood that the EIC-MMSI gap is driven by proxy responses in the

EIC – provided by one main informant per household – since PERLA (nor any of the other surveys) used proxies.

When comparing questions which used a race-based introduction in Panel B, we see that an open vs. closed response format may also be significant. The MMSI estimate of 2.6% is much higher than what was captured with the similarly-worded PERLA-2 question (0.5%), which could be due to the time between surveys, but the fact that 0.5% is substantially lower than all other estimates during that time period, across various wording types, suggests that PERLA2's open-ended format was driving the low estimate. The open-ended response may have produced an especially low estimate because black identification is weak in Mexico and because of the historical absence of questions on black identification. This interpretation is supported by the fact that the difference between the MMSI and PERLA-2 in indigenous identification is much lower (13.9% vs. 11.7%).

Finally, Panel C presents estimates of the black and indigenous populations from questions which have no introduction and simply ask people to identify based on a list of mutually-exclusive ethno-racial options. In addition to PERLA, we examine findings from a series of AmericasBarometer (LAPOP) surveys, which were taken in numerous Latin American countries and where the Mexico samples include roughly 1,500 respondents per cross-section. Although the PERLA-3 estimate for people identifying as black or mulatto is higher (3.1%) than the LAPOP estimate (2.2%), the difference between these figures is not statistically significant ($p>0.05$, not shown in Table).[6] This suggests that response option order (i.e. having the options

[6] The PERLA survey also fielded a question with no introduction, asking interviewers to classify respondents, which yielded an estimate of 3.7% as black/mulatto.

of mulatto/black vs. white/mestizo read first) may not be a strong factor influencing response rates.

Because LAPOP fielded several cross-sections, we can also use these data to assess change over time. Although there have been slight changes in the response options between 2004 and 2017 (with no new changes since 2010), in general there is a trend of increasing black identification over time, with the most notable increase being in the cross-section fielded in 2016-2017 (4.6%, up from 2.1% in 2014, $p<0.001$). This likely reflects the increased visibility of black movement organizations and the awareness campaigns sponsored by the Mexican government in preparation for the 2015 inter-census question on blackness. Of all the surveys, LAPOP 2016-2017 has the highest black population estimate, significantly higher than both the 2015 EIC and 2016 MMSI estimates ($p<0.001$ and $p<0.01$, respectively), likely due to the lack of a specific prompt, which allowed people to interpret the question in the most open way possible. Supporting this interpretation is the difference between the 2016-2017 LAPOP and 2016 MMSI questions, which were both closed-ended and had a similar mix of mutually-exclusive ethnonyms, but which had different introductions.

In terms of indigenous self-identification, the LAPOP data show a much weaker temporal trend. However, between the 2010 Census long-form and the 2015 EIC, which used almost the exact same wording, the percent of the population self-identifying as indigenous increased by more than half (14.4% to 23.7%). When comparing across measures, unlike black estimates, the indigenous estimates appear to be highest when the question is framed in cultural terms. This is unsurprising given the long history of defining indigeneity according to culture and particularly language.

Ethno-racial Identification by Sociodemographic Groups and Regions

Having established that various question types yield different shares identifying as black or indigenous, we now turn to asking whether ethno-racial identification in the much larger EIC and MMSI samples varies by sociodemographic characteristics and across regions. Table 3 shows the share black and/or indigenous, as well as the ratio between the EIC and the MMSI for these estimates, and significance tests for these ratios. While Table 3 also shows estimates of the historically-black Costa Chica region for reference, unfortunately this region is not well-represented in the MMSI, precluding comparisons with the EIC. Figure 1 illustrates the most important differences between the EIC and MMSI estimates in black and indigenous identification across groups based on the estimates in Table 3.

–TABLE 3 ABOUT HERE–

Overall, differences in the percent identifying as black by these sociodemographic characteristics are very small when examining black categories in the EIC (both for non-indigenous black and black-indigenous), while they are somewhat more pronounced when examining blacks in the MMSI. More importantly, differences across demographic and social characteristics in the non-indigenous black column of the EIC generally run counter to those of all other groups, particularly with blacks in the MMSI. For example, older individuals in the EIC are slightly more likely to identify as non-indigenous black than younger persons (0.7% of 45–64 year-olds vs. 0.6% of 25–44 year-olds). In sharp contrast, younger individuals are somewhat more likely to identify as black in the MMSI. Also note there are no notable gender or age patterns when comparing EIC non-black indigenous and the MMSI indigenous.

-FIGURE 1 ABOUT HERE-

In addition, these findings suggest that people who are more disadvantaged or live in more disadvantaged areas were more likely to identify as black in the MMSI, as black-indigenous in the EIC, or as indigenous in both surveys. In contrast, less disadvantaged persons in the EIC were more likely to identify as non-indigenous black. In the EIC, individuals with higher schooling are more likely to identify as non-indigenous black than those with lower schooling (e.g., 0.8% and 0.5% for those with the highest and lowest education levels, respectively). In sharp contrast, the share of MMSI respondents self-identifying as black is more than three times higher among people with 0–5 years of education (4.2%) than those with 16 or more years (1.3%). Indeed, non-indigenous black identification in the EIC stands in sharp contrast not only with black identification in the MMSI, but also with black-indigenous identification in the EIC, non-black indigenous identification in the EIC, and indigenous identification in the MMSI. Similar to blacks in the MMSI, relative to those with higher schooling, people with lower schooling levels are more likely to identify as either black-indigenous or non-black indigenous in the EIC, or as indigenous in the MMSI. These patterns are consistent overall across several other direct and indirect markers of socioeconomic difference, including indigenous language speaking ability (except for blacks in the MMSI), rural-urban residence, and municipal marginalization levels (see Figure 1).

The divergence in SES differences in black identification across surveys implies that the MMSI-EIC gap in (non-indigenous) black identification is considerably larger for individuals with higher socioeconomic standing than for people with lower SES. For example, while the MMSI estimate of the share of the population with 16+ years of schooling is 1.7 times larger than the estimate for non-indigenous blacks in the EIC, this gap is 7.9 for those with 0-5 years of schooling (note that the gap between black identification in the MMSI and black-indigenous

identification in the EIC is smaller but still considerable, increasing from 1.4 to 2.9 times for those with most to least schooling). In other words, the one million "additional" people identifying as black in the MMSI relative to the EIC are, most likely, of lower socioeconomic status and live in rural areas and more marginalized communities. As a result of these differences, as we show below, ethno-racial socioeconomic inequality in Mexico differs considerably depending on which measure one uses to assess it.

As a result of, or perhaps adding to, socioeconomic differences, there are also large regional disparities in black identification between the two surveys. As shown on the right-hand side of Table 3, the share of black individuals in the MMSI is 3-6 times larger than that of non-indigenous blacks in the EIC across regions. More specifically, it is 3.3 and 2.9 times larger in the Mexico City metropolitan area and the state of Mexico, respectively, and 5.3-5.9 times larger in Guerrero, Oaxaca, Veracruz, and all other regions combined. Therefore, compared to the EIC, the racial prompt of the MMSI question seemed to capture more people identifying as black in the areas of historic African presence - Oaxaca, Guerrero, and Veracruz (although this was also the case with "other" states). This is somewhat surprising since one could imagine that it is precisely in the centers of blackness in Mexico that people would identify as having black culture.

In contrast to black identification, the share indigenous in the MMSI is consistently smaller than the share indigenous estimated using the EIC cultural question with a yes/no response format. This is likely due to the fact that indigeneity has historically been defined in cultural as opposed to racial terms, as well as the fact that the MMSI question offered mutually-exclusive responses, including a mestizo option; many people that might otherwise identify as indigenous may have opted into the mestizo category given its centrality to Mexican national

ideology. Therefore, while the EIC question encouraged indigenous identification, the same question format resonated less with people in terms of black identification. While the EIC-MMSI gap varies less across sociodemographic groups for indigenous identification (non-black indigenous in the EIC) than black identification, the estimates do vary somewhat across schooling levels and region. The gap is larger among people with higher schooling relative to those with lower schooling (0.41 vs. 0.69). In addition, this gap is smallest in Guerrero and Veracruz, and largest in the State of Mexico.

To further assess if particular sociodemographic patterns in identification differing across surveys are due to compositional differences in all other characteristics examined previously, we estimated multinomial models predicting black/indigenous identification for each survey, relative to NANI identification, presented in odds ratio form in Table 4. With few exceptions, our descriptive results hold after controls: people with more schooling are *less* likely to identify as black or indigenous in the MMSI and as black-indigenous and non-black indigenous in the EIC. In sharp contrast, people with greater schooling are *more* likely to identify as non-indigenous black in the EIC. Likewise, while residence in municipalities with higher levels of marginalization is associated with a higher likelihood of self-identification as indigenous in the MMSI, and as black-indigenous or non-black indigenous in the EIC, higher levels of marginalization are associated with 17% lower odds of self-identifying as non-indigenous black in the EIC.

In addition, these models suggest that the regional patterns in the gap in black identification between EIC and MMSI are largely driven by sociodemographic differences across regions. After including all controls, the gap in black identification in the MMSI and EIC (approximated by dividing the odds ratio for black identification in the MMSI for a particular

region and dividing it by the odds ratio for non-indigenous black identification in the EIC for the same region) is only 2-3 times higher in the MMSI than the EIC across all regions, a less variable figure than the difference in unadjusted share black discussed before.

-TABLE 4 ABOUT HERE-

Ethno-racial Socioeconomic Inequality

To further illustrate the potential consequences of using a particular question type on estimates of ethno-racial socioeconomic inequality, Appendix III shows levels of schooling, occupations according to skill/prestige conferred to them, and household amenities according to individuals' ethno-racial self-identification in the EIC or MMSI. Like population estimates, ethno-racial inequality in Mexico looks quite different depending on the measure used (with the exception of indigenous disadvantage which remains clear across both surveys). Disadvantage compared to NANIs is prevalent among the EIC black-indigenous and blacks in the MMSI, but not non-indigenous blacks in the EIC, who actually have similar or slightly higher SES than NANIs. As discussed before, the slight non-indigenous black advantage in the EIC not only contrasts with the black disadvantage in the MMSI, but also with studies showing color-based inequality and anti-black discrimination in Mexico (e.g., Martínez Casas et al. 2014; Sue 2013; Vaughn 2001; Villarreal 2010). In contrast, our findings of black-indigenous and indigenous inequality are consistent with prior studies on the topic (e.g. CONEVAL 2012).

To further disentangle the discrepancy between the EIC and MMSI in terms of whether the socioeconomic position of Mexican blacks persists net of the sociodemographic and regional variables presented earlier, we estimated multivariate models predicting three socioeconomic outcomes: years of schooling, white-collar occupation, and car ownership to signal broader

opportunities earlier in life, labor market opportunities, and levels of wealth/lifestyle, respectively, which we present in panels A, B, and C in Table 5. Each column within each panel presents differences in the outcome for a particular ethno-racial category compared to the same outcome for NANIs, with the shading depicting a statistically significant disadvantage for the group in question. To assess whether/how introducing particular controls affects ethno-racial differences in the three SES measures, we estimated several models (separately for each survey), presented in different rows within each panel. The first model for each outcome incudes no controls other than ethno-racial identification. For the next six models, we control for only one sociodemographic variable at a time (in addition to ethno-racial identification), including a control for years of schooling in models predicting white-collar occupation and household car ownership. Finally, we also present models controlling for sex, age, urban residence, municipal marginalization, *and* region, adding models with all these controls plus indigenous language for all outcomes, and all prior controls plus schooling when predicting white-collar occupation and car ownership. Panels A, B, and C in Figure 2 summarize these results for each outcome, respectively, showing how the ethno-racial socioeconomic hierarchy changes when controlling for different factors confounding or producing it (e.g., municipal marginalization), but only showing significant differences at the $p<0.05$ level.

-TABLE 5 ABOUT HERE-

These results confirm that non-indigenous blacks in the EIC (column i) have fewer disadvantages relative to NANIs than all other ethno-racial groups across both surveys (columns ii through v). Interestingly, Table 5 also reveals that the inclusion of sociodemographic controls explains away much more of the gap in schooling for EIC black-indigenous vs. NANI and EIC and MMSI indigenous vs. NANI than for EIC non-indigenous black vs. NANI or MMSI black

vs. NANI. Between 44% and 60% of the black-indigenous vs. NANI or non-black indigenous vs. NANI gap in schooling is erased when controlling for the different characteristics described previously, with municipal marginalization being particularly important. In contrast, only 6.1% and 7.2% of the non-indigenous black vs. NANI difference in the EIC and MMSI respectively, is explained by including all the same controls. As shown in Figure 2a, as a result of these differential changes in the educational gap between these groups and NANIs before vs. after adding controls, blacks in the MMSI become the most disadvantaged group in terms of educational attainment (mainly as a result of controlling for indigenous language). For all indigenous-identified individuals, these results likely reflect historical and contemporary exclusion in terms of educational opportunities. Yet, little in these models explains the MMSI black disadvantage, or the EIC non-indigenous black advantage.

-FIGURE 2 ABOUT HERE-

The patterns for white-collar occupation are consistent with those for schooling in that controls do less to explain the EIC non-indigenous black vs. NANI difference than the black-indigenous and most of the indigenous vs. NANI gap in both surveys, resulting in lower ethno-racial inequality in general and smaller differences between indigenous and blacks in particular after adding all indicators included in the education models (see Figure 2b). However, when adding educational attainment in addition to these controls, only the EIC non-indigenous black advantage and EIC non-black indigenous disadvantage in white-collar occupation remained significant, suggesting that a large amount of ethno-racial inequality in Mexican labor markets (at least in higher-prestige occupations) originates in access to and resources for completing school.

Finally, for all groups, most (66%-91%) ethno-racial differences in car ownership are explained by differences in sociodemographic composition, especially for EIC non-indigenous blacks, who exhibit a much smaller disadvantage relative to NANIs than all other groups before (but especially, after) adding any controls. Like in the case of educational attainment, the addition of controls not only reduces ethno-racial differences in general, but black vs. indigenous differences in particular (Figure 2c). Similarly, as in the case of white-collar occupation, introducing schooling as a control reduced these differences considerably, making them not significant except for the EIC non-indigenous black advantage and the EIC indigenous disadvantage (similar to the case of education-as-outcome after adding sociodemographic controls). This again suggests that differential access to schooling is a particularly important mechanism in the production of ethno-racial inequality.

Discussion and Conclusion

Beginning in the 1980s, there has been a steep increase in ethno-racial statistics gathering across Latin America, although there is wide variation in the way countries ask about ethnicity and race. Some censuses ask about culture or "customs" and others use questions explicitly about race, ancestry, or physical appearance (Loveman 2004). However, the Mexican Census had not collected data on its Afrodescendant population until the 2015 Intercensal Survey (EIC) and it decided to use a cultural question. A year later it fielded another survey - the 2016 Intergenerational Survey (MMSI) and it used a racial question. We examine and compare these novel but distinct official surveys to provide new information about Mexico's black population. We also illustrate the implications of using different forms of measurement of black identity (mainly culture versus race) on estimations of population size and ethno-racial inequality.

Finally, we provide new insights into the Mexican population that identifies as both black and indigenous.

The EIC yielded an estimate of the black population that is less than 70% the size of the estimate based on the MMSI – a difference of roughly one million people. Our comparison with the results from the EIC, MMSI and other existing unofficial surveys (LAPOP, PERLA) suggests that the EIC-MMSI gap in percent black is most likely due to the way the question was introduced or prefaced (as a racial or cultural question) rather than from the response format and options (yes/no for the EIC vs. mutually-exclusive ethnonyms for the MMSI). In asking respondents if they identified as black based on their "culture, history, and traditions," the EIC question may have discouraged individuals who do not associate themselves with having black culture or traditions from identifying as black, especially absent of any government programs or recognition of blacks as an ethnic group. Individuals may have opted out of the EIC black category even though they might identify as black based on their phenotype or ancestry, an identity which may be better captured in a race-based question (like the MMSI) or a question that has no introduction (like LAPOP). This interpretation is consistent with evidence suggesting that popular conceptions of blackness in Mexico rest more on phenotype than culture (Sue n.d.; INEGI n.d.).

Our findings suggest that the cultural question disproportionately discouraged black identification by younger individuals, those with lower schooling, residents of rural areas, and those living in more marginalized municipalities. Thus, the culture-based EIC question might have had greater resonance among higher status individuals residing in urban areas. The consciousness-raising campaigns put out by the Mexican government just before the EIC may have reached or more strongly influenced individuals with greater schooling. The CONAPRED

campaigns, in particular, relied heavily on social media networks (e.g. #yotambiensoyafro) which are more accessible to those with higher schooling and those living in urban areas. However, this does not explain why younger individuals (who are heavier social media users) were less likely to identify as black than older individuals in the EIC. Likewise, if the CONAPRED campaign was more effective in influencing the self-identification of higher-status individuals, but not of lower-SES ones, it is unclear why these patterns reversed when people answered the MMSI question.

In our analyses, the EIC showed that non-indigenous blacks in Mexico have similar or slightly greater socioeconomic levels than non-indigenous/non-black Mexicans, which is consistent with findings from some other Latin American countries showing self-identification as black does not necessarily translate into disadvantage (e.g. Telles and PERLA 2014; Telles et al. 2015). However, these findings are, in turn, inconsistent with the fact that dark skin is negatively correlated with socioeconomic status in Mexico (Flores and Telles 2012; Martínez Casas et al. 2014; Villarreal 2010) and that blacks are disadvantaged throughout the Western Hemisphere (Telles et al. 2015; Flórez et al 2003, Bailey et al. 2015). Indeed, with the exception of non-indigenous blacks using the cultural measure, we found that black- and indigenous-identified individuals face large socioeconomic disadvantages relative to non-black, non-indigenous Mexicans. Therefore, our findings suggest that culturally-defined measures of blackness may underestimate the extent to which Afrodescendants suffer discrimination and other forms of disadvantage in Mexico.

Our findings also provide clues regarding the mechanisms of inequality. Indigenous and black Mexicans may be less likely to stay in school due to the generally-poorer socioeconomic background of their families (Solís 2018) and because discrimination and stereotypes negatively

affect student aspirations and performance (e.g., Campos-Vázquez and Medina-Cortina 2018). As such, access to education – from the local availability of schools to the ability of families to finance the direct costs and take on the opportunity costs of education, to the way in which ethno-racial discrimination operates within the educational system itself – is likely a particularly important mechanism producing ethno-racial inequality in Mexico by affecting labor market performance, income, and wealth. Of course, indigenous or black individuals with higher schooling may also be excluded from accessing better-paying or more prestigious white-collar jobs by direct labor market discrimination (Arceo-Gómez and Campos-Vázquez 2016), although this is something that our study cannot directly address.

Regarding our final contribution, the fact that the EIC included two separate questions – one on black identification and one on indigenous identification – allowed the rare opportunity to examine individuals identifying as black *and* indigenous, and compare them to non-indigenous identified blacks. Although we find the EIC question problematic in that it misses some black-identified individuals who just don't identify as culturally black, since it is the only national data source on individuals identifying as black and indigenous, we used these data to provide initial clues regarding the black-indigenous population. One of the main differences we found between non-indigenous black and black-indigenous individuals was, not surprisingly, with regard to their propensity to speak an indigenous language (1% and 15% respectively). However, the share of indigenous language speakers for black-indigenous is still considerably lower than for non-black indigenous (at 26%), suggesting that a smaller proportion of people identifying as black-indigenous may live in or have strong ties to an indigenous community (facilitating language transmission). Relatedly, we found nontrivial differences in the regional distribution of black-indigenous Mexicans. Residents of the Costa Chica of Guerrero, and to a lesser extent Oaxaca,

were the most likely to identify as black-indigenous (18% and 13.5%, respectively, see Table 3). The Oaxaca-Guerrero difference is consistent with the aforementioned studies by Lewis and Vaughn, but the small size of the difference suggests more similarities in black-indigenous identification across these two regions than differences.

While our findings suggest that overlapping black/indigenous identities are more common in these places, these are also areas with fairly high (non-indigenous) black identification (25% and 10%, respectively). As a result, the relative share of blacks also identifying as indigenous in these two regions – at 42% and 56%, respectively – is actually lower than the 67% national average, thus suggesting black-indigenous identities are not disproportionately more common in the Costa Chica region, contrary to suggestions in the literature (e.g. Wade 2018). One reason that black-indigenous identification may be relatively low in the Costa Chica is because this region is the center of existing black politics. However, the way in which these politics play out has resulted in the drawing of a symbolic boundary between black and indigenous communities; black Mexicans have demanded rights equivalent to indigenous Mexicans, which has positioned the indigenous as the oppositional "other," dynamics which are not conducive to the recognition of joint black and indigenous identities.

In contrast to the Costa Chica, shares of black-indigenous identified individuals are higher than the 67% average in Veracruz (73%) and the non-Costa Chica portion of Oaxaca (82%). The higher rate of black-indigenous identification in Veracruz may be due to the region's ethno-racial history – its position as a point of entry not only for African slaves but a large number of immigrants has created a regional culture based on the idea of mixture. In Oaxaca, outside of the Costa Chica, the high rate of black-indigenous identities could be connected to the greater strength of ethno-racial movements in general due to the more ethno-racial progressive

nature of Oaxacan politics, the state's constitution, and its laws. Although an in-depth regional analysis is beyond the scope of this paper, future research should delve more deeply into this topic. The high degree of regional variation in black Mexican identities is likely due to the historic absence of blackness in the national narrative, which has allowed regional discourses to play a greater role in identity construction and processes of inequality (Hoffman 2007).

As discussed throughout, our EIC findings suggest that the socioeconomic position of indigenous blacks is intermediate to that of non-indigenous blacks (or blacks in general) and the non-black indigenous. Because the MMSI finding of a black disadvantage relative to NANIs, but advantage relative to indigenous individuals, it is unlikely that the SES of black-indigenous individuals would fall below non-indigenous blacks in other surveys allowing for overlapping indigenous and black identification. This suggests that black-indigenous identification may not be accompanied by a kind of intersectional disadvantage or double oppression (based on cultural and phenotypic markers), even for black-indigenous individuals who speak an indigenous language. However, much more research is needed on this topic, especially given that over two thirds of those who identified as black in the EIC also identified as indigenous.

If the goal of future Mexican censuses is to include questions on black identification that are as inclusive as possible and which reflect ethno-racial inequality, we would recommend removing the reference to culture, history and traditions from the black identification question. Using a race-based introduction (similar to the MMSI) or no introduction (similar to LAPOP) would move away from the ethnicization of blackness, which appears to be odds with the identities of many Mexicans. Although a few other Latin American countries treat blacks as an ethnic group, this conceptualization is usually tied to struggles for collective communal property rights and/or political autonomy, based on the idea of distinct culture (Hooker 2008). However,

these resources and rights are not available to black Mexicans. Moreover, Mexico does not have a large black movement, nor is Afrodescendancy associated with any sort of cultural identity in Mexico (Hoffman 2013), making a culturally-based question a poor fit for the Mexican context.

Unlike the MMSI and most other pre-existing surveys, we recommend the continued use of two separate questions on blackness and indigeneity or a single question that allows people to check more than one option, which is consistent with recommendations by the United Nations (2017: 205). This would allow for the recognition of multiple or overlapping identities such as black-indigenous. Finally, in way that is atypical for ethno-racial questions in Latin America, the EIC allowed for the interviewer to classify people's responses to the black question as "yes" or "yes, in part." Because these results are very difficult to interpret, we would recommend removing the "in part" option for future censuses.

Despite all of the complications with using self-identification as a proxy for observed race and exposure to discrimination, it will likely continue to be the standard way by which membership in ethno-racial categories is determined; the emphasis on self-identification is not only consistent with Mexican law, but also with international standards (INEGI n.d.). Therefore, it will be important to continually assess the implications of the ways in which official ethno-racial statistics are constructed, and their implications. In this vein, our findings contribute to the growing body of literature concerning the measurement of race and ethnicity, especially in national censuses. Like others (e.g. Bailey et al. 2013; Bailey et al. 2014, Telles and PERLA 2014), our findings strongly suggest that question wording has a substantial impact on population counts. Although self-identification measures have been critiqued based on their subjective nature compared to seemingly more "objective" measures like outside classification, our findings

demonstrate that even among self-identification measures, some measures are better suited to measuring population size, as well as ethno-racial inequality, than others.

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Table 1. Sociodemographic characteristics of Mexican adults ages 25-64 by race/ethnicity, 2015 EIC and 2016 MMSI surveys.

	2015 EIC				2016 MMSI		
	Non-indigenous black	Black-indigenous	Non-black indig.	NANI	Black	Indigenous	NANI
Pct. of sample in category	0.636	1.156	21.9	76.3	2.6	13.9	73.3[Φ]
	(0.009)	(0.016)	(0.077)	(0.081)	(0.158)	(0.433)	(0.498)
	Mean (S.E.)	Mean (S.E.)	Mean (S.E.)	Mean (S.E.)	Mean (S.E.)	Mean (S.E.)	Mean (S.E.)
Speaks indig. language	1.0	15.1	26.8	0.8	5.4	32.6	3.0
	(0.069)	(0.438)	(0.131)	(0.009)	(0.901)	(0.769)	(0.125)
Female	50.8	52.7	52.4	53.1	53.2	53.0	51.4
	(0.362)	(0.221)	(0.040)	(0.024)	(2.607)	(1.177)	(0.549)
Age	42.0	41.5	41.6	41.4	39.4	42.2	42.0
	(0.094)	(0.072)	(0.016)	(0.012)	(0.629)	(0.271)	(0.127)
Schooling (years)	10.1	8.8	7.9	9.9	8.1	7.6	10.4
	(0.052)	(0.046)	(0.012)	(0.011)	(0.263)	(0.129)	(0.056)
0 - 5 years	12.9	19.4	25.2	12.3	23.9	26.3	10.6
	(0.286)	(0.336)	(0.085)	(0.044)	(2.578)	(1.197)	(0.366)
6 - 8 years	17.2	20.7	23.4	18.4	20.1	22.8	16.2
	(0.342)	(0.261)	(0.060)	(0.050)	(2.193)	(1.038)	(0.400)
9 - 11 years	27.4	27.7	27.0	29.4	32.3	31.8	30.7
	(0.390)	(0.335)	(0.067)	(0.063)	(3.186)	(1.212)	(0.523)
12 - 15 years	22.9	19.0	14.9	21.8	15.2	12.9	22.1
	(0.411)	(0.307)	(0.067)	(0.057)	(2.049)	(0.868)	(0.491)
16+ years	19.7	13.3	9.5	18.2	8.5	6.2	20.5
	(0.445)	(0.301)	(0.068)	(0.096)	(1.654)	(0.625)	(0.490)
Urban locality	83.7	76.3	65.7	83.7	65.7	58.5	84.3
	(0.469)	(0.644)	(0.177)	(0.092)	(3.041)	(1.609)	(0.358)
Mun. marginalization (z)	-1.2	-0.8	-0.6	-1.3	-0.8	-0.3	-1.3
	(0.011)	(0.016)	(0.004)	(0.002)	(0.062)	(0.049)	(0.012)
Region of residence							
Guerrero, Costa Chica	2.4	1.0	0.1	0.0	N/A	N/A	N/A
	(0.086)	(0.040)	(0.002)	(0.001)			
Oaxaca, Costa Chica	3.6	2.7	0.5	0.1	N/A	N/A	N/A
	(0.136)	(0.125)	(0.013)	(0.003)			
Guerrero	10.0	11.5	3.3	2.1	13.5	4.3	1.8
	(0.557)	(0.453)	(0.060)	(0.035)	(1.805)	(0.678)	(0.136)
Oaxaca	3.9	10.0	8.5	1.1	6.1	10.7	1.7
	(0.166)	(0.272)	(0.071)	(0.015)	(1.343)	(0.727)	(0.133)
Veracruz	12.6	18.8	8.5	6.0	16.7	11.2	5.3
	(0.442)	(0.678)	(0.090)	(0.059)	(2.681)	(1.320)	(0.258)
Mexico City metro	33.6	26.9	10.6	21.7	17.3	8.0	22.0
	(0.851)	(0.819)	(0.159)	(0.192)	(2.852)	(0.948)	(0.746)
Mexico State[**]	3.2	3.1	5.0	3.1	3.4	6.5	3.1
	(0.324)	(0.207)	(0.117)	(0.091)	(2.086)	(1.121)	(0.533)
All others[**]	31.5	26.6	63.7	65.9	43.0	59.3	66.0
	(0.746)	(0.710)	(0.198)	(0.193)	(2.915)	(1.632)	(0.532)
N (thousands)	63.197	146.761	3,264.429	6,057	0.630	3.723	18.497

Notes: all figures are percentages unless noted otherwise; all means were weighted and standard errors were adjusted
NANI = Non-black, non-indigenous. See Table 3 for wording of questions on race/ethnicity and text for group definition
[Φ] Composed of 60% mestiza, 13% blanca, and 0.4% other. Figure does not include 11% reporting "don't know" who
[**] Excludes municipalities that are part of Mexico City metro area.

Table 2. Percent of the Mexican population ages 25-64 identifying as black or indigenous, various surveys and years.

Data source (institution)	Year(s)	N	Pct. black Est. (S.E.)	Sig.[1]	Sig.[2]	Pct. indigenous Est. (S.E.)	Sig.[1]	Sig.[2]	Question wording
A. Measures with a culture-based introduction.									
EIC (INEGI)	2015	14.4 million	1.8 (0.0227)	N/A	***				According to their culture, history, and traditions, [NAME] considers him/herself black, meaning afromexican or afrodescendant?
						23.7 (0.0791)	N/A	***	According to their culture, [NAME] considers him/herself indigenous?
PERLA project (Princeton) - 1	2010	1,000	2.0 (0.5212)	N.S.	N.S.	20.7 (1.4932)	*	***	According to your ancestry and customs, do you consider yourself to be of Náhuatl, Maya, Zapoteco, Mixteco, other indigenous *pueblo*, Negro, Mulato, Blanco, or Mestizo origin?
Decennial Census long-form sample (INEGI)	2010	1.95 million	N/A			14.4 (0.0333)	***	N.S.	According to [NAME] culture, does s/he consider her/himself indigenous?
B. Measures with race-based introduction.									
MMSI (INEGI)	2016	25,634	2.6 (0.1579)	***	N/A	13.9 (0.4330)	***	N/A	In our country, there are people with multiple racial origins. Do you consider yourself black or mulata, indigenous, mestiza, white, or other (e.g., Asian, Eurodescendant) person?
PERLA project (Princeton) - 2	2010	1,000	0.5 (0.2712)	***	***	11.7 (0.2712)	***	***	In our country there are people of multiple racial characteristics and origins. What do you consider your race to be? [OPEN-ENDED]
C. Measures with no specific introduction.									
PERLA project (Princeton) - 3	2010	1,000	3.1 (0.6544)	*	N.S.	12.2 (1.2318)	***	N.S.	Do you consider yourself a mulata, negra, indigenous, mestiza, white, or other?
LAPOP project Mexico samples (Vanderbilt)	2004	1,556	0.4 (0.1981)	***	***	11.4 (0.9456)	***	**	Do you consider yourself white, mestizo, indigenous, or black?
	2006	1,560	0.9 (0.2855)	**	***	8.8 (0.8554)	***	***	Do you consider yourself to be a white, mestizo, indigenous, afro-mexican (black), mulata, or other person?
	2008	1,560	1.4 (0.3610)	N.S.	***	9.0 (0.8932)	***	***	Do you consider yourself a white, mestizo, indigenous, afro-mexican (black), mulata, or other person?
	2010	1,562	2.2 (0.4571)	N.S.	N.S.	7.1 (0.8030)	***	***	Do you consider yourself a white, mestizo, indigenous, black, mulata, or other person?
	2012	1,560	2.0 (0.4347)	N.S.	N.S.	7.4 (0.8157)	***	***	Do you consider yourself a white, mestizo, indigenous, black, mulata, or other person?
	2014	1,535	2.1 (0.4568)	N.S.	N.S.	12.7 (1.0645)	***	N.S.	Do you consider yourself a white, mestizo, indigenous, black, mulata, or other person?
	2016-2017	1,563	4.6 (0.6989)	***	**	12.1 (1.1000)	***	N.S.	Do you consider yourself a white, mestizo, indigenous, black, mulata, or other person?

Notes: EIC estimates for black (indigenous) include individuals also identifying as indigenous (black). N = full sample size.

[1] Diff. bet. estimate relative to corresponding one for 2015 EIC ("yes" + "in part") is statistically significant at...***0.001 **0.01 *0.05 … level (otherwise, N.S. = not sig. at 0.05 or lower level).

[2] Diff. bet. estimate relative to corresponding one for 2016 MMSI is statistically significant at...***0.001 **0.01 *0.05 ...level (otherwise, N.S. = not sig. at 0.05 or lower level).

Table 3. Percent of adults ages 25-64 that identify as black and/or indigenous by selected characteristics, 2015 EIC and 2016 MMSI.

	2015 EIC			2016 MMSI		Ratio MMSI/EIC			
	i. Non-indigenous black	ii. Black-indigenous	iii. Non-black indigenous	iv. Black	v. Indigenous	iv/i	iv/ii	v/ii	v/iii
	Mean (S.E.)	Mean (S.E.)	Mean (S.E.)	Mean (S.E.)	Mean (S.E.)	Ratio Sig.	Ratio Sig.	Ratio Sig.	Ratio Sig.
Men	0.7 (0.011)	1.2 (0.020)	22.1 (0.080)	2.6 (0.209)	13.8 (0.555)	3.86 ***	2.20 ***	11.9 ***	0.626 ***
Women	0.6 (0.011)	1.2 (0.018)	21.7 (0.078)	2.6 (0.207)	14.0 (0.509)	4.29 ***	2.28 ***	12.2 ***	0.647 ***
Age groups									
25 - 34	0.6 (0.013)	1.1 (0.023)	21.7 (0.090)	3.5 (0.349)	14.0 (0.661)	5.89 ***	3.06 ***	12.2 ***	0.644 ***
35 - 44	0.6 (0.014)	1.2 (0.022)	21.6 (0.088)	2.6 (0.238)	12.9 (0.588)	4.09 ***	2.24 ***	11.1 ***	0.598 ***
45 - 54	0.7 (0.015)	1.2 (0.021)	21.6 (0.090)	1.8 (0.217)	14.4 (0.674)	2.72 ***	1.58 **	12.5 ***	0.667 ***
55 - 64	0.7 (0.017)	1.2 (0.025)	23.1 (0.099)	2.0 (0.323)	15.0 (0.853)	3.02 ***	1.72 **	12.8 ***	0.650 ***
Schooling levels									
16+	0.8 (0.020)	0.9 (0.023)	12.8 (0.094)	1.3 (0.269)	5.2 (0.537)	1.74 *	1.41 N.S.	5.5 ***	0.409 ***
12 - 15	0.7 (0.018)	1.1 (0.027)	16.1 (0.092)	2.0 (0.292)	9.2 (0.633)	2.79 ***	1.85 ***	8.5 ***	0.571 ***
9 - 11	0.6 (0.013)	1.1 (0.024)	20.5 (0.090)	2.7 (0.317)	14.2 (0.587)	4.43 ***	2.40 ***	12.8 ***	0.691 ***
6 - 8	0.6 (0.015)	1.2 (0.023)	26.2 (0.104)	2.9 (0.345)	17.7 (0.923)	5.16 ***	2.36 ***	14.5 ***	0.676 ***
0 - 5	0.5 (0.014)	1.5 (0.032)	36.3 (0.129)	4.2 (0.485)	25.2 (1.328)	7.88 ***	2.87 ***	17.1 ***	0.694 ***
Indigenous language status									
Non-speaker	0.7 (0.011)	1.1 (0.018)	17.2 (0.071)	2.6 (0.169)	10.1 (0.325)	3.90 ***	2.50 ***	9.6 ***	0.591 ***
Speaker	0.1 (0.007)	2.6 (0.087)	88.3 (0.133)	2.1 (0.497)	64.6 (1.806)	20.98 ***	0.79 N.S.	24.5 ***	0.731 ***
Urban loc.	0.7 (0.012)	1.1 (0.021)	18.1 (0.084)	2.2 (0.157)	10.3 (0.390)	3.22 ***	1.94 ***	9.3 ***	0.571 ***
Rural loc.	0.5 (0.015)	1.3 (0.040)	36.8 (0.160)	4.2 (0.457)	27.6 (1.435)	8.35 ***	3.16 ***	20.5 ***	0.749 ***
Municipal marginalization									
Very low	0.6 (0.014)	0.9 (0.025)	14.0 (0.100)	1.9 (0.178)	7.1 (0.320)	2.99 ***	2.05 ***	7.6 ***	0.503 ***
Low	0.8 (0.038)	1.5 (0.047)	22.9 (0.173)	3.2 (0.490)	12.1 (1.190)	3.74 ***	2.10 ***	8.0 ***	0.530 ***
Medium	0.4 (0.009)	1.1 (0.043)	31.0 (0.159)	3.1 (0.434)	22.7 (1.256)	7.16 ***	2.84 ***	21.0 ***	0.732 ***
High	0.8 (0.020)	2.2 (0.053)	44.9 (0.268)	6.1 (1.109)	35.5 (3.047)	7.23 ***	2.81 ***	16.3 ***	0.790 **
Very high	0.5 (0.030)	2.5 (0.081)	71.4 (0.234)	3.9 (0.976)	58.1 (3.844)	7.75 ***	1.56 N.S.	23.1 ***	0.813 ***
Region of residence									
Guerrero, CC[1]	24.8 (0.684)	18.3 (0.594)	23.8 (0.715)	N/A	N/A	N/A	N/A	N/A	N/A
Oaxaca, CC[1]	10.4 (0.365)	13.5 (0.551)	45.2 (0.774)	N/A	N/A	N/A	N/A	N/A	N/A
Guerrero[2]	2.4 (0.138)	5.2 (0.200)	28.2 (0.440)	13.9 (1.650)	23.6 (3.413)	5.69 ***	2.68 ***	4.6 ***	0.837 N.S.
Oaxaca[2]	0.9 (0.035)	4.0 (0.095)	65.9 (0.302)	5.1 (1.132)	48.1 (2.794)	5.91 ***	1.26 N.S.	11.9 ***	0.730 ***
Veracruz	1.2 (0.042)	3.2 (0.132)	27.8 (0.253)	6.4 (1.129)	23.0 (2.848)	5.34 ***	1.96 **	7.1 ***	0.828 *
Mex. City	1.1 (0.035)	1.6 (0.059)	11.9 (0.161)	3.6 (0.753)	6.2 (0.927)	3.29 ***	2.26 **	3.8 ***	0.518 ***
Mex. State[3]	0.6 (0.054)	1.0 (0.060)	30.9 (0.681)	1.7 (0.538)	10.5 (1.265)	2.85 *	1.63 N.S.	10.3 ***	0.338 ***
Other	0.3 (0.008)	0.5 (0.015)	21.5 (0.091)	1.7 (0.117)	12.7 (0.469)	5.48 ***	3.56 ***	26.7 ***	0.591 ***

Notes: all means were weighted and standard errors were adjusted for complex sampling design.

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ N.S. Not significant at 0.05 or lower level.

[1] CC = Costa Chica region.

[2] Excludes municipalities in the Costa Chica due to data unavailability in MMSI.

[3] Excludes municipalities that are part of the Mexico City metropolitan area.

Table 4. Odds ratios from multinomial models predicting self-reported ethno-racial identification, 2015 EIC and 2016 MMSI surveys.

	2015 EIC					2016 MMSI					Ratio MMSI / EIC			
	i. Non-indigenous black vs. NANI		ii. Black-indigenous vs. NANI		iii. Non-black indigenous vs. NANI	iv. Black vs. NANI			v. Indigenous vs. NANI					
	O.R.	Sig.1	O.R.	Sig.1	O.R. Sig.1	O.R.	Sig.1	Sig.2	O.R.	Sig.1	Sig.2	iv/i	iv/ii	v/ii	v/iii
Female	0.898	***	0.956	***	0.963 ***	1.040	N.S.	N.S.	1.054	N.S.	N.S.	1.2	1.1	1.1	1.1
Age	1.004	***	0.996	***	0.998 ***	0.961	***	***	0.986	***	***	1.0	1.0	1.0	1.0
Speaks indigenous language	1.319	***	15.97	***	24.91 ***	1.253	N.S.	N.S.	8.066	***	***	0.9	0.1	0.5	0.3
Respondent's schooling (years)	1.008	*	0.974	***	0.964 ***	0.905	***	***	0.951	***	N.S.	0.9	0.9	1.0	1.0
Rural locality (REF = urban)	1.023	N.S.	0.893	**	0.964 **	1.514	**	**	1.136	N.S.	*	1.5	1.7	1.3	1.2
Municipal marginalization (z)	0.829	***	1.093	***	1.537 ***	1.136	N.S.	***	1.687	***	*	1.4	1.0	1.5	1.1
Region (REF = all other places)															
Guerrero, Costa Chica	27.21	***	8.458	***	0.936 N.S.	N/A			N/A			N/A	N/A	N/A	N/A
Oaxaca, Costa Chica	10.58	***	6.504	***	2.226 ***	N/A			N/A			N/A	N/A	N/A	N/A
Guerrero, non-Costa Chica	1.183	**	1.174	***	0.532 ***	3.041	***	***	0.789	N.S.	**	2.6	2.6	0.7	1.5
Oaxaca, non-Costa Chica	0.845	***	1.844	***	2.782 ***	1.565	*	**	2.072	***	**	1.9	0.8	1.1	0.7
Veracruz	0.493	***	0.791	***	0.768 ***	1.623	*	***	1.107	N.S.	**	3.3	2.1	1.4	1.4
Mexico City metro	0.300	***	0.370	***	0.554 ***	0.637	*	***	0.587	***	N.S.	2.1	1.7	1.6	1.1
Mexico state[3]	0.233	***	0.262	***	1.049 N.S.	0.537	N.S.	*	1.278	N.S.	N.S.	2.3	2.1	4.9	1.2
AIC			85,720,348					48,344,122							
N (thousands)			13,684					21.456							

Notes: weighted estimates, standard errors adjusted for complex sampling design.

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ N.S. $p > 0.05$

[1] Level of significance of coefficient.

[2] Level of significance of difference bet. coefficient for black/indigenous in MMSI rel. to same group in EIC (see text for explanation).

[3] Excludes municipalities that are part of the Mexico City metropolitan area.

Table 5. Differences in years of schooling, odds in being in white-collar occupation, or odds of living in household that owns a car between black/indigenous groups and NANIs according to types of controls added, 2015 EIC and 2016 MMSI surveys.

		EIC			MMSI	
		i. Non-indigenous black	ii. Indigenous-black	iii. Non-black indigenous	iv. Black	v. Indigenous
a. Schooling (differences in years vs. NANIs)						
		Est. Sig.	Est. Sig.	Est. Sig.	Est. Sig.	Est. Sig.
No sociodemographic controls		0.153 ***	-1.105 ***	-2.062 ***	-1.907 ***	-2.435 ***
Single additional controls	Sex	0.145 **	-1.106 ***	-2.064 ***	-2.248 ***	-2.807 ***
	Age	0.208 ***	-1.090 ***	-2.037 ***	-2.522 ***	-2.791 ***
	Indig. lang.	0.162 ***	-0.647 ***	-1.232 ***	-2.166 ***	-2.013 ***
	Urban/rural	0.150 ***	-0.862 ***	-1.470 ***	-1.716 ***	-2.070 ***
	Mun. Margin.	0.316 ***	-0.365 ***	-0.842 ***	-1.495 ***	-1.429 ***
	Region	0.253 ***	-0.847 ***	-1.818 ***	-2.019 ***	-2.513 ***
All sociodemographic controls		0.144 ***	-0.619 *	-0.817 ***	-1.770 ***	-1.362 ***
Pct. gap vs. NANIs explained by all vs. no controls		6.1	44.0	60.4	7.2	44.1
All sociodemg. + indig. lang.		0.145	-0.488 ***	-0.578 ***	-1.767 ***	-1.085 ***
Pct. gap vs. NANIs explained by all vs. no controls		5.2	55.9	72.0	7.3	55.4
b. White-collar occupation (log-odd difference vs. NANIs)						
		Est. Sig.	Est. Sig.	Est. Sig.	Est. Sig.	Est. Sig.
No sociodemographic controls		0.098 ***	-0.280 ***	-0.575 ***	-0.755 ***	-1.032 ***
Single additional controls	Sex	0.102 ***	-0.276 ***	-0.562 ***	-0.753 ***	-1.034 ***
	Age	0.106 ***	-0.278 ***	-0.572 ***	-0.781 ***	-1.030 ***
	Indig. lang.	0.100 ***	-0.202 ***	-0.432 ***	-0.733 ***	-0.830 ***
	Urban/rural	0.102 ***	-0.233 ***	-0.450 ***	-0.601 ***	-0.800 ***
	Mun. Margin.	0.132 ***	-0.146 ***	-0.328 ***	-0.516 **	-0.579 ***
	Region	0.103 ***	-0.254 ***	-0.538 ***	-0.665 ***	-0.906 ***
	Schooling	0.078 *	-0.042 N.S.	-0.082 ***	-0.148 N.S.	-0.220 *
All sociodemographic controls		0.085 **	-0.218 ***	-0.327 ***	-0.557 **	-0.553 ***
Pct. gap vs. NANIs explained by all vs. no controls		13.4	22.2	43.1	26.3	46.4
All sociodemg. + indig. lang.		0.085	-0.190 ***	-0.280 ***	-0.556 **	-0.480 ***
Pct. gap vs. NANIs explained by all vs. no controls		12.5	32.2	51.3	26.4	53.5
All sociodem. controls + schooling		0.084 **	-0.017 N.S.	-0.053 ***	0.040 N.S.	0.027 N.S.
Pct. gap vs. NANIs explained by all vs. no controls		13.8	94.0	90.9	105.3	102.6
c. Car ownership (log-odd difference vs. NANIs)						
		Est. Sig.	Est. Sig.	Est. Sig.	Est. Sig.	Est. Sig.
No sociodemographic controls		-0.180 ***	-0.642 ***	-0.745 ***	-0.941 ***	-1.152 ***
Single additional controls	Sex	-0.183 ***	-0.643 ***	-0.746 ***	-0.939 ***	-1.150 ***
	Age	-0.184 ***	-0.644 ***	-0.747 ***	-0.928 ***	-1.153 ***
	Indig. lang.	-0.178 ***	-0.497 ***	-0.474 ***	-0.919 ***	-0.927 ***
	Urban/rural	-0.183 ***	-0.608 ***	-0.651 ***	-0.805 ***	-0.958 ***
	Mun. Margin.	-0.141 ***	-0.465 ***	-0.432 ***	-0.676 ***	-0.629 ***
	Region	0.050 ***	-0.347 ***	-0.693 ***	-0.754 ***	-1.016 ***
	Schooling	-0.230 ***	-0.546 ***	-0.503 ***	-0.629 ***	-0.701 ***
All sociodemographic controls		0.006 N.S.	-0.295 ***	-0.447 ***	-0.591 ***	-0.613 ***
Pct. gap vs. NANIs explained by all vs. no controls		103.3	54.0	40.0	37.1	46.8
All sociodemg. + indig. lang.		0.008	-0.228 ***	-0.324 ***	-0.590 ***	-0.542 ***
Pct. gap vs. NANIs explained by all vs. no controls		104.2	64.5	56.5	37.2	52.9
All prior controls + schooling		-0.017 N.S.	-0.169 ***	-0.256 ***	-0.297 N.S.	-0.310 ***
Pct. gap vs. NANIs explained by all vs. no controls		90.9	73.7	65.6	68.5	73.1

Notes: all estimates were weighted and standard errors adjusted for complex sampling.

All models include black/indigenous variable(s); models with "single additional controls" also include sociodemographic variable as

Models with "all controls" include sex, age (years), urban/rural locality, municipal marginalization index (z-score), region (see Table 1 for options) and, in the case of white-collar occupation and car ownership, schooling (years).

NANI = Non-black (afrodescendant), non-indigenous individuals.

Highlighted estimates imply statistically significant black/indigenous disadvantage rel. to NANIs.

*** $p < 0.01$ ** $p < 0.01$ * $p < 0.05$ N.S. Not significant at 0.05 or lower level.

Appendix I. Sociodemographic characteristics of Mexican adults ages 25-64, 2015 EIC and 2016 MMSI surveys.

	2015 EIC	2016 MMSI	Sig. MMSI-EIC diff.
	Mean	Mean	
	(S.E.)	(S.E.)	
Speaks an indigenous lang.	6.7	7.0	N.S.
	(0.036)	(0.480)	
Female	52.7	52.6	N.S.
	(0.019)	(0.462)	
Age	41.5	41.9	***
	(0.011)	(0.109)	
Schooling (years)	9.4	9.6	***
	(0.010)	(0.049)	
0 - 5 years	15.3	14.6	*
	(0.045)	(0.374)	
6 - 8 years	19.6	18.0	***
	(0.044)	(0.365)	
9 - 11 years	28.8	31.3	***
	(0.054)	(0.486)	
12 - 15 years	20.1	19.7	N.S.
	(0.050)	(0.414)	
16+ years	16.1	16.5	N.S.
	(0.082)	(0.383)	
Urban locality	79.5	79.0	*
	(0.092)	(0.281)	
Mun. marginalization (z)	-1.1	-1.1	N.S.
	(0.002)	(0.013)	
Region of residence			
Guerrero, Costa Chica	0.1	N/A	
	(0.001)		
Oaxaca, Costa Chica	0.2	N/A	
	(0.005)		
Guerrero	2.6	2.5	N.S.
	(0.034)	(0.115)	
Oaxaca	2.8	3.1	*
	(0.023)	(0.119)	
Veracruz	6.8	6.8	N.S.
	(0.054)	(0.176)	
Mexico City metro	19.3	19.1	N.S.
	(0.168)	(0.607)	
Mexico State[1]	3.5	3.6	N.S.
	(0.082)	(0.549)	
All others[1]	64.7	64.9	N.S.
	(0.168)	(0.388)	
N (thousands)	9,937	25.634	

Notes: all figures are percentages unless noted otherwise; all means were weighted and standard errors were adjusted for complex sampling design.

[1] Excludes municipalities that are part of Mexico City metro area.

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ N.S. $p > 0.05$.

Appendix II. Sociodemographic characteristics of non-indigenous black and black-indigenous adults ages 25-64 according to whether classified as "yes" or "in part" black, 2015 EIC.

	Non-indigenous black			Black-indigenous		
	"Yes"	"In part"	Sig. "yes" - "in part" diff.	"Yes"	"In part"	Sig. "yes" - "in part" diff.
Pct. of sample in category	0.428	0.208	***	0.827	0.329	***
	(0.009)	(0.004)		(0.016)	(0.007)	
	Mean	Mean		Mean	Mean	
	(S.E.)	(S.E.)		(S.E.)	(S.E.)	
Speaks indig. lang.	1.1	0.9	N.S.	15.2	14.8	N.S.
	(0.087)	(0.111)		(0.566)	(0.537)	
Female	50.4	51.7	*	53.0	51.7	**
	(0.433)	(0.640)		(0.242)	(0.477)	
Age	42.2	41.5	***	41.5	41.6	N.S.
	(0.118)	(0.149)		(0.090)	(0.111)	
Schooling (years)	10.1	10.0	*	8.8	9.0	*
	(0.065)	(0.076)		(0.055)	(0.069)	
0 - 5 years	12.9	12.8	N.S.	19.6	18.8	N.S.
	(0.347)	(0.478)		(0.423)	(0.456)	
6 - 8 years	17.1	17.5	N.S.	20.7	20.6	N.S.
	(0.434)	(0.533)		(0.316)	(0.436)	
9 - 11 years	26.6	29.0	**	27.5	28.1	N.S.
	(0.479)	(0.660)		(0.396)	(0.581)	
12 - 15 years	23.3	22.1	N.S.	19.4	18.0	*
	(0.504)	(0.611)		(0.369)	(0.516)	
16+ years	20.2	18.6	*	12.8	14.6	**
	(0.577)	(0.612)		(0.355)	(0.504)	
Urban locality	84.0	83.2	N.S.	76.5	75.8	N.S.
	(0.594)	(0.718)		(0.828)	(0.764)	
Mun. marginalization (z)	-1.1	-1.2	***	-0.8	-0.8	N.S.
	(0.015)	(0.011)		(0.020)	(0.019)	
Region of residence						
Guerrero, Costa Chica	3.2	0.8	. . .	1.2	0.5	. . .
	(0.127)	(0.079)		(0.053)	(0.037)	
Oaxaca, Costa Chica	5.0	0.6	. . .	3.3	1.2	. . .
	(0.210)	(0.055)		(0.172)	(0.096)	
Guerrero	12.6	4.7	***	13.8	5.8	***
	(0.798)	(0.362)		(0.590)	(0.444)	
Oaxaca	4.8	2.2	***	11.5	6.4	***
	(0.239)	(0.170)		(0.352)	(0.338)	
Veracruz	14.2	9.3	***	21.7	11.6	***
	(0.542)	(0.719)		(0.877)	(0.539)	
Mexico City metro	37.7	25.2	***	30.5	17.9	***
	(1.086)	(0.976)		(0.991)	(0.929)	
Mexico State[1]	3.8	2.2	***	3.6	1.9	***
	(0.458)	(0.224)		(0.260)	(0.178)	
All others[1]	20.0	55.1	***	15.3	55.0	***
	(0.971)	(1.012)		(0.831)	(1.039)	
N (thousands)	45.611	17.586		105.576	41.185	

Notes: all figures are percentages unless noted otherwise; all means were weighted and standard errors were adjusted for complex sampling design.

NANI = Non-black, non-indigenous. See text for definitions.

[1] Excludes municipalities that are part of Mexico City metro area.

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ N.S. $p > 0.05$.

Appendix III. Socioeconomic composition of Mexican adults ages 25-64 according to ethno-racial identification, 2015 EIC and 2016 MMSI surveys.

	2015 EIC							2016 MMSI						
	Non-indigenous black		Black-indigenous		Non-black indigenous		NANI	Black			Indigenous			NANI
	Mean (S.E.)	Sig.1	Mean (S.E.)	Sig.1	Mean (S.E.)	Sig.1	Mean (S.E.)	Mean (S.E.)	Sig.1	Sig.2	Mean (S.E.)	Sig.1	Sig.2	Mean (S.E.)
Schooling (years)	10.1 (0.052)	**	8.8 (0.046)	***	7.9 (0.012)	***	9.9 (0.011)	8.1 (0.263)	***	***	7.6 (0.129)	***	*	10.4 (0.056)
16+	19.7 (0.445)	***	13.3 (0.301)	***	9.5 (0.068)	***	18.2 (0.096)	8.5 (1.654)	***	***	6.2 (0.625)	***	***	20.5 (0.490)
12 - 15	22.9 (0.411)	**	19.0 (0.307)	***	14.9 (0.067)	***	21.8 (0.057)	15.2 (2.049)	***	***	12.9 (0.868)	***	*	22.1 (0.491)
9 - 11	27.4 (0.390)	***	27.7 (0.335)	***	27.0 (0.067)	***	29.4 (0.063)	32.3 (3.186)	N.S.	N.S.	31.8 (1.212)	N.S.	***	30.7 (0.523)
6 - 8	17.2 (0.342)	***	20.7 (0.261)	***	23.4 (0.060)	***	18.4 (0.050)	20.1 (2.193)	*	N.S.	22.8 (1.038)	***	N.S.	16.2 (0.400)
0 - 5	12.9 (0.286)	*	19.4 (0.336)	***	25.2 (0.085)	***	12.3 (0.044)	23.9 (2.578)	***	***	26.3 (1.197)	***	N.S.	10.6 (0.366)
Occupation type														
White-collar, higher sk.	26.4 (0.542)	***	19.7 (0.388)	***	15.4 (0.090)	***	24.5 (0.093)	13.8 (2.031)	***	***	10.8 (0.815)	***	***	25.4 (0.531)
Office worker	6.3 (0.289)	N.S.	4.9 (0.176)	***	4.0 (0.038)	***	6.4 (0.032)	6.2 (1.374)	N.S.	N.S.	3.3 (0.417)	***	N.S.	7.5 (0.307)
Skilled blue collar	21.2 (0.478)	***	20.3 (0.426)	***	20.6 (0.080)	***	23.2 (0.066)	21.8 (2.357)	N.S.	N.S.	20.8 (1.029)	N.S.	N.S.	19.6 (0.472)
Blue collar	8.1 (0.306)	N.S.	9.9 (0.251)	***	9.8 (0.056)	***	8.3 (0.033)	26.3 (2.511)	**	***	32.0 (1.014)	***	***	20.3 (0.468)
Service job	13.5 (0.374)	N.S.	14.0 (0.292)	N.S.	12.1 (0.062)	***	13.7 (0.039)	8.5 (1.651)	N.S.	**	6.3 (0.561)	***	***	8.4 (0.306)
Ag. production	7.7 (0.271)	*	11.4 (0.290)	***	18.5 (0.104)	***	7.1 (0.039)	12.3 (2.251)	***	*	16.6 (1.018)	***	*	4.6 (0.258)
Select HH amenities														
Computer	41.6 (0.598)	**	30.6 (0.474)	***	22.8 (0.114)	***	39.9 (0.112)	26.2 (2.568)	***	***	19.7 (1.080)	***	**	44.1 (0.573)
Internet	42.9 (0.618)	***	31.7 (0.495)	***	22.6 (0.124)	***	40.7 (0.117)	33.0 (2.850)	***	***	24.0 (1.241)	***	N.S.	52.4 (0.582)
Car	47.7 (0.571)	***	36.5 (0.497)	***	34.2 (0.117)	***	52.3 (0.107)	16.1 (2.180)	***	***	13.4 (0.892)	***	***	32.9 (0.565)
Flat screen	51.6 (0.605)	N.S.	41.8 (0.599)	***	34.8 (0.122)	***	51.5 (0.106)	71.9 (2.416)	N.S.	***	61.9 (1.440)	***	***	74.6 (0.463)
Washing machine	76.7 (0.456)	***	64.7 (0.458)	***	57.0 (0.129)	***	79.1 (0.067)	66.6 (2.774)	***	***	52.6 (1.662)	***	**	80.5 (0.477)

Notes: all means were weighted and standard errors were adjusted for complex sampling design.

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ N.S. $p > 0.05$.

[1] Level of significance of difference relative to NANIs.

[2] Level of significance of difference between "Blacks"/"Indigenous" in MMSI and "all Blacks"/"Non-black indigenous" in EIC.

Figure 1. Percent of Mexican adults ages 25 – 64 identifying as black (a) and indigenous (b) by age group, schooling level, indigenous language speaking ability, rural/urban residence, and municipal marginalization levels, 2015 EIC & 2016 MMSI surveys.

Figure 2. Un- & adjusted differences in (a) schooling (years), (b) odds of being in white-collar occupation (percent), and (c) odds of living in household that owns a car (percent) between black/indigenous individuals relative to NANIs, 2015 EIC & 2016 MMSI surveys.