# Is Mexico a Post-Racial Country? Inequality and Skin Tone across the Americas

By Daniel Zizumbo-Colunga and Iván Flores Martínez

Center for Research and Teaching in Economics, CIDE

daniel.zizumbo@cide.edu
ivan.flors@cide.edu

November 6, 2017

Mexico's National Institute of Statistics (INEGI) recently re-leased the results of its 2017 National Household Survey (ENH).[1] For the first time, INEGI used a color palette to measure individuals' skin tone. Using this information from the survey, INEGI (2017) finds that Mexicans who were classified by the interviewers as having darker skin tones tend to have lower levels of education and are worse off economically than their lighter skinned counterparts.

These results have provoked heated discussion among journalists and academics. Some, seeing Mexico as a post-racial country, contend that discrimination based on skin tone is a thing of the past and cast doubt upon INEGI's results (e.g., Páramo, 2017). Others (e.g., Monroy-Gómez-Franco, 2017; Campos-Vázquez and Medina-Cortina 2017) contend that these statistics are in line with other studies (see, for example, Trejo and Altamirano 2016; Campos, 2016; Arceo and Campos, 2014; Aguilar 2011; Telles and Steele, 2012; Telles, 2014), and constitute clear evidence of social inequality and discrimination on the basis of skin tone.

---

INEGI's findings, while valuable, are limited in two ways. First, they likely confound the effect of skin tone with that of other socio-demographic variables. Since citizens of darker skin tones are more likely to belong to ethnic minorities and live in rural areas, differences in wealth and education observed across individuals with differing skin tones may simply reflect differences across ethnic and geographic groups. Second, since INEGI only works within Mexico, its data do not allow us to compare the severity of skin tone inequality in Mexico with that in other countries. Even if one could identify that discrimination by skin tone exists in Mexico, with INEGI's data it is not possible to tell if it is lower or higher than that in other countries in the Latin America and Caribbean (LAC) region. We use data from the 2016/17 AmericasBarometer to address both of these issues.

In addition to asking citizens about their political and economic attitudes, the AmericasBarometer asks interviewers to classify respondents' facial skin tone using an 11-point scale, with higher numbers representing darker skin tones.[2] This technique is identical to the one used by the ENH.[3] Using data from the 2014 and 2016/17 rounds of the AmericasBarometer, we estimate OLS regression models that examine the relationship between skin tone and material wealth in Mexico and the other countries of the LAC region.
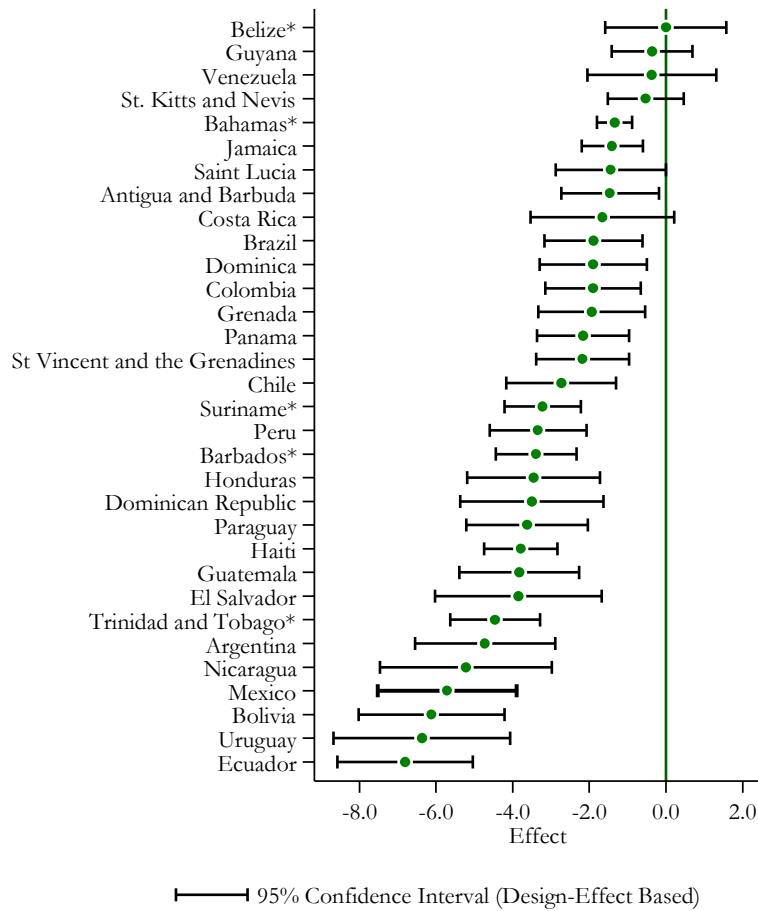
Figure 1 shows the relationship of skin tone to material wealth within each of the countries of the Americas, holding respondents' ethnicity, rural/urban location, subnational region, and gender constant.[4] Each point represents the change in the dependent variable (in this case material wealth) when the independent variable (skin tone) is changed from its minimum value (0, the lightest skin tone) to its maximum (1, the darkest skin tone). Horizontal bars represent 95 percent confidence intervals. If the confidence interval does not cross the vertical line at zero, the effect of skin tone is statistically significant with 95 percent confidence. Figure 1 shows that the negative toll of skin color on material wealth in Mexico is among the three most extensive in the region, trailing only Trinidad and Tobago and Ecuador.

┣━━━━━┫ 95% Confidence Interval (Design-Effect Based)
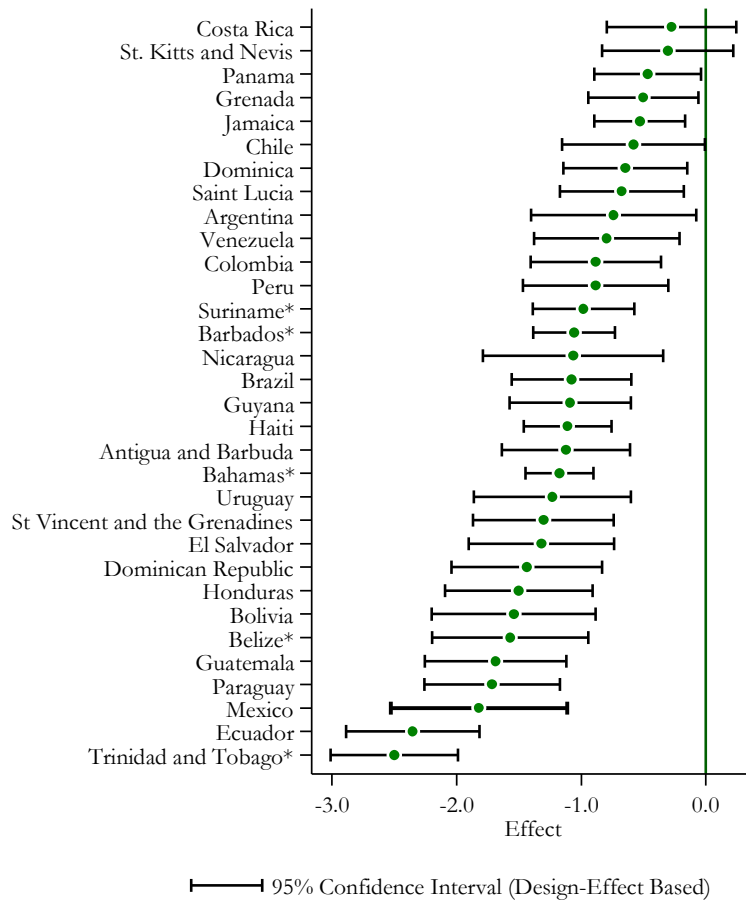
Source: 2016-2017 AmericasBarometer by LAPOP.
*2014 AmericasBarometer

**Figure 1. Skin Tone and Material Wealth in the LAC Region (Maximal Effects)**

In fact, while the average Mexican with the lightest skin tone is located between the 3rd and 4th wealth quintile, Mexicans with the darkest skin tone are located, on average, below the 2nd wealth quintile.[5] In substantive terms, a maximal change in skin tone (i.e., from the lightest to the darkest tone) in Mexico is associated with a 51.5% decrease in LAPOP's scale of material wealth, even when other variables are controlled for.[6]

**Figure 2. Skin Tone and Educational Attainment in the Americas**

Figure 2 also displays a grim story for educational inequality. Consistent with INEGI's report, we find that skin tone exerts a negative toll on educational attainment. Further, we show that the toll of skin tone on educational outcomes in Mexico is among the greatest in the LAC region, behind only Bolivia, Uruguay, and Ecuador.

This finding speaks directly to the debate that the INEGI report has generated. While Mexicans with the lightest skin tones complete, on average, 11 years of schooling, their dark-skinned counterparts finish only 5.3 years of education, on average. In total, a maximal change in skin tone in Mexico can be associated with a decrease of 5.7 years of schooling, a 51.8% reduction in educational attainment– even after

controlling for ethnicity, rural/urban area, subnational region, and gender.[7]

All things considered, the AmericasBarometer data paint a stark picture of the relationship between skin tone and inequality in Mexico. Our analyses confirm INEGI's results and show that the negative relationship between skin tone, on the one hand, and wealth and education outcomes, on the other hand, is statistically significant even when controlling for potential confounding factors (such as geographic and ethnic differences). Moreover, they show that the effect of skin tone in mexico is stronger than the effect of any of the other socioeconomic variabels.[8] In short, not only does the color of one's skin negatively predict economic and educational attainment in Mexico, but these negative implications are among the strongest in the LAC region.

The debate about the kind of policies that are likely to be effective to fight inequality derived from racial discrimination is still open. However, citizens, journalists, and government officials in Mexico gain little from hiding or ignoring the very existence of the race problem. It is necessary for these sectors to invest in systematic research aimed at uncovering the causes of explicit, implicit and structural discrimination. Further, it is critical for public agencies to promote the cientific evaluation of interventions aimed at preventing and fighting discrimination.[9] Only then will they be able to create a more just and equal society.

## Appendix

Figures A1 and A2 show the predicted level of wealth and educational attainment for an average respondent at different levels of skin tone. To produce these estimates we estimated an OLS regression model with the data from Mexico. Then we fixed all controls at their mean and varied the levels of the skin tone variable from 1 to 11. To do this we used the *margins* comand in STATA®. This allows us to produce confidence intervals that account for the complex nature of the AmericasBarometer sample.
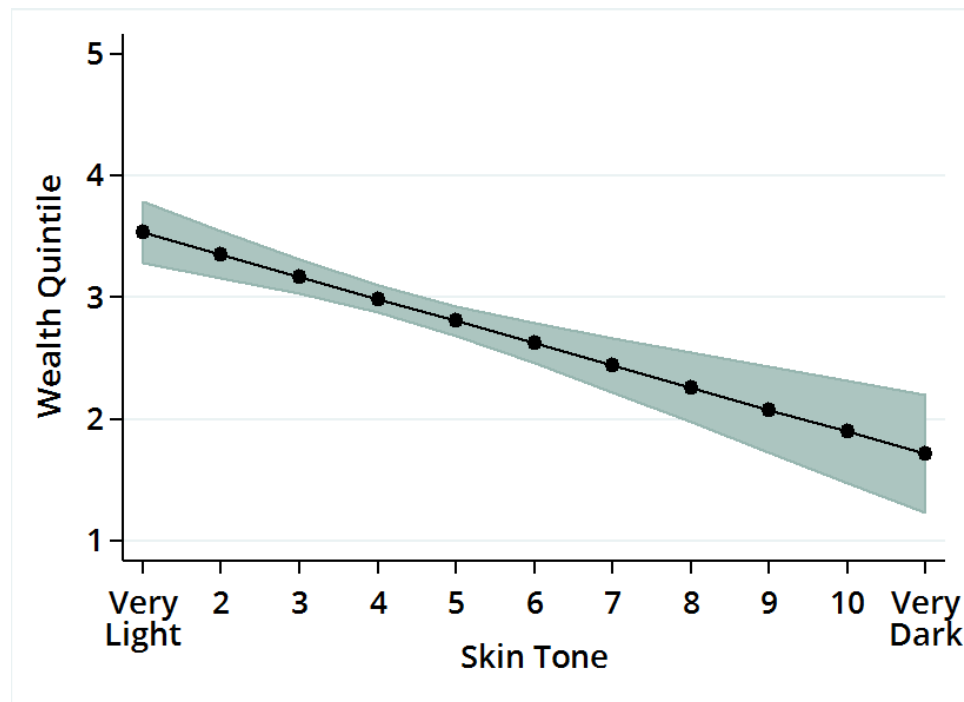


**Figure A1. Predicted Effect of Skin Tone on Material Wealth in Mexico**
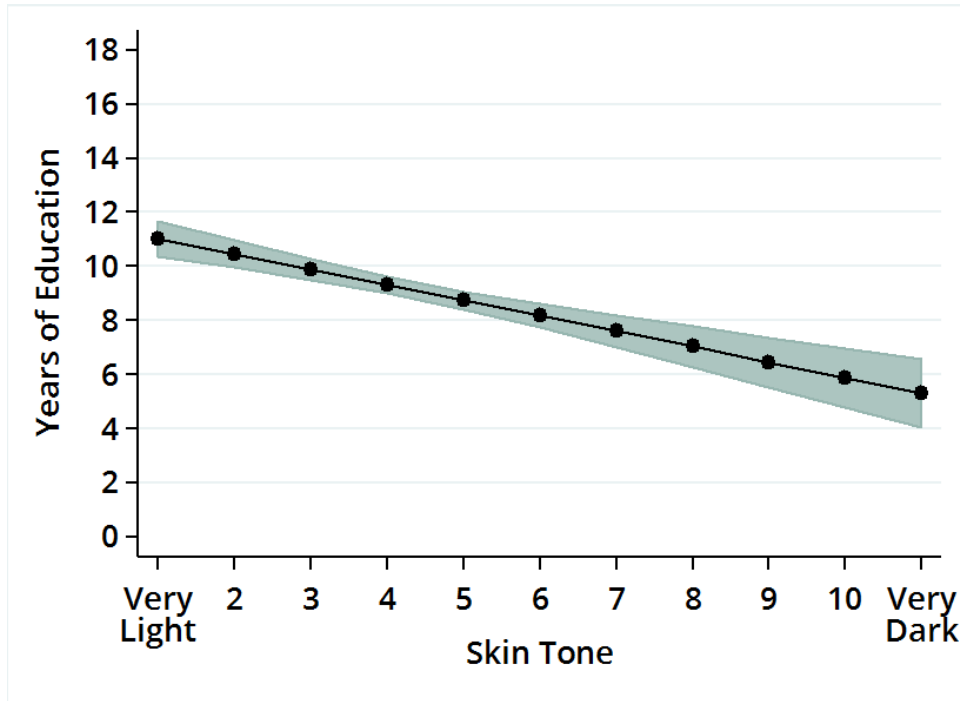
**Figure A2. Predicted Effect of Skin Tone on Educational Attainment in Mexico**

Table A1 shows the OLS regression results for Mexico. The dependent variables are quintiles of wealth (coded from 1–5) and educational attainment (coded from 0 to 18). The independent variables are either dummy variables or continuous variables recoded to run from 0 to 1. As can be seen in the table, the maximal effect of skin tone is many times larger than the effects of gender, rural place of residence, and geographical location.

**Table A1. Demographic Factors' Influence in Predicting Wealth and Educational Attainment**

|  | Wealth | Educational Attainment |
|---|---|---|
| Skin Tone | -1.820*** | -5.707*** |
|  | (0.357) | (0.914) |
| Mestizo vs White | 0.369*** | 2.524*** |
|  | (0.114) | (0.356) |
| Indigenous vs White | -0.525*** | 0.989* |
|  | (0.168) | (0.528) |
| Black vs White | -0.271 | 0.424 |
|  | (0.271) | (0.813) |
| Mulatto vs White | 0.0195 | 1.132 |
|  | (0.366) | (1.186) |
| Other vs White | -0.0567 | 1.308** |
|  | (0.181) | (0.514) |
| Central West Area vs North | -0.520*** | -1.547*** |
|  | (0.181) | (0.547) |
| Central Area vs North | -0.307** | -0.138 |
|  | (0.121) | (0.379) |
| South vs North | -0.713*** | -0.0196 |
|  | (0.136) | (0.412) |
| Rural vs Urban | 0.241* | -1.654*** |
|  | (0.139) | (0.323) |
| Female | -0.388*** | -0.226 |
|  | (0.0671) | (0.202) |
| Constant | 3.976*** | 10.55*** |
|  | (0.143) | (0.446) |
| Observations | 1,505 | 1,525 |
| R-squared | 0.158 | 0.142 |

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.
All coefficients show maximal effects.

## Notes

1. INEGI. Encuesta Nacional de los Hogares 2015, accessed the 4th of July of 2017, retrieved from: http://www.beta.inegi.org.mx/proyectos/enchogares/regulares/enh/2015/default.html. This is a nationally representative survey of nearly 62,000 interviewees.

2. Skin-tone was rescaled to run from 0 to 1; Figure 1 presents the effect of a maximal shift in skin tone (from the lightest to the darkest skin tone) within each country. INEGI's skin tone palette was identical to the one used by LAPOP since 2010.

3. INEGI used the color palette designed by Princeton's Project on Ethnicity and Race in Latin America (PERLA). This is the same color palette used by LAPOP since 2010.

4. Material wealth was calculated using respondents' possession of consumer goods. For more details, see Córdova (2009). Some countries were not included in the 2016/17 AmericasBarometer; for those, we use data from the 2014 round (see Figure 1).

5. Figure A1, in the Appendix, shows the predicted level of wealth for an average respondent at different levels of skin tone.

6. We find that this reduction is clear even when we estimate the impact of skin tone on a variable that captures the total number of consumer goods owned by a respondent. We find that while an average light-skinned Mexican is estimated to own 8.24 consumer goods, an average dark-skinned Mexican is estimated to own only 5. These results are available upon request.

7. Figure A2, in the Appendix, shows the predicted level of education for an average respondent at different levels of skin tone.

8. Table A1 shows the OLS regression results for Mexico. As the table shows the effect of skin tone is many times larger than the effect of sex, rural (vs. urban) place of residence, and geographical location.

9. Note that discrimination does not necessarily emerge from explicitly discriminatory behavior. It can also emerge from unconscious biases against those in minority groups and/or from policies, rules, practices and arrangements that have disproportionately negative effects on certain social groups.

## References

Aguilar, Rosario (2011). *The Tones of Democratic Challenges: Skin Color and Race in Mexico*. (Documentos de Trabajo No. 231). Mexico City: Centro de Investigación y Docencia Económicas.

Arceo-Gómez, Eva O., and Raymundo M. Campos-Vazquez (2014). "Race and Marriage in the Labor Market: A Discrimination Correspondence Study in a Developing Country." American Economic Review, 104(5): 376-80.

Beck, Scott, Kenneth J. Mijeski, and Meagan M. Stark (2011). "¿Qué es racismo? Awareness of Racism and Discrimination in Ecuador." Latin American Research Review, 46(1): 102-125.

Campos Vázquez, Raymundo M. (2016). "Promoviendo la Movilidad Social en México: Informe de Movilidad Social 2015". El Colegio de México: 1-67.

Campos-Vázquez, Raymundo & Medina-Cortina, Eduardo (2017). Skin Color and Social Mobility: Evidence from Mexico, El Colegio de México, Centro de Estudios Económicos: 1-45.

Córdova, Abby (2009). *Measuring Relative Wealth using Household Asset Indicators*. Insights Series, No. 6 (p. 9). Vanderbilt University: Latin American Public Opinion Project (LAPOP).

INEGI (2017). Presenta INEGI, por vez primera, resultados sobre la movilidad social intergeneracional, Comunicado de prensa núm. 261/17, Ciudad de México: 1-16.

Jasso, Carlos (June 25, 2017). In Mexico, economic opportunity increases the closer your skin gets to white. A Palette of Inequality, Quartz, accessed on July 24th 2017. Retrieved from https://qz.com/1014257/a-new-study-shows-that-economic-opportunity-in-mexico-increases-the-closer-your-skin-gets-to-white/

Monroy-Gómez-Franco, Luis Ángel (2017). ¿Importa el color de piel en México? Nexos: Economía y sociedad, accessed on June 23rd of 2017.

Páramo, David (June 19 2017). "Guerra de castas recargada" Dinero en Imagen, accessed on June 23rd of 2017. Retrieved from http://www.dineroenimagen.com/2017-06-19/87906

Telles, Edward, René Flores and Fernando Urrea (2011). "Ethnoracial and Skin Color Inequality and Discrimination in Latin America." Paper presented at the Conference on Marginalization in the Americas: Perspectives from the AmericasBarometer, University of Miami, Miami, Florida, October 28.

Telles, Edward & Project on Ethnicity and Race in Latin America. (2014). "Pigmentocracies: Ethnicity, Race, and Color in Latin America." University of North Carolina Press, Chapel Hill, NC: 1-297.

Telles, Edward, and Liza Steele (2012). *Pigmentocracia en las Américas: ¿cómo se relaciona el logro educativo con el color de piel?* Perspectivas desde el Barómetro de las Américas: 2012, Número 73: 1-10.

Trejo, Guillermo & Melina Altamirano (2016). "The Mexican Color Hierarchy. How Race and Skin Tone Still Define Life Chances 200 Years after Independence." American Political Science Association: 1-14.