

Skin colour and ethnic inequality in Latin America: an intersectionality approach

A thesis submitted to the University of Manchester for the degree of Doctor of Social Science in the
Faculty of Humanity

2022

Javier Ignacio Castillo Jaramillo

School of Social Sciences

This thesis was sponsored by Advanced Human Capital Program, of the National Commission for Scientific and Technological Research (CONICYT), which awarded the Chilean National Scholarship ID 72150401 to the author.

–Blank page–

TABLE OF CONTENTS

	LIST OF FIGURES AND TABLES	1
	ABSTRACT	2
	DECLARATION	2
	COPYRIGHT STATEMENT	3
	ACKNOWLEDGEMENTS	4
1	INTRODUCTION	5
1.1	Backgrounds of Latin American Racial Hierarchies	13
1.2	Causal mechanisms explaining the skin colour effect on Latin American inequalities	19
1.2.1	<i>Social origin</i>	20
1.2.2	<i>Intersectionality between skin colour, gender and ethnoracial identity</i>	21
1.2.3	<i>Ethnoracial context</i>	24
1.3	Measuring skin colour and Race in Latin America	27
1.4	Research Problem and Hypotheses	33
2	DATA AND METHODS	37
2.1	PERLA-LAPOP dataset	38
2.1.1	<i>Universe, Population and Observation Units</i>	41
2.1.2	<i>Sample frame</i>	42
2.1.3	<i>Sampling Method</i>	42
2.1.4	<i>Stratification process</i>	42
2.1.5	<i>Weighting scheme</i>	43
2.1.6	<i>Design Effects</i>	43
2.2	Variables	43
2.2.1	<i>Skin colour</i>	46
2.2.2	<i>Ethnoracial self-classification and social origin</i>	48
2.2.3	<i>Ethnoracial context</i>	50
2.2.4	<i>Other Independent Variables</i>	55
2.2.5	<i>Dependent Variables</i>	55
2.3	Analytical approach	57
2.3.1	<i>Skin colour and education</i>	57
2.3.2	<i>Skin colour and income</i>	58
2.3.3	<i>Interviewer effects on skin colour assessment</i>	59
3	PAPER 1: Educational Pigmentocracy in Latin America: A Study of Skin Colour Effects on Educational Attainment from an Intersectional perspective	61

	ABSTRACT	61
3.1	Introduction	62
3.1.1	<i>Skin Colour and Social Origin</i>	65
3.1.2	<i>Skin Colour and Gender</i>	66
3.1.3	<i>Skin Colour and Ethnoracial Identification</i>	67
3.1.4	<i>Skin Colour and Ethnoracial Configuration at the Country Level</i>	68
3.1.5	<i>Interaction Effect between Skin Colour and Social Origin</i>	69
3.2	Data and Methods	69
3.2.1	<i>Data Source</i>	69
3.2.2	<i>Dependent Variable</i>	70
3.2.3	<i>Independent Variables</i>	70
3.2.4	<i>Methods</i>	73
3.3	Findings	74
3.4	Conclusion	84
4	PAPER 2: <i>Income and Skin Colour Inequality in Latin America: An Intersectional Approach</i>	86
	ABSTRACT	86
4.1	Introduction	87
4.1.1	<i>Skin colour and income inequality in Latin America</i>	88
4.1.2	<i>Skin colour and ethnoracial categories</i>	88
4.1.3	<i>Skin colour and social origin</i>	91
4.1.4	<i>Skin colour and ethnoracial context</i>	92
4.1.5	<i>Skin colour and gender</i>	94
4.1.6	<i>Hypotheses</i>	95
4.2	Data and Methods	95
4.2.1	<i>Dataset</i>	96
4.2.1	<i>Key independent variables</i>	96
4.2.3	<i>Dependent variable</i>	98
4.2.4	<i>Control Variables</i>	98
4.2.5	<i>Analytical Approach</i>	98
4.3	Findings	102
4.4	Conclusion	110
5	PAPER 3: <i>Measuring skin colour: some considerations before drawing conclusions about skin colour hierarchies</i>	118
	ABSTRACT	119
5.1	Introduction	122

5.1.1	<i>Background on skin colour measurement</i>	125
5.2	Hypotheses	127
5.3	Dataset and variables	129
5.4	Analytical approach	133
5.5	Results	142
5.6	Conclusion	146
6	CONCLUSIONS	146
6.1	Origins of the preference for light skins	146
6.1.1	<i>Pigmentocracy, colonialism and slavery</i>	147
6.1.2	<i>New republics: from the whitening ideology to racially blinded societies</i>	148
6.1.3	<i>The multiculturalist turn</i>	149
6.2	What is known and what still needs to be known	150
6.3	Skin colour inequality in Latin America: an intersectional and multilevel approach	152
6.3.1	<i>Gender and skin colour</i>	153
6.3.2	<i>Skin colour and social origin</i>	153
6.3.3	<i>Skin colour and ethnoracial identity</i>	154
6.3.4	<i>Skin colour and ethnoracial composition</i>	155
6.3.5	<i>Skin colour and interviewer effects</i>	156
6.4	Main findings, new understanding	156
6.5	Limitations and future research	161
7	REFERENCES	166

Word count: 52.763

LIST OF FIGURES AND TABLES

	Figures:	
Figure 1:	Basic Ethnoracial Pyramid in Colonial Latin America	10
Figure 2:	Caste Painting from the Museo Nacional del Virreinato, Mexico	11
Figure 3:	The PERLA colour palette	47
Figure 4:	Latin American countries by skin colour mean, LAPOP 2010-2014	51
Figure 5:	Latin American countries by largest ethnoracial identity, LAPOP 2010-2014	52
Figure 6:	Latin American countries by skin colour fractionalisation index, LAPOP 2010-2014	53
Figure 7:	Latin American countries by ethnoracial composition, LAPOP 2010-2014	54
Figure 8:	Latin American countries by skin colour mean, LAPOP 2010-2014	73
Figure 9:	Skin colour influences the educational performance of Latin Americans	77
Figure 10:	Ethnoracial Configuration	80
Figure 11:	Education level of the mother and skin colour	81
Figure 12:	Average Marginal Effects of Skin Colour by Ethnoracial Identity and Ethnoracial Configuration at the County Level	83
Figure 13:	Descriptive Statistics of Income Variable	103
Figure 14:	Skin colour and gender	106
Figure 15:	Predictive Margins of Ethnoracial Configuration	107
Figure 16:	Predictive Margins of Skin Colour	108
Figure 17:	Average Marginal Effects of Skin Colour	109
Figure 18:	Racial Tolerance in Latin America	115
Figure 19:	PERLA scale	121
Figure 20:	Multilevel model	132
Figure 21:	Distribution of skin colour	136
Figure 22:	Factionalized elites index	136
Figure 23:	Variation by ethnoracial configuration without controls	138
Figure 24:	Variation by ethnoracial configuration with controls	138
Figure 25:	The skin colour effect on education and income in Latin America	141
Figure 26:	The skin colour on education	141
Figure 27:	The skin colour effect on income	142
Figure 28:	Conceptual diagram of our theoretical model	159
Figure 29:	Conceptual diagram of our empirical evidence	168
	Tables	
Table 1:	Sample sizes and Sampling errors in 2010, 2012 and 2014 LAPOP waves	41
Table 2:	Design effects, 2014, 2012 and 2010 LAPOP surveys	45
Table 3:	Variable means by cluster	72
Table 4:	Descriptive Statistics	75
Table 5:	Tobit regression of years of schooling in 18 Latin American countries	78
Table 6:	Ethnoracial Identity * Skin Colour Cross-tabulation	82
Table 7:	Descriptive statistic of personal monthly income by country	100
Table 8:	Descriptive statistic of independent variables	101
Table 9:	OLS regression of income in 18 Latin American countries	104
Table 10:	Average Marginal Effects of Skin Colour by different factors	111
Table 11:	Descriptive statistics	133
Table 12:	Cross-classified multilevel regression of respondent's skin colour in 17 Latin American countries	134

ABSTRACT

A novel trend in Latin American social sciences has been the rediscovery of the presence of indelible inequalities related to skin colour. Using the PERLA colour palette, scholars have found that skin colour influences income and education. More precisely, darker-skinned Latin Americans are consistently in lower status positions than their lighter-skinned counterparts. However, there are relevant research gaps regarding this effect that this thesis aims to fill. First, it still needs to be determined how gender, social origin, ethnoracial identity, and ethnoracial composition at the country level can moderate the skin colour effect on socioeconomic outcomes. Second, we also need to know if that effect remains statistically significant and if so if it happens in the expected manner after considering the interviewer's effects and controlling for the skin colour of the interviewer. Using the 2010-2014 LAPOP survey and different regression models, we show that each one of these moderators significantly influences how much skin colour affects income and education. The results are not always consistent with our initial assumptions, nor do they remain consistent for every dependent variable. Despite the effect that the interviewer had on the research, it was not strong enough to bias our initial results when the interviewees and their features are considered.

DECLARATION

No portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institutes of learning.

COPYRIGHT STATEMENT

1. The author of this thesis (including any appendices and/or schedules to this thesis) owns certain copyright or related rights in it (the “Copyright”) and he has given The University of Manchester certain rights to use such Copyright, including for administrative purposes.
2. Copies of this thesis, either in full or in extracts and whether in hard or electronic copy, may be made only in accordance with the Copyright, Designs and Patents Act 1988 (as amended) and regulations issued under it or, where appropriate, in accordance with licensing agreements which the University has from time to time. This page must form part of any such copies made.
3. The ownership of certain Copyright, patents, designs, trademarks and other intellectual property (the “Intellectual Property”) and any reproductions of copyright works in the thesis, for example graphs and tables (“Reproductions”), which may be described in this thesis, may not be owned by the author and may be owned by third parties. Such Intellectual Property and Reproductions cannot and must not be made available for use without the prior written permission of the owner(s) of the relevant Intellectual Property and/or Reproductions.
4. Further information on the conditions under which disclosure, publication and commercialisation of this thesis, the Copyright and any Intellectual Property and/or Reproductions described in it may take place is available in the University IP Policy (see <http://documents.manchester.ac.uk/DocuInfo.aspx?DocID=24420>), in any relevant Thesis restriction declarations deposited in the University Library, The University Library’s regulations (see <http://www.library.manchester.ac.uk/about/regulations/>) and in The University’s policy on Presentation of Theses.

ACKNOWLEDGEMENTS

The completion of this thesis would not have been possible without my advisory team's expressive advice and patience. Special mention is needed for Dr Yaojun Li, who is the reason why I ended up at the University of Manchester. I would also like to recognise the great honour of working under the supervision of Dr Anthony Heath for two years. Finally, I would like to thank Dr Nick Shrayne for his support at the last stage of this process.

Last but not least, I would like to publicly recognise that without the generous help of my partner, Catalina, as much as the emotional support of my parents, I would not have been able to finish this thesis.

1. INTRODUCTION

Skin colour is probably the most relevant feature when we talk about race. From a historical standpoint and within Western World science, it has been used in a non-neutral way. When scholars used it for the first time to create different groups of human beings, skin colour highlighted specific social meanings that influenced others' perceptions of those groups (Jablonski, 2020). Hence, many other characteristics of human groups, such as culture, values and behaviours, and even other physical attributes, were put under the umbrella of skin colour. The main objective of such classifications was to establish a substantial difference between White and non-White groups. In such a context, White people were used to identify positive traits, while dark-skinned people were described as full of imperfections. The objective of this whimsical association was to justify the slave trade and sustain a colonial system where Whites were at the top and different dark-skinned groups were at the bottom (Guenther, 2011; Sussman, 2014). This racial hierarchy, established centuries ago, has survived until present times, despite the abolition of slavery. Nowadays, no laws support racial differences or the scientific theories that justify them in the Western World. However, their infamous legacy remains in the form of an uneven distribution of wealth and social outcomes, which is the consequence of discriminatory actions supported by a White supremacy ideology and inherited disadvantages from the slave-trafficking and colonial periods (Picower, 2009; Bonilla-Silva, 2012; Gittleman and Wolff, 2000).

In order to understand how enduring racism is and how its functioning has changed over time, especially in Latin American societies, it is essential to go beyond scientific racism's influence. After the end of the Second World War, openly racist ideologies¹, as much as their scientific support, turned into a social taboo. Nonetheless, racial disparities were far from disappearing or even diminishing. This persistent presence of racism and its effects are not the mere product of a scientific idea but the consequence of the European colonial expansion and the consolidation of capitalism as a global power (Quijano, 2011; Moreno-Figueroa, 2022; Wade, 2010). Therefore, when we talk about racism, we refer to the process by which power relations are translated into an uneven distribution of resources based on the pretext that physical differences –which means if races exist– matter, giving legitimacy to the rule of some over others (Moreno-Figueroa, 2022). Moreover, and as an indirect consequence of assuming that racism is a remnant of a historical process, its social construction dimension has become

¹ With the notable exception of the Apartheid regime in South Africa.

more evident as the school of thinking that previously gave it legitimacy was publicly exposed as fake science (Wade, 2010). Hence, in order to explain the permanence of racial disparities in the second half of the twenty century, it is necessary to be aware that racism evolved from an association between biological traits and a set of stereotyped behaviours to a relationship that replaced such biological characteristics with a vaguely-defined set of cultural aspects. To properly grasp this movement, it should be framed within the tendency of the more advanced liberal democracies to mask race and racism as relevant forces that are able to produce inequalities, favouring explanations that focus on "individual or cultural" factors that do not have the "bad smell" of those concepts (Goldberg, 2009).

Racism has changed, mainly in its public discourse; however, it still affects the same groups that were harmed by racialization processes in the past. Nowadays, racism publicly embraces the language of culture, but in the background, it still refers to the old racial categories. This new kind of racism has become more complex. It has relaxed but not lost its connections with the language of biology, but its reinforced connection with the language of culture and morality enables it to follow a twofold path: on the one hand, this new racism eases its own minimization; on the other hand, it has turned into a more divisive and exclusionary phenomenon, which reinforces racial hierarchies even without needing to name them (Moreno-Figueroa and Wade, 2021). Thus, the new racism favours the European colonizers' language, sociability, traditions and religion, but in doing so, it implicitly points out their bodies and facial traits (Moreno-Figueroa, 2022). Moreover, this deeply culturally-rooted racism denies its responsibility for the tenacity of racial hierarchies, claiming that class and geographical differences (not the salience of race) are guilty of that. Nonetheless, in any society, as much as in Latin American ones, skin colours, hair textures and body weight and height are not evenly distributed across the territories and socioeconomic status distribution (Quijano, 2011). Thus, poor people and deprived territories have notorious colours and physical features, as in Colombia, where most Black people live in the poorest region of "el Chocó" (Wade, 2010).

In this context, racism does not need to summon the word race or its biological vocabulary to reproduce the obscure landscape of racial inequalities from previous decades. These new layers of complexity are also present in Latin American societies; for instance, employers and mass media usually refer to "good-looking" or "well-educated" people to avoid mentioning Indigenous or Black ethnoracial labels in Peru (Quijano, 2011). Since this thesis is about racism in Latin America, it is essential to highlight that this region, contrary to what its

intellectuals and scholars have said for decades, does not represent an exception to global changes in racism discourse and strategies (Hooker, 2017). Such strength to survive significant political, cultural and social transformations makes racism challenging to struggle against. For example, in a region like Latin America, where racism was constantly denied –and still is, even now– shouting that race is a social construct and not a biological concept does not help to dismantle the subtle effect of racism on the Latin American social structure (Hooker, 2017). This specificity accounts for things: 1) first, there are different kinds of racism, each connected to different historical and contextual roots; 2) and second, all of them are heirs of the colonial expansion era (Wade, 2010).

Present racism, as defined above and mainly in Latin America, is what Bonilla-Silva calls "racism without racists" (Bonilla-Silva, 2020). To illustrate this problem, Moreno-Figueroa and Wade (2021) explain that Latin American racism may elude biological concepts using words such as *Indio* –a derogative way to refer to indigenous people– which is characterized more in terms of culture than biology. However, in the background of this new language, the strong ties between cultures and bodies continue to damage non-White Latin Americans. Two different approaches can be used to interpret the flexibility of racism to adapt to this new scenario. First, racism can be treated as an ideology –which is historically and geographically situated– aiming at the domination of particular groups of people, who are classified using a flexible but rigid enough scheme to point out the same groups who were negatively affected by the colonization process using different terms or the same ones with other meanings (Moreno-Figueroa and Wade, 2021; Moreno-Figueroa, 2022). This approach recognizes that racism expresses itself by various structural processes, but it cannot entirely escape from the biocultural language attached to discriminatory actions or from a conception where racism is a phenomenon controlled by dominant groups. Hence, it is necessary to go beyond the previous definition and assume a more radical approach to overcoming these problems and fully understand how racism works without naming races, racist people, or openly discriminatory actions. From this perspective, Latin American societies can be described as *racialized social systems* (Bonilla-Silva, 2020), where rewards are partially allocated along racial categories because there is a set of mechanisms, behaviours and practices that leads to the reproduction of racial inequalities without needing a racist ideology or the exclusive support of White Latin Americans (Bonilla-Silva, 2021). Consequently, racism in Latin America is a collective phenomenon supported by the whole society that can flourish

even in the presence of an ambiguous ideology that exalts a racial mixture and supports paths of racial mobility while hiding White privilege.

The long-lasting prevalence of a colour-based hierarchy is one of the most pervasive effects of the old-fashioned way that science defined the concept of race. Although scientifically outdated, people still - consciously or not - associate lighter skins with virtuous behaviour and darker skins with vicious lifestyles and other negative characteristics (Jablonski, 2020). Social scientists interested in this phenomenon conceptualise this as colourism (Dixon and Telles, 2017), which describes the association between skin colour and social status as a gradient of colours from the darkest at the bottom to the lightest at the top. As previously stated, in the Western World, the strong association between high social status and the lightest skin tones is mainly due to the European expansion, slavery and the White supremacist ideology. Thus, in this context, race and skin colour cannot be separately understood when we analyse the problem of colourism. However, things become more complicated when studying the same phenomenon outside the Western World.

In the Far East and the Middle East, the preference for lighter skin colours is not associated with any idea of race. In contrast, social status and Arab human trafficking create different forms of colourism (Dixon and Telles, 2017). Unfortunately, to understand such a phenomenon, the study of colourism is mainly limited to a theoretical framework created to analyse colourism in North America and the English-Speaking World. This is problematic because the link between race and skin colour in these societies is not the same as in other parts of the world. Race and skin colour can be easily separated in the Anglosphere, while both concepts are usually confounded in different societies (Monk, 2016). This is the case in Latin American communities, where skin tone and race are almost used as synonyms since the question "What is your race?" is not easily understood by laypeople (Telles and Pashel, 2014). While race and colour can be treated as different concepts in North America, in Latin America, the difference between them is less clear, and they can be treated indistinctly as a continuum of colours (Telles and PERLA, 2014). This Latin American characteristic is what the Chilean physician Alejandro Lyphshutz labelled the "pigmentocratic regime" (1967).

There are notable differences between Latin and North America regarding skin colour and race treatment. Colonisation by European settlers, slave trafficking and a racial hierarchy enforced by law and dominated by Whites are identifiable features throughout the colonial

history of both regions. Nonetheless, the miscegenation between European settlers, Native Americans and enslaved Black people was much more intense in Latin America than in the English colonies (Mörner, 1970). This process, called "mestizaje" in Spanish and "mestiçagem" in Portuguese, progressively blurred the lines between racial categories, making it challenging to impose the one-drop rule in the Iberian Empires. The miscegenation process in Latin America made the "Mestizo" (the Spanish word for a person of mixed origin), in contrast to White people in North America, the subject around whom national mythologies emerged. Thus, for an extended period, Latin American countries looked at themselves as made up of a new race, which had the virtue of deleting the racial differences inherited from the Spanish and Portuguese rule. As a result, such Latin American characteristics, which strongly contrast with the former English colonies, denied racism, creating the false idea that Latin Americans were free from the unfair treatment that non-White people received in the North.

This mythology was widespread throughout the region thanks to the work of notable intellectuals such as José Vasconcelos and his idea of "Raza Cósmica" (Cosmic Race) (1925) in Mexico, Nicolás Palacios and his book entitled "Raza Chilena" (Chilean Race) (1904), and Gilberto Freyre and his conceptualisation of Brazil as a "Democracia Racial" (Racial Democracy) (1933). The strength of these ideas was so intense that many decades after their first publication, a left-wing Chilean president, Salvador Allende, claimed that Chile was free of racism in front of the UN General Assembly. Unfortunately, that was not completely true. Ethnoracial differences amongst Latin Americans were banished after the end of colonial rule. However, this did not influence the end of racism but had a consequence in national mythologies, which tried to reinforce national unity around an ideal of the Mestizo concept. A few decades after their independence, the new Latin American republics tried to whiten their population by importing European migrants and encouraging miscegenation between White and dark-skinned Latin Americans. National censuses were strategically used to show how the White and mixed populations had increased while the Amerindians and Blacks had almost disappeared. Thus, nearly all Latin American countries enforced their populations' homogeneous character by denying their internal ethnoracial diversity (Loveman, 2014).

Because of this process, most Latin American national censuses stopped asking about ethnoracial adscription in the second half of the 19th century. Therefore, it was impossible to account for these differences during that time. Nonetheless, the racial hierarchies did not disappear; they continued working under the surface of a negationist discourse. Before going

further, it is relevant to discuss how Latin American racial hierarchies constructed their main characters. Upon the arrival of the first European settlers, a three-level social pyramid began to rule social life. Within this scheme, White people were at the top, followed by Mestizos (mixed people), Amerindians (indigenous people) and finally, at the bottom, Blacks (Figure 1). However, as time passed, this pyramid became more complex. This scheme's continuous miscegenation between these groups augmented the number of levels and ethn racial categories (Mörner, 1970; Telles and PERLA, 2014, Wade, 1997).

This increasingly complex ethn racial pyramid gave shape to some extravagant categories, such as "salto atrás" (backward jump) or "no te entiendo" (I do not understand you), which were the product of various generations of different ethn racial interchanges. All of these categories (more than 16 in some colonies) were labelled as "Sociedad de castas" (Caste society) by the Iberian Empires. This racial hierarchy imposed a parallel between the degree of European blood and different levels of enfranchisement (Navarro García, 1989). Because of the complexity of this system, the colonial authorities made "Cuadros de castas" (caste paintings) to explain the origin and position of every inhabitant according to their ethn racial category (Figure 2). However, since skin colour is one of the most notorious and salient physical traits, it turned into the informal standard with which European people established a pigmentocracy (Lipshutz, 1963). Hence, the lighter a person's skin tone, the more social and legal privileges they had.

Figure 1: Basic Ethn racial Pyramid in Colonial Latin America

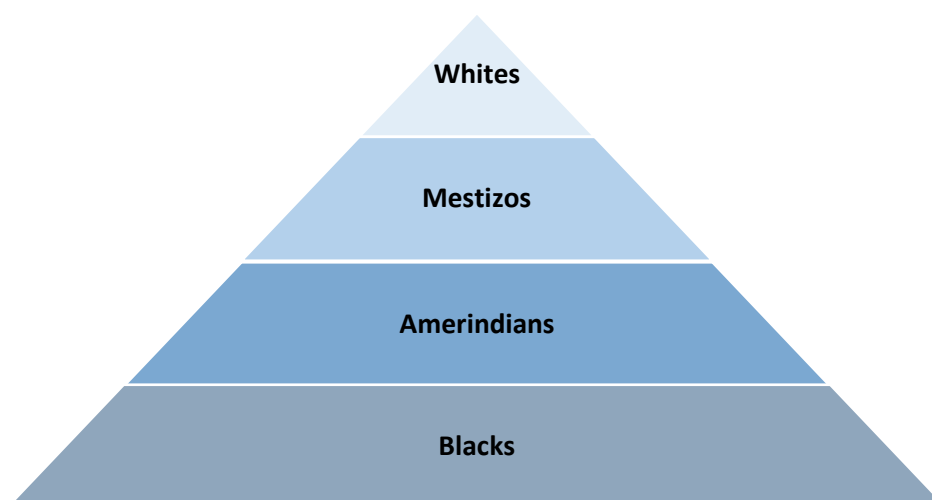


Figure 2: Caste Painting from the Museo Nacional del Virreinato, Mexico



Even after the new Latin American republics abolished the caste system, the preference for the lightest skin colour survived. During most of the 19th century and the first half of the next century, Latin American countries, mainly those of the southern cone and Brazil, tried to whiten their population by supporting European immigration (Sánchez-Alonso, 2018). Hence, with no law sustaining a racist system, lighter-skinned people remained at the top of the social hierarchy. Although the arrival of a new national ideology whose main objective was to distinguish Latin America from the racially divided North America was constructed around the idea of “mestizaje”, which created the illusion of a region free of racism. Nevertheless, the multicultural turn of the 1990s enabled scholars to readdress the influence of skin colour on the Latin American social structure (Wade, 2000). This new stage in the history of social science in Latin America shed light on the long-lasting association between skin colour and different socio-economic outcomes (Telles, Flores and Urrea-Giraldo, 2015; Bailey, Fialho and Penner, 2016) and perceived discrimination (Perreira and Telles, 2014; Canache et al., 2014).

Despite controlling for social origin and self-reported ethnoracial classification (e.g. White, Indigenous, Mixed, Black or others), these studies show that skin colour still affects

education and income in Latin America. Other studies show the effect of skin colour on choosing spouses (Telles and Esteve, 2019) and the quality of a person's health (Costas et al., 1981; Gravlee and Dressler, 2005; Travassos et al., 2011). Unfortunately, only a few studies compare all of the countries across the region, and the papers about individual countries mainly focus on Mexico (Villarreal, 2010; Campos-Vasquez and Medina-Cortina, 2019) and Brazil (Telles, 2006; Lovell and Wood, 1998). Thus, there are still vast unstudied gaps regarding the role and influence of skin colour on social stratification in Latin American countries. Excluding the lack of evidence, external signals support the hypothesis of the long-lasting effect of skin colour on the Latin American stratification process. This is the case in terms of beauty standards (Jha & Adelman, 2009; Glenn, 2009). Soap operas, TV shows and advertisements in Latin American mass media over-represent light-skinned people and promote European features as the beauty standard (Tipa, 2020). The effect of these preferences on people and societies has been conceptualised in two ways. On the one hand, some scholars argue that they are pathologically internalised, harming dark-skinned and non-White people (Hall, 2005, 2013). On the other, some authors emphasise that these beauty standards are used as a form of embodied capital (Hunter, 2005, 2007). Thus, bleaching creams and blond hair dyes are used by many people, primarily women, to increase their chances of getting a good job and avoiding discrimination (Moreno-Figueroa, 2013; Lewis et al., 2013). Such behaviour is trendy in countries like Latin America, where a mixed population constitute the majority. This beauty standard is based on an idea of "global beauty", which highlights White features in a multicultural and multiracial wrapping (Hunter, 2005).

The preference for light-skinned people, promoted by the Latin American mass media and the beauty industry, is a gendered problem. The ideology of beauty, which has an incredible impact on girls' and women's lives, links lightness to attractiveness (Hunter, 2005; Wade, 2008). For example, in the Latin American Spanish language, the words "Guero" (Mexico) and "Clarita" (Chile) can mean both beauty and light skinned. Thus, women may be located on a gradient from the darkest to the lightest skin tone according to their perceived beauty level. It is not risky to hypothesise that the effect of skin colour is more potent in women than men. However, more research is needed to clarify this possible association (Dixon and Telles, 2017).

The relationship between skin colour and different dimensions of socio-economic status in Latin America is a promising research field for social scientists using quantitative or experimental research methods (Telles and PERLA, 2014). Most of the previous works have

used ethnographies and other qualitative techniques, and the influence of skin colour on different aspects consequences that we can derive from them remains unclear (Wade, 2008; Hoffmann and Centeno, 2003; Golash-Boza and Bonilla-Silva, 2013). To lay the groundwork for future research in this field it is necessary to go further in three directions: 1) first, to explore the background of racial hierarchies in Latin America; 2) second, to elucidate the hypothetical causal mechanism behind the link between skin colour and inequality in the region; 3) and finally, (it is crucial) to conceptualise the difference between skin colour, race and ethnicity, as well as to give a more complex definition of each one of them.

1.1 Backgrounds of Latin American Racial Hierarchies

Latin America has one of the most uneven distributions of wealth in the World (Hoffmann and Centeno, 2003). To explain them better, inequalities in Latin America can be divided into three different dimensions: gender (Alvarez, 1998; Stepan, 1991), class (Pastor and Dymski, 1991; Portes and Hoffmann, 2003), and race (Wade, 1997; Telles, 1995, 1998). Since this subsection's main objective is to explain racial hierarchies, this work will not go beyond exploring race as a measure of inequality dimension. This decision does not imply misunderstanding or distorting the role of race in the stratification process since the fossilisation of some racial distinctions from the colonial period is one of its main explaining factors (Hoffmann and Centeno, 2003).

Using the Marshallian triumvirate of rights, we can understand better the background of the racial hierarchies in Latin America (Hoffmann and Centeno, 2003). This scheme suggests three important conclusions regarding civil, political, and social rights, respectively. First, in the Andean countries (Colombia, Ecuador, Bolivia, and Peru), some racial laws up until the 20th century caused the Amerindian population to suffer more formal segregation than Blacks. Second, in the 1990s, the emergence of Amerindian movements contrasted with the fact that Black political organisations were still developing. Finally, the castes society's subterranean survival, alongside the lack of affirmative action policies, the subterranean survival of the castes societies harmed Blacks' and Amerindians' social status. Some of these situations have changed since then. Today, there are affirmative action programmes in some Latin American countries, and ethn racial inequalities have turned into a recurrent public discussion topic. Nonetheless, this triumvirate illustrates where racial hierarchies stood for a long time.

As previously stated, Latin America is the product of three groups: European settlers (primarily Spanish and Portuguese), different Amerindian groups and Blacks. This encounter created a racial structure of multiple layers and colours, which may induce the erroneous belief that the region is free of racial distinctions. However, this is not true. Except for Venezuela, where some non-White people have historically been part of the political elite (Sansone, 1998), Blacks and Amerindians have suffered discrimination and they are usually at the bottom of the other Latin American countries' social structures (Hopenhayn and Bello, 2001; Bello and Rangel, 2002). Despite the abundant evidence against this belief, racial hierarchies' neglect is a common topic in social sciences and humanities in the field of Latin America (Hoffmann and Centeno, 2003). Many scholars suggest that race and ethnicity are not critical factors in the stratification process (Franco, León and Atria, 2007). In contrast, it is frequently assumed amongst Latin American scholars that social class is the key and only relevant factor in defining Latin Americans' social positioning and prestige. Brazil is the only exception to this case, where social scientists have historically considered ethnoracial categories a stratification factor. However, there is a growing interest in closing this research gap and considering such factors for cases other than Brazil (Torche, 2014).

To understand racial inequalities in Latin America, it is necessary to clarify the difference between race and ethnicity. Race is a group of physical features associated with specific labels externally imposed on different human groups. In contrast, ethnicity refers to a self-ascribed tag that corresponds to an identity membership (Golash-Boza, 2018). However, despite their main difference in defining people's belonging to a specific ethnic or racial group, both link such membership to cultural and moral attributes. Thus, certain groups, such as Latin Americans, can be perceived as ethnic and racial categories (Hitlin, Brown and Elder, 2007). One consequence of this confusion is the broad spectrum of skin colours that is present within each ethnic group in Latin America (Telles and Paschel, 2014). Therefore, Latin American scholars prefer to speak about "ethnoracial groups" instead of pure ethnic or racial clusters (Telles and PERLA, 2014).

For analytical purposes, we distinguished race and ethnicity in the above paragraph. However, this distinction is an ideal type. From an empirical standpoint, the two concepts are challenging to disentangle. Such a difficulty is partly due to the evident correlation between racial and ethnic groups, but it is also due to what we previously defined as the new racism. In this new era, it is more acceptable to talk about ethnicities than racial groups (Wade, 2010).

The former racial labels have a "bad smell"; they remember the debunked pseudo scientific biological foundations of racial inequalities. On the contrary, the language of ethnicity seems aseptic and free of a forgettable legacy, although most of the time, it creates human groups like those created by old-fashion racism. For example, the language of ethnicity usually appeals to cultural geography, but these distinctions often give importance to racial ones. This is the case for Black populations in the US, Colombia and Costa Rica, which are disproportionately allocated in the "South", the coastal region and the "city of Limón", respectively. Comparatively speaking, while the old racism explained inequality as the consequence of a set of characteristics inherited by blood, the new one states that the cultural traits that explain social hierarchies are absorbed from one generation to another, resembling the explanation of genetic inheritance (Porqueres i Gene, 2007). This is why some scholars (De la Cadena, 2001) argue that adopting the language of ethnicity has helped to legitimise some practices of racism in Latin America, similarly to what the *Mestizaje* discourse did in the past. Hence, it is necessary to give a warning before going further. When we mention *Indigenous*, *Amerindian* and *Indomestizo* nations throughout this text, even though they immediately evoke an ethnic distinction, we should not forget that they also, to some extent, represent a racial case. This warning makes it tempting to blur the distinction between race and ethnicity entirely; however, we still believe that it is worth maintaining it as –beyond the evident overlap– the two indicate two different mechanisms through which discrimination may work (Wade, 2010).

Nonetheless, it is fundamental to establish that race and ethnicity influence socio-economic status through different mechanisms. On the one hand, others' perceptions and discrimination are how race affects education, income, and prestige. On the other hand, ethnicity does it through the psychological process behind self-identity, which is associated with geographical location, individual strategies, and collective interests and values (Halle, 1997). In Latin America, where the process of miscegenation and national ideologies diluted ethnic differences, most people do not recognise an ethnicity other than their nationality. Consequently, when we analyse the influence of ethnoracial distinctions on Latin American societies' social structure, we must focus on the most desirable phenotypical feature: a fair skin tone (Telles and PERLA, 2014 Bonilla-Silva, 2002). This fact does not imply denying the effect of geographical isolation and acculturation, commonly associated with indigenous identity in Latin America, on educational or labour opportunities (Hoppenhayn and Bello, 2001; Bello and Rangel, 2002; Winkler et al., 2004). It is only to recognise that skin colour is the essential explanatory factor to describe racial hierarchies in Latin America.

One reason for the minor relevance of ethnic identities to racial hierarchies is how ethnic categories were defined. Such categories were the elite consensus product when Latin American republics were born (Hoffman and Centeno, 2003). During the 19th century, Latin American elites, who were entirely white "criollos" (the Spanish word for white people born in Latin American colonies), did not feel that their social position was under threat and decided not to create a rigid system of ethnoracial categories such as in the United States. As Loveman (2012) and Jimeno (1989) showed, these categories were part of a state policy that aimed to homogenise Latin American populations. In this context, the mestizaje ideology was used for a plan with two objectives. On the one hand, it was a strategy to deny the existence of Amerindian ethnic groups. It whitened Latin American populations and justified European immigration (De la Torre, 1999; Quijada, 1998). Thus, general labels such as "Chilean", "Argentinian" and "Puerto Rican", or even more unspecific categories such as "Campesino" (peasant) were used by the national elites to blur the colonial ethnoracial categories (Safa 1998; Loveman, 2014). Ethnic identities other than nationalities are strictly linked to local realities where class, political and cultural factors intersect and change through time (Belote and Belote, 1984). Therefore, skin colour labels are more informative than others based on ethnic identity.

Even though Latin American racial hierarchies have historically been neglected and their particularities make them a challenge to study, for many decades social scientists have used the case of Brazil to establish a North America vs Latin America comparison regarding racism and racial divisions (Hoffman and Centeno, 2003). This contrast highlights the most noticeable differences between those contexts. First, there are neither clear racial lines nor a "one-drop rule" in Brazil (Winant, 1992; Skidmore, 1995). Second, scholars see the difficulty in identifying borders between racial groups in Brazil as a path of social mobility that encompasses the "money-whitening" thesis (Guillebeau, 1999). However, this contrast cannot hide the one thing that racial hierarchies in the North and South have in common: the preference for light-skinned people.

This ambiguity, which has been noted since a long time ago in Brazil (Telles and Lim, 1998) and Colombia (Wade, 1993), can be extended to other parts of Latin America (Telles and PERLA, 2014). In this context, Latin Americans choose different labels to describe themselves depending on social class and social desirability. However, it is essential to highlight that words implying lighter identities are preferred over darker ones. Consequently, since ethnoracial identity and socioeconomic status can affect each other, there is an academic

debate about the actual magnitude of the racial gap in Latin America (Telles and Lim, 1998, Telles, 1995). Other variables, such as national history and age, influence how people perceive their ethnic identity (Telles and Flores, 2013; Telles and Paschel, 2014). Hence, skin colour is the best feature to consider analysing racial hierarchies in Latin America.

Since ethnoracial identity in Latin America is explained by different variables and varies from one context to another, to analyse racial hierarchies and the impact of race on socio-economic status, a variable capable of explaining that should be used is ethnoracial identity as a factor in discrimination. This is the case of skin colour. In most Latin American countries, skin colour is one of the best predictors of ethnoracial identity (Telles and Flores, 2013). It is exposed to others' evaluations (Telles and PERLA, 2014). As an external feature under public scrutiny, skin colour drives discriminatory actions in Latin American societies. The preference for lighter complexioned people is persistent across nations and ethnoracial groups in the region (Uhlmann et al., 2002), consistent with self-reported experiences of discrimination based on skin colour (Canache et al., 2014). So, skin colour is crucial to understanding racial hierarchies in Latin America.

As stated previously, research about the effect of skin colour on Latin Americans' socio-economic status is scarce. However, some classical pieces of research give us information about skin tone in various aspects of Latin Americans' life. For example, there is unmistakable evidence of a preference pattern for lighter-skinned people in Brazil's case in the labour market (Hasenbalg, 1994). Similarly, Brazilians with lighter skin have more years of schooling than their darker-skinned co-nationals (Lovel and Wood, 1998). Interestingly, the relevance of skin colour rises as we climb the social pyramid (Andrews, 1992). The few available studies show no better situation for darker-skinned people in other Latin American countries. Cuba, a country with a large Black population, is an exciting example of this situation. The Cuban revolution has not eradicated the racial hierarchies inherited from the previous regime (de La Fuente, 1995). Historically speaking, Cuba and Brazil are the most studied Latin American countries by scholars interested in racial inequalities, mainly because their racial demography is like that of the United States. The state of racial disparities in the rest of Latin America has been less well documented. However, some studies conducted in the 20th century show that race is a stratification factor. People of Amerindian and Black ancestry face racial discrimination and significant barriers to accessing education and working positions since they

are concentrated in rural or deprived areas (Mesa-Lago, 1978; Birdsall, Braham and Sabot, 1998).

The studies mentioned above tend to concentrate on countries with high proportions of Blacks or Amerindians and subnational areas with strong ethnic identities. This tendency emerged because both groups are the most different from the Mestizo majority and have suffered from poverty, segregation, and discrimination (Hoffman and Centeno, 2003). Nonetheless, as previously indicated, this trend implies a big methodological problem: in many cases, indigenous identities overlap with social class positions. To illustrate this problem, we can compare the meaning of the word "Indio" (indigenous) in both the Andean countries (Peru, Bolivia, and Ecuador) and the Amazonas (primarily Brazil). In the former context, such a word means a class label as an ethnic belonging. At the same time, the latter refers to cultural and social isolation from Christianity and the Portuguese language. Similar problems occur when ethnic labels are the product of an elite imposition; they have different meanings depending on which ethnic group uses them, or they are heavily determined using specific languages or outfits (Nutini, 1997; Primov, 1980; Aguilar, 1979).

Despite this confusion, scholars assert that non-White people, on average, have fewer years of schooling and lower salaries than White Latin Americans (Dillon Soares and Reyna, 1967). Social class mobility in the region is as fluid as in industrialised societies (Torche, 2014). However, upward mobility is more effortless for lighter-skinned people (Hoffman and Centeno, 2003). All this evidence suggests that the influence of skin colour on socioeconomic status increases as we climb the social pyramid. Unfortunately, none of these suppositions has been properly assessed as previous research has assumed that studying racial inequalities in countries with high proportions of mixed populations is difficult (Birdsall, Braham and Sabot, 1998). Thus, the state of racial inequality in other Latin American countries and the vast majority of mixed-race Latin Americans remain poorly studied. Only the rise of a new tradition, inaugurated by scholars such as Edward Telles and Eduardo Bonilla-Silva and the Project of Ethnicity and Race in Latin America (Princeton University), who work with skin colour as the main factor, has paved the road for a better understanding of racial inequalities in Latin America.

1.2 Causal mechanisms explaining the effect of skin colour on Latin American inequalities

In the previous sections, we discussed the relevance of *mestizaje* for creating a national discourse that blurs racial differences and supports national unity in Latin American countries. Nonetheless, *mestizaje* also had a non-explicit aim for White Latin American elites, who believed that through mixing races, the Amerindian and Black cultures and features would disappear (Chavez-Dueñas, Adames and Organista, 2013). Additionally, national elites thought that mixing races would create a whiter population. Following this belief, Latin American States encouraged European immigration to achieve this objective (Soler-Castillo and Pardo-Abril, 2009; Castellanos-Guerrero et al., 2009). This public policy also had effects on the colloquial language, turning phrases such as "mejorar la Raza" (improving the race) into part of the ordinary jargon when referring to the appearance or birth of lighter-skinned people in many Latin American countries.

Public policies supporting European immigration stopped decades ago. However, the beliefs that shaped them is still ongoing. Discriminatory actions against people who wear traditional Amerindian clothes or ascribe to Afro-Latin American traditions are still part of everyday life in the region (Hopenhayn and Bello, 2001; Bello and Rangel, 2002). In addition, Amerindians and Blacks are constantly negatively stereotyped by public discourses and the media (Chavez-Dueñas, Ademas and Organista, 2013). However, since ethnoracial categories in Latin America are primarily operationalised through skin colour, such discriminatory actions and negatives images affect the lives of all dark-skinned people (Telles and PERLA, 2014).

Discrimination and skin colour stereotypes still affect different dimensions of the social life of Latin Americans. Health (Perreira and Telles, 2015; Gravlee et al., 2005), education (Telles et al., 2015), income (Bailey et al., 2014; Bailey et al., 2016), and politics (Johnson, 2020; Campos-Vazquez and Rivas-Herrera, 2021) are amongst the best documented. After controlling for other sociodemographic factors, all of these studies suggest that darker-skinned Latin Americans suffer from discrimination because of the association between skin colours. In addition, all of these variables are statistically significant. Thus, the worst situation for darker-skinned Latin Americans can be labelled statistical discrimination (Arrow, 1973) because it may be the product of non-prejudiced actions. If this were the case, as other scholars state (Torche, 2014), the current state of racial hierarchies in Latin America would be the

subproduct of more than 500 years of light-skin privilege, giving social origin more relevance than skin colour. However, studies conducted during the present century show that prejudices against dark-skinned people are still in force (Soler-Castillo and Pardo-Abril, 2009; Castellanos-Guerrero et al., 2009).

It is imperative to carry out experimental studies on this topic in order to definitively eliminate the doubt mentioned above. Unfortunately, this kind of study is scarce in Latin America, and the few available studies were not designed to directly assess the influence of skin colour on socio-economic outcomes. However, they show that implicit prejudices based on skin colour are still present amongst Latin Americans. The preference for whiter skin is so strong that even darker-skinned people express it, and it seems to surpass national borders (Uhlmann et al., 2002). Interestingly, self-reported preference measures do not show a clear pattern, which is consistent with the historical tendency to neglect racial hierarchies in Latin America (Chavez-Dueñas, Adames, Organista, 2013). Given the evidence we have, it is possible to assume that Latin American racial hierarchies' most recurrent explanatory factors are social origin, inherited disadvantages, skin colour, and discrimination and stereotypes.

1.2.1 Social origin

Social origin is the critical factor in analysing class structure's role in skin tone as an ethnoracial marker (Bailey et al., 2016). One virtue of social origin is that it shows the influence of parents' social position on their children's future (Torche, 2014). It also works as a benchmark to assess the actual impact of skin colour in Latin American racial hierarchies. If there are no discriminatory actions against dark-skinned people, the gap between the former and lighter-skinned populations is primarily the product of inherited inequalities (Blau and Duncan, 1967). In contrast, in the presence of a formal system of discrimination, skin colour washes out the effect of social origin. The reality is in the middle, with both factors playing a role in racial inequalities. In Latin America, as in the United States, social origin is a crucial variable to understand the structure of social inequality (Bailey et al., 2016). In Latin America, most scholars assume that the social origin effect is more critical than any ethnoracial measure (Torche and Spilerman, 2009). In the United States, there is no such consensus regarding this topic. As part of the long tradition of neglecting racial inequalities in Latin America, scholars usually deny the influence of skin colour on racial hierarchies, assuming that they are only

caused by social origin (Telles et al., 2015; Portes and Hoffman, 2003). Hence, many studies on this topic do not include skin colour or other ethnoracial measures, either due to the absence of data or theoretical reasons (Torche and Spilerman, 2009; Atria, 2004). In sum, the dominant tradition amongst Latin American scholars is to propose that the effect of any ethnoracial measure is transitory or irrelevant (González-Casanova, 1965). Nonetheless, there is a growing trend towards including measures of skin colour in studies assessing Latin American inequality (Villarreal, 2010; Telles et al., 2015; Bailey et al., 2015; Bailey et al., 2016). All of these studies suggest that the net of other sociodemographic controls and skin colour has a significant and independent effect on income and education after controlling for social origin. Empirically speaking, both skin colour and social origin affect different socio-economic outcomes. However, theoretically speaking, it would be naive to consider the two variables entirely independent.

The social source represents a class position, but this is also the product of centuries of a caste system that imposed segregation, exclusion, and oppression over non-White Latin Americans. Thus, social classes in the present and, therefore, social origin could also be treated as caused by skin colour discrimination (Morner, 1999; Andrews, 2004). Like other stratification factors, skin colour inequalities are inherited from one generation to another (Telles et al., 2015). As a result, racial hierarchies can be detected in many American societies even without a discriminatory system and in the absence of negative stereotypes and individual discriminatory actions based on skin colour. For this reason, the lack of more complex data and experimental designs using transnational samples, this research aims to find a significant effect of skin colour independent of social origin.

1.2.2 Intersectionality between skin colour, gender and ethnoracial identity

Many papers have provided evidence regarding the influence of phenotypical features on many aspects of social life. Attractive people usually receive better treatment and better life opportunities than unattractive people (Alam and Dover, 2001; Mobius and Rosenblat, 2006). In countries with Western beauty standards, non-White people are perceived as less attractive and suffer from lower incomes and unfair treatment (Hersh, 2008; Goldsmith et al., 2007). In Latin America, ideas about beauty like those about skin colour are the consequences of the process of mixing races that started five centuries ago. "Mestizaje" is the dominant racial

discourse in the region, and, for this reason, it plays a significant role in defining who is attractive and who is not, especially for women (Moreno-Figueroa and Rivers-Moore, 2013). There are no White, American, or Black people in this context. There are only people who are darker or lighter than others. This feature obscures racial tensions in the region but never makes it invisible that a fair complexion is better than a dark one (Moreno-Figueroa and Rivers-Moore, 2013). Thus, skin colour and other features such as hair texture are crucial to state how attractive someone is (Nichols, 2013).

Creams for skin whitening are among the most drastic consequences of the above detailed Latin American ideology of beauty (Masi de Casanova, 2018). Such a transformation, which Latin American females mainly take part in, can be labelled "racial mobility". However, it is worth noticing that this kind of body modification is not as common as in other parts of the world, leaving different types of transformation as the standard (Dixon and Telles, 2017). The impact of such an ideal of beauty can be seen in Latin American movies and TV shows, where most actors, journalists, and presenters are light-skinned mestizos if they are not blond-haired and blue-eyed (Masi de Casanova, 2018). In contrast, darker-skinned Latin Americans are stigmatised by being associated with lower status positions or occupations. These stigmas tend to be internalised by Latin Americans, serving to justify and maintain racial hierarchies.

The information available on the link between skin colour and attractiveness shows that this varies according to ethnoracial groups and gender (Hersh, 2011). Nonetheless, the evidence about this association in Latin America only suggests a more substantial effect on women. Skin colour seems to be the most crucial factor in discrimination based on appearance, especially for African-Americans (Hersh, 2011). Other physical features, such as weight or height, are not so important. These results support the idea that skin colour results in different socio-economic outcomes via discrimination. Espino and Franz (2002) reveal that skin colour plays a significant role in discrimination phenomena in Latin American populations, controlling for ethnoracial categories. This kind of treatment can be found in the association between skin colour and health in Puerto Rico (Gravlee et al., 2005). High SES people classified by others as dark-skinned suffer from higher blood pressure than their light-skinned counterparts. This is considered a physiological consequence of skin colour discrimination. However, this association only occurs in high SES contexts, adding more evidence to the increasing relevance of skin colour as one moves upwards in the social hierarchy. Interestingly, such an association vanishes when using a spectrometer to assess skin colour objectively. This result sheds light

on two things: first, race influences social life as a social construct, not through genetic or physical differences; second, the perception of others is crucial to understanding how race gives better life chances to some people than others.

Studies in other parts of Latin America paint a similar picture. In Colombia, people with different skin colours recognise the relevance of discrimination as a social problem and state that skin tone is the most recurrent reason for being discriminated against (Barbary, 2002). In Mexico, the phenomenon of discrimination has some differences. Mexicans, mostly the elite, tend to recognise class-based discrimination and neglect or downplay colour-based discrimination. However, a recent study suggests that many Mexicans have witnessed discrimination based on physical appearance, language, or gender (Trejo and Altamirano, 2016). Although challenging to recognise in public, colour-based discrimination is still a social problem in Mexico. Indeed, Mexicans with darker-skinned tones are more willing to report discrimination than their lighter-skinned counterparts (Trejo and Altarmirano, 2016).

A few experimental studies can provide more detailed information about colour-based discrimination in Latin America. In Brazil, evidence suggests that skin colour does not have a discriminatory effect among males in terms of hiring decisions. However, having dark skin negatively affects females' chances of getting a job (Dias, 2020). Contrarily to what has been said previously, this study shows that the relevance of skin colour tends to disappear as we ascend the SES scale. However, this result is counterbalanced by evidence from Chile. An experimental study working with a sample of Chilean students shows that people use skin colour as a proxy variable when assessing others' SES (Torres et al., 2019). Thus, while darker-skinned Chileans are perceived as having a low SES, lighter-skinned ones are seen as having a high SES. However, this association is only valid when those who assess others' status are from the middle and high classes. This result aligns with our previous assumption. It suggests that Brazil is a particular case concerning the increasing relevance of skin colour as one moves upwards in the social hierarchy. Studies comparing Latin American countries confirm these results: skin colour is associated with perceived discrimination (Perreira and Telles, 2014). The perception of discrimination is higher among darker-skinned Latin Americans than lighter-skinned ones.

Like other social problems regarding race and ethnicity, discrimination imbricates various physical and cultural features (Canache et al., 2014). Thus, it should not be assessed

using a single measure. For this reason, scholars recommend including as many variables as possible, especially skin colour as perceived by others (Roth, 2010). This recommendation relies on evidence from Latinos in the US and Latin Americans, suggesting that perceived discrimination varies according to changes in skin colour (Espino and Franz, 2002; Perrera and Telles, 2014), and that ethnoracial self-identification is not sufficient for assessing it. Even within different ethnoracial groups (e.g. Whites, Amerindians, Blacks, Mulato, Mestizo), darker-skinned Latin Americans consistently report the highest perceived discrimination level (Canache et al., 2014). To assess the impact of skin colour on acts of discrimination, more complex study designs (e.g., social experiments) should be considered; unfortunately, they are scarce in Latin America. However, the combined evidence of the effect of skin colour on different socio-economic outcomes and its influence on perceived discrimination suggests that discrimination based on skin tones drives racial hierarchies in Latin America.

1.2.3 Ethnoracial context

Our final explanation for the Latin American racial hierarchies goes beyond the individual-level mechanisms. To do so, we put individuals within their regional contexts. Skin colour influences on different socio-economic outcomes also depend on others' behaviour. A vast amount of evidence suggests the relevance of context for explaining race-related phenomena such as colour-based discrimination and the association between skin colour and SES (Oliver and Mendelberg, 2000; Hirsh and Kornrich, 2008). The contextual influence is usually explained through two competing theories. First, **racial threat theory** states that racial diversity increases negative feelings against discriminated groups as their size increases (Blalock, 1967; Quillian, 1995). One variation of this explanation is social-control theory (Sampson, Raudenbusch and Earls, 1997), which states that social norms become weaker as diversity increases because various groups struggle to define them, causing an increment in mutual distrust that affects negatively stereotyped groups. Finally, contact theory (Pettigrew and Tropp, 2006) supports the contrary idea that an increment in ethnoracial diversity helps fight against prejudice and negative stereotypes affecting discriminated groups, reversing previous assumptions about contextual influence. One study supporting **racial threat theory** claims that it is also relevant to consider the cultural context of ethnoracial discrimination. According to these findings, the percentage of the Black population hurts Whites' anti-Black

feelings. However, such an effect is much higher in the non-southern regions than in the South (Taylor, 1998). This result suggests that the history of race relations also plays a role in defining the contextual effect. Unfortunately, as in the previous sections, all these theories and evidence refer to the European and North American contexts, leaving the case of Latin America unexamined. One of the few studies referring to Latin America is that of Caneche et al. (2014). One of the critical aspects they consider is the share of minority ethnoracial groups. As other scholars have stated, hostile behaviours against historically discriminated groups increase as their proportion augments.

The assumption is that the majority feels more threatened when minority groups grow. Interestingly, as Welsh et al. (2001) show, this is a curvilinear effect. Thus, perceived discrimination reaches its peak when the minority group is near 50% and decreases to its lowest level when discriminated groups represent a tiny proportion or are the majority. Evidence from Latin America supports that assumption. When the sum of Blacks, Mulatos and Amerindians represents less than 25% or more than 50% in each region, perceived discrimination reaches its lowest levels. Evidence from Mexico suggests that the effect of skin colour on the labour market varies across subnational levels. The authors of this study say that the composition of each region's skin colour is essential to explain the effect of skin colour at the individual level. However, they only report such a variation and do not describe how the contextual factor influences it (Monroy-Gómez-Franco and Vélez-Grajales, 2020). Although not assessing the contextual influence on the effect of skin colour, other studies analysing Latin American countries suggest that the provision of public services worsens as diversity increases due to the permanent conflict between ethnoracial groups (Alesina et al., 2009). This effect has the risk of affecting historically discriminated groups (primarily dark-skinned) since they are the primary public services users in areas such as public education and public health. It is worth noting that the assessment of ethnoracial diversity in Latin America should not be done merely by replicating studies designed for the US or European context. There is a dominant language (Spanish or Portuguese) in almost all Latin American countries as well as a dominant religion (Catholic). Thus, scholars recommend focusing on skin colour differences when assessing ethnoracial diversity in Latin America (Alesina et al., 2009). Curiously, even scholars with this kind of data do not use them to determine ethnoracial variety (Caneche et al., 2014), while those who have made this recommendation do not follow it. The main problem is related to the traditional ethnoracial categories (e.g., White, Mestizo, Mulato, Black, and Amerindian) they use because such labels take skin colour differences to be ethnic ones.

On the one hand, two individuals, one Mestizo and one Mulato, both from mixed ancestry, can have the same skin colour. On the other hand, Amerindians are a historically discriminated group in the Latin American context, but their name refers to a specific skin colour range and a cultural ascription. Hence, when considering ethnoracial diversity, it should be assessed using proper skin colour measures alongside other ethnoracial measures, capturing as many differences as possible. As the case of the Southern region of the US illustrates, it is also relevant to include information regarding the historical patterns of racial relations. Regarding this point, Latin America can be divided into four regions despite their biological and cultural composition (Lizcano, 2005). The first is the Indo-mestizo countries, where the most advanced Amerindian civilisations (Inca and Mayan) were established before the European settlers.

This region has the highest percentage of Amerindian populations in Latin America, and its major ethnoracial group is the Mestizos. Second, Afro-Mestizo countries are the only ones with notorious shares of Black and Amerindian people, and mixed groups (Mestizos and Mulatos) are dominant. The third region is Afro-White, where Amerindians almost vanished after the Europeans arrived, and a high proportion of enslaved Black people were imported. The last one is the "Criollo" (the Spanish word for Iberian people born on Latin American soil) countries where Whites and light-skinned Mestizos are the dominant groups in mostly European societies, culturally speaking. As Lizcano (2005) states, discrimination based on skin colour depends on the degree of cultural and biological mixture among all of the groups mentioned above. Thus, it is a crucial dimension when assessing the relevance of ethnoracial context for the effect of skin colour on different socio-economic outcomes.

In contexts of "mestizaje" such as Latin America, studying ethnoracial stratification requires a multidimensional approach. Race, ethnicity, and culture have mixed across Latin America to different degrees, shaping configurations that should be considered when assessing racial hierarchies in the region (de la Cadena, 2000). In such a context, someone self-defining as White can be classified by others as Amerindian or Mestizo. However, this specificity does not imply that ethnoracial-related problems are purely the product of a subjective experience they are also a contextual result (Paredes, 2018). While in some contexts, someone only needs to be lighter than others to be classified as White, in others, the same person could require more complex –phenotypical and cultural– traits to be given the same label. The crucial factor in understanding the origin of that difference relies on the degree of ethnoracial-mixture. As

evidence about attractive standards suggests (Sue and Golash-Boza, 2013), skin colour is particularly relevant in contexts characterised by high degrees of racial mixture and blurred lines between ethnoracial groups. Evidence and theoretical assertions about the influence of ethnoracial context imply that how diverse a context is, alongside its degree of mixture, play a crucial role in understanding the impact of skin colour on various socio-economic outcomes.

1.3 Measuring skin colour and Race in Latin America

Contrary to the United States, in Latin America, ideas about race and skin colour overlap (Telles, 2012). In both regions, race and skin colour inequalities are, first, the consequence of scientific racism and racial ideologies produced to justify European colonisation, and nowadays, the direct or indirect effect of discriminatory actions and structural racism, respectively (Moreno and Wade, 2021). However, Latin American societies have interpreted such ideas differently. Skin colour differences are not merely descriptive or secondary in the former Spanish and Portuguese colonies. People from these countries are exceptionally aware of skin tone variations and use them to create a social hierarchy. In Latin America, skin colour definitions include status, skills, and moral connotations, which we can easily translate into racial differences, achieving similar conclusions (Telles, 2012). In contrast, skin tone hierarchies are subjugated to racial ones in the US. The latter are the primary source of socio-economic inequalities, while the former aid in understanding intra-racial group differences.

The Project on Ethnicity and Race in Latin America (PERLA) is the first and most considerable effort to disentangle the complex relationship between skin colour, race, and ethnicity in this region. The main objectives of these projects are to: 1) unveil the relevance of skin colour to determining ethnoracial identities, and 2) determine which better explains racial hierarchies in the region (Telles and PERLA, 2014). One crucial point regarding the rivalry between skin colour and ethnoracial identities as explanatory factors is how they are determined. While ethnoracial identities result from a self-determination process influenced by SES, gender, age, and residence, skin colour is dependent upon others' evaluation (Telles, 2012). This point is crucial for two reasons. First, sociodemographic variables (which correlate with socioeconomic inequalities) related to ethnoracial identities make this variable unsuitable for assessing racial hierarchies. In contrast, skin colour, as an externally defined variable that

catches what others eventually use to discriminate, is a better explanatory factor of racial inequalities.

Racial and, more precisely, colour-based discrimination directly depends on the assessment of others. Hence, an external evaluation of that phenotypical trait is unavoidable to fully understand how skin colour shapes racial hierarchies in Latin America. Methodologically speaking, PERLA considers this assumption as including a variable of skin colour as perceived by others. Results using this data confirm PERLA's first suppositions. When only considering ethnoracial identities (White, Black, Amerindian, Mulato and Mestizo), racial gaps seem much less pronounced than when we add the effect of skin colour (Telles and Steele, 2012). More precisely, darker-skinned Latin Americans' actual position on the social pyramid only emerges using a colour palette to assess others' skin tones. Previous results do not discard the utility of ethnoracial categories for problems other than inequality-related ones. For example, social issues such as political ascription or institutional trust are better understood by using ethnoracial identity. However, as others see, skin colour or race is a better tool for analysing Latin American racial hierarchies. Altogether, both variables are different dimensions or approaches to measuring the more complex concept of race (Telles, 2012).

There are diverse ways of measuring skin colour. For example, self-assessed skin tone is another feasible alternative, but it has similar problems to ethnoracial identity. One's social position may influence self-rated skin colour (Telles and Lim 1998; Telles 2004; Bailey et al. 2013). Of course, this implies that skin colour as perceived by others does not always match self-rated skin tone. Nonetheless, this incongruency does not mean that it is impossible to objectively analyse skin colour-related problems. Specifically, it only implies that for assessing how skin colour affects social hierarchies via discrimination, it is necessary to use skin colour in one definition (as perceived by others), precisely capturing what drives such scales. In Latin America, the historical absence of ethnoracial classification in the national censuses helps explain why phenotypical features, especially skin colour, are the most relevant factors when determining someone's race (Telles and Paschel, 2014). Skin tone is more critical than ancestry; intermediate categories and blurred racial lines dominate public discourse. Colour continuums better explain social hierarchies than well-defined ethnoracial categories. However, not all Latin American countries are the same. The main differences are related to 1) the development of a "mestizaje" discourse, 2) the presence of the Black population, and 3) the legal status of Indigenous and Black groups.

On the one hand, some countries like Argentina, Uruguay, and Costa Rica, the "whitest" of Latin America, did not encourage the miscegenation process or mixing of races as relevant parts of their national myths (Telles and Paschel 2014). On the other hand, the "blackest" countries of Latin America, the Dominican Republic, Colombia, and Brazil used blackness in different ways to build their national discourses. For example, Brazil has a long tradition of blackness recognition, which is reflected in their "racial democracy" discourse. In contrast, the Dominican Republic and Colombia have historically downplayed Black ancestry because they considered it a backward step (Wade, 1993; Telles, 2004; Simmons, 2009). Finally, since the multicultural wave started in the mid-1980s, countries like Bolivia and Ecuador have passed reforms to recognise their ethnoracial diversity as constitutional, giving specific political and social rights to their Indigenous populations. However, other countries like Chile, Costa Rica, and Uruguay have not constitutionally recognised their ethnoracial diversity (PNUD, 2013).

Such ethnoracial variety suggests that national contexts and dynamics are particularly relevant to disentangling the close relationship between ethnoracial categories, skin colour and social status in Latin America (Telles and Paschel, 2014). Ethnoracial identification, affected by skin colour (as perceived by others), varies significantly across Latin America. Most of the darkest Latin Americans recognise themselves as Blacks, but this association is not the same across the region. While in some countries, phenotypical features fully determine ethnoracial identification, in others (such as the Dominican Republic), cultural factors such as the neglect of Black heritage also play a role. Thus, not all Latin American countries are equally fluid, which means that the colour spectrum does not always match racial lines. In some contexts, Whites are lighter than Mestizos, and the latter are lighter than Blacks and Indigenous people. Still, in others, colour differences around ethnoracial categories do not follow a predictable pattern.

Similar to blackness or indigenusness, the Latin American idea of whiteness is complex, flexible, and affected by social status and skin colour (Telles and Flores, 2013). These features are fundamental to understanding Latin American elites' whitening strategies, which is the most studied and relevant whiteness dimension to analyse ethnoracial hierarchies in the region (Graham, 2003). Following neo-Lamarckian principles, Latin American elites believed that mixing Black and Amerindians with White populations, given that the latter had the most robust genetic pool, would improve, and eventually turn their inhabitants white. Some decades

later, the "mestizaje" ideology overcame this belief, but it still partially shapes the link between whiteness, social status, and skin colour in the region.

As Telles and Flores show (2013), White identity is currently constrained by skin colour, but it is also affected by national context, age, and social status. Thus, it is not self-evident to determine who is White and who is not since it depends on distinct factors. Such is the case that we need as many explanations as there are countries that to explain the process of ethnoracial identity formation in Latin America. For example, in Chile, Argentina, Uruguay and Costa Rica, the colour spectrum of White people is more comprehensive than in other countries. Light-brown people from those countries tend to describe themselves as Whites, while they could assume a mixed-race identity in different societies. This phenomenon suggests that those countries' racial ideologies encourage individuals to distinguish themselves from other Latin Americans.

Nonetheless, it should not be forgotten that countries' racial composition also influences their racial ideology. Hence, historical evidence suggests that the national elite's propensity to assume a White ideology depends on the degree of racial admixture with Black populations. This means that when Mulato (half White half-Black) populations are relevant, there is a tendency to emphasise whiteness over mixedness (Telles and Flores, 2013). Evidence suggests a relevant effect regarding age, especially in countries that embraced White over "Mestizaje" ideologies (Telles and Flores, 2013). Younger people from Chile, Brazil (an exception since the idea of "racial democracy" was created), Uruguay and Costa Rica are more likely to assume a non-White identity. This trend is probably the cause of two unrelated factors: 1) the multicultural turn initiated in the last three decades, and 2) the strategical use of White identities to climb up in organisational structures. Disregarding the causal explanation, the spectrum of skin colour for whites is contracting in such a group of countries since their younger light-Brown inhabitants are more likely to prefer non-White identities. The most attractive association is between social status and ethnoracial identification, whose direction seldom follows the "money whitening" thesis. While in some countries (e.g. Colombia), high-status Latin Americans identify as Mestizos, in others (e.g. the Dominican Republic), they assume a Black identity (Telles and Paschel, 2014). These results come from a study that used income to prove social status. The association between social class and ethnoracial identification is slightly different when using education. There is a negative and counterintuitive association between social class and White self-ascription in eight Latin American countries, while there

is no association between these variables in five countries. Only in Argentina, Chile, Uruguay, and Panama do more educated people assume a White identity, following the "money whitening" hypothesis. These results suggest that more educated people have incentives to take a White identity in countries that embraced a "White ideology" because employers prefer White people in their middle and high-status occupations (Andrews, 2004). In opposition, in most of Latin America, the multicultural turn started in the 1980s, probably revaluing non-White identities, and in turn diminishing the incentives to self-describe as White for more educated people. They have more resources than less educated Latin Americans with light-Brown or pale skin, who only have the symbolic money of "being White" to improve their chances in the labour market. At the same time, the former can assume a harmless non-White identity (Telles and Flores, 2013).

Overall, this evidence reinforces the relevance of considering the context when analysing race-related problems in Latin America. Each region has specific characteristics that affect the effect of skin colour on different socio-economic outcomes and how skin colour determines ethnoracial identities. Hence, avoiding these regional contexts' specificity may lead to distorting our findings regarding skin colour in defining Latin American social hierarchies. However, the most remarkable result is the effect of the interviewer's skin colour on ethnoracial identities. As Telles and Flores (2013) show, in the presence of darker-skinned interviewers, Latin Americans tend to prefer a White identity. This effect sheds light on a relevant problem that researchers face when measuring skin colour and skin colour inequality: it is challenging to obtain an objective measure of skin colour as it is a relational phenomenon. We mentioned that problem a few paragraphs earlier, but we did not go further. Nonetheless, it is crucial to take the unstable character of skin colour measurements into account to assess skin colour as perceived by others, free of the interviewer's characteristic influence.

The study we mentioned above analyses the effect of the interviewer's skin colour on the respondents' ethnoracial identification. However, nothing is said about how this interviewer's attribute influenced their perception of others' skin colour. As previously stated, skin colour as perceived by others is a more decisive factor, theoretically and methodologically speaking, to explain racial hierarchies in Latin America. There are not many studies about this topic based on samples from this region; nonetheless, the few that are available show contradictory evidence. For example, in Mexico (Villarreal, 2010), it was found that the interviewer's skin colour did not affect how they perceived others' skin tone. In opposition, in

Peru (Paredes, 2018), the interviewer's characteristics such as gender and skin colour affected how they perceived others' skin tone. Despite that, neither trait affected the educational attainment or wealth of the respondents.

Studies assessing the effect of skin colour on different socio-economic outcomes do not usually examine how the interviewer's features affect their skin colour ratings (Villarreal, 2010). However, establishing the degree of agreement amongst interviewers about their skin colour evaluations is relevant because of these measures' novelty and the ambiguity of racial schemes in Latin America. Thus, assessing the reliability of skin colour as perceived by others is crucial before truly determining its influence on Latin Americans' SES. Researchers interested in skin colour inequalities in Latin America should know whether the skin colour of respondents varies with the age, gender, SES and, more importantly, skin colour of the interviewer.

Academic work whose aim is to assess the effect of the interviewer on skin colour categorisations are unusual. Latin America is no exception, but rather another case where such an effect has scarcely been studied. The only exception is probably the US case. As Hill shows (2002), interviewers' race affects their racial classification of others, Whites, and Blacks. When White interviewers assess a Black respondent's skin colour, their assessment is darker than that of a Black interviewer. In contrast, Black interviewers perceive the skin colour of White respondents as much lighter than White interviewers do. In addition, this study shows that interviewers perceive more skin colour variation within their racial group than outside of it. As a result, it is expected to find similar results from each interviewer when assessing skin colour measures in Latin America.

As previously stated, skin colour as perceived by others has proven its strength as an explanatory factor of discrimination and SES in Latin America (Telles et al., 2015; Telles and Perreira, 2014; Bailey et al., 2014). Nonetheless, given the potential interviewer effect explained above, some issues must be considered before asserting that skin colour plays a role in Latin American racial hierarchies. Hypothetically speaking, national ideologies alongside interviewers' characteristics could bias skin colour evaluations. Thus, it makes sense to remove any uncertainties related to these issues. A systematic review on this topic shows this kind of interviewer effect in the US and Europe (West and Bloom, 2017); therefore, it is reasonable to suspect that similar influences exist in Latin America. The actual magnitude of the effects of

interviewers on skin colour evaluations has been insufficiently studied, and even less so in cross-cultural contexts such as Latin America (Cernat et al., 2019). The most concerning aspect in regard to this gap is the distortion that these potential interviewer effects may introduce into the previously documented association between skin colour and different socio-economic outcomes or discrimination. If this distortion exists, it could invalidate the evidence that supports the idea of Latin American racial hierarchies as a pigmentocratic regime. It could also lead to inappropriate conclusions regarding the effect of skin colour when comparing cases from a cross-cultural context such as Latin America.

As researchers interested in skin colour inequalities in Latin America, the effects of interviewers force us to wonder whether there is a systematic bias in respondents' skin colour evaluation process; more precisely, if the ethnicity or skin colour of the former affects their perception of the latter. The answer to this question leads us to discover the proportion of skin colour variation explained by interviewers after controlling for areas and respondents' characteristics. Such a discovery is critical to validate a cross-country comparison regarding the effect of skin colour on socio-economic outcomes. In the presence of a significant country-level variation regarding the effect of interviewers, our conclusions about skin colour inequalities may be biased. Finally, considering the effect of interviewers could change what we know about differences in skin colour in relation to education or income.

1.4 Research Problem and Hypotheses

The answers to these research questions are critical to clarifying the racial inequalities in actual states of Latin America. In a recent study (Cernat et al., 2019), the level of the interviewer's interpretation explains around 20% of the skin colour variation. However, there are significant differences across Latin America. While in some countries, the interviewer's level explains about 0%, it reaches 20% in others. We also found that as interviewers' skin colour turned darker, they perceived respondents' skin colour as slightly darker than lighter interviewers. This effect is particularly relevant for respondents who self-identify as Amerindians or Mestizos. Nonetheless, more importantly, evidence shows that not controlling for the interviewer's skin colour does not affect the relationship between skin colour and education in Latin America. However, it could underestimate the association between having dark skin and lower incomes. We did not find biasing effects in the models we estimated. Still,

these results also suggest how relevant controlling for the interviewer's impact is when assessing skin colour inequalities in Latin America. It remains imperative for statistical and theoretical purposes to disentangle the relationship between ethnoracial contexts whose relevance for studying skin colour inequalities has already been mentioned and the effect of such interviewers. The influence of skin colour on education and income across Latin America has been sufficiently documented. Dark-skinned individuals show worse results than their lighter-skinned counterparts. Additionally, skin colour discrimination suggests that dark-skinned Latin Americans are treated worse than light-skinned ones. Both results indicate that skin colour influences different social outcomes via discrimination in Latin America. However, little has been said about potential moderation effects on the influence of skin colour, and almost nothing has been said about how the degree to which skin colour is mismeasured depends on those who assess it.

In this context, we face two research problems. The first one is to study the role of social origin, gender and ethnoracial context in moderating the effect of skin colour on educational and income gap construction. The second one is to determine the influence of the interviewer's features on our measure of skin colour. The answer to our first problem will tell us whether the social hierarchies in Latin America an independent product of competing factors are, not solely skin colour, social origin, or gender, i.e. whether these factors interact with each other to give shape to those hierarchies. In turn, in responding to our second research question, we will discover how much skin colour variation relies on the interviewer and how much the characteristics of the interviewer, i.e., their skin colour, affect our measure of skin colour and its capacity to construct social hierarchies in Latin America. The state of the art of research on skin colour in Latin America suggests that the influence of skin colour on socioeconomic outcomes increases as social origin rises. It also indicates that darker-skinned females suffer more discrimination than darker-skinned males, probably because skin colour plays a crucial role in defining Latin American standards of female beauty.

Finally, in those ethnoracial contexts characterised by high levels of diversity and "mestizaje", perceived skin colour discrimination increases the relevance of skin colour for social dynamics. However, the interaction between skin colour and social origin, gender or ethnoracial context, and its influence on social hierarchies in Latin America, has not been evaluated until now. On the other hand, the few reports on the relevance of interviewers' features for assessing skin colour in Latin America suggest that, although it does not

dramatically change our conclusion, it is relevant to control for the effects of interviewers when assessing skin colour inequalities (Cernat et al., 2019a; Cernat et al., 2019b). Nonetheless, they do not approach the ethnoracial context problem, leaving this research problem unanswered. Thus, this research plans to address four different hypotheses to fill the moderation and interviewer effects gaps.

First, given that all the historical, theoretical, and empirical research suggests the increasing relevance of skin colour as we climb Latin American social ladders, our first hypothesis is as follows: *the effect of skin colour on socio-economic outcomes, such as education and income, which implies that dark-skinned people perform worse than lighter-skinned ones, varies depending on social origin. More precisely, the effect of skin colour on socio-economic outcomes increases as we move from low to high-class social sources.* From an opposite perspective, dark-skinned Latin Americans have developed "whitening strategies" (Telles and Flores, 2013). Many examples from Latin American colonial history show how some people removed their non-White ancestry by buying certificates of whiteness (Chambers, 1999). In modern times, some wealthier non-Whites do not receive any penalty for their ethnoracial identity because of their status (Harris, 1963). This evidence supposes an alternative to the previous hypothesis that states the effect of money whitening. Even though previous studies show that people change their ethnoracial identity because of their status (Telles and Flores, 2013), we should not discard the possibility that money modifies the way people perceive others (Telles and PERLA, 2014). Hence, we also assess the reverse hypothesis, *which claims that the effect of skin colour weakens as social origin increases.*

Second, considering all of the ethnographical work on the importance of gender differences, especially regarding beauty standards and negative stereotypes, to fully understand skin colour discrimination in Latin America, we assume as our second hypothesis that *the effect of skin colour (effect) on different socio-economic outcomes is more substantial for Latin American females than males.* Third, considering the absence of studies addressing the influence of ethnoracial context on different skin colour-related problems in Latin America, such as discrimination and social hierarchies, our third hypothesis intends to fill this gap. As theoretical and historical research on this topic suggests, the social relevance of skin colour as a racial marker and, in turn, for discrimination and social hierarchies rises in contexts characterised by significant levels of racial mixing. Thus, our third hypothesis states that the influence of *skin colour on various socio-economic outcomes is more robust in ethnoracial*

contexts characterised by high degrees of racial mixing, associated with "mestizaje" ideologies, broad skin colour spectrums and blurred racial lines. As evidence from the US suggests, such importance of the ethnoracial context should be even higher in societies with a historical path of slavery, segregation, and legal discrimination against non-White populations.

Furthermore, it is worth saying that perceived colour-based discrimination in Latin America increases when the non-dominant groups are large enough to threaten the dominant ones (Caneche et al., 2014). Across the region, most elite and middle-class members are White or Mestizos. Therefore, *a particular case of ethnoracial diversity, where non-Whites and non-Mestizos are relevant enough, should represent the worst scenario for dark-skinned Latin Americans.* These hypotheses intend to fill relevant research gaps in the novel field of research on colour inequalities in Latin America. However, they cannot be assessed without addressing the effect of interviewers on the perceptions of skin colour. To be more precise, previous studies on the influence of skin colour on education and income have overlooked the influence of interviewers on our primary independent variable: respondents' skin colour. This omission could have led the previous studies to draw the wrong conclusions. Therefore, our last hypothesis states that *controlling for the interviewer's features, mainly skin colour, does not change our findings on the influence of skin colour on various socio-economic outcomes such as income and education.*

2. DATA AND METHODS

Quantitative research on skin colour inequalities in Latin America is a novel area of study. The first studies in this field date back no further than 25 years ago (Villarreal, 2010; Flores and Telles, 2012; Sidanius et al., 2001; Telles and Lim, 1998; Bailey, 2002; Gravlee et al., 2005). However, all these studies analyse a single national case, and they only come from four countries: Brazil, Mexico, the Dominican Republic, and Puerto Rico. The lack of regional datasets has impeded studies using a comparative sociology approach. It was not until 2008, with the foundation of the Project for Ethnicity and Race in Latin America (PERLA), that the first regional dataset specifically designed for addressing research problems on race and ethnicity started to be planned.

The first PERLA survey, which took place in 2010, only covered four Latin American countries: Colombia, Peru, Brazil, and Mexico. There were two reasons for this selection: first, the sum of the inhabitants of these countries represents almost two-thirds of the Latin American population; and second, they have large proportions of Afro-descendants (Brazil and Colombia) and Amerindians (Mexico and Peru). A brief set of questions, also designed by PERLA, were included in the Latin American Public Opinion Project (LAPOP) dataset, which has collected data on skin colour and other ethnoracial variables across all Latin American countries every two years since 2010. The appearance of the PERLA and LAPOP datasets has, for the first time in Latin American history, enabled many scholars to study ethnoracial inequalities and the role that skin colour plays in them.

This novel area of study, founded by Edward Telles (director of PERLA) and his research team (2014), covers the effect of skin colour on ethnoracial identities (Telles and Pashel, 2014; Telles and Flores, 2013) and educational achievement (Telles et al., 2015), as well as discrimination based on skin colour and its impact on a person's health (Perreira and Telles, 2015). Following this new trend, other scholars have also studied the effect of skin colour on income (Bailey et al., 2014, 2016) and assets (Painter II et al., 2020). To address our research problems, we use the LAPOP data from the 2010, 2012 and 2014 waves and follow a similar analytical and systematic approach to the authors mentioned above. The subsequent sections will detail the datasets used, the most important variables, and the analysis followed throughout this research.

2.1 PERLA-LAPOP datasets

The PERLA and then the LAPOP surveys are the first national representative surveys that go beyond the traditional ethn racial questions included in Latin American federal censuses during the last decades. These surveys have a set of questions with topics ranging from ethn racial identities, socioeconomic inequality, and perceived discrimination to public opinion about social policies, ethn racial groups and social movements. The PERLA team spent two years, from 2008 to 2010, designing their set of questions. They aimed to produce information to support the academic, political, and public debate around ethn racial issues. The PERLA and LAPOP surveys allow us to do empirical analyses of such topics that other Latin American surveys do not. Both surveys focus on the critical variables involved in ethn racial identity formation, the nature and degree of ethn racial inequality and discrimination, and social relations across ethn racial boundaries, always considering the specificity of national contexts. One of the most salient features of the PERLA and LAPOP surveys is that both use separate ways of classifying people according to their race or ethnicity, which is crucial for researchers interested in ethn racial inequalities. This enables the comparison, as explanatory factors, between self-ascribed skin colour and the assigned by other identities. This last point is crucial for our purposes since the PERLA team designed an eleven-category palette of colours that the interviewers used to classify the skin tone of the respondents, which has also been included in the LAPOP surveys since 2010.

The PERLA team comprises leading scholars on race and ethnicity from the US, Colombia, Brazil, Peru, and Mexico. They come from different areas of expertise, such as sociology, history, economy, anthropology, and linguistics. Also, they can write and read in English, Portuguese, and Spanish, which, in combination with their academic diversity, allows them to resolve different issues related to asking sensitive questions in other languages and across different cultural contexts. The PERLA and LAPOP surveys work with large enough samples to generalise the results from their analysis of the Latin American population. The questions on race and ethnicity in LAPOP are not as comprehensive as in the PERLA survey. However, eight countries from the LAPOP sample include a more extensive module designed by PERLA. This LAPOP subsample offers us a richer set of questions to address our research problems, but we are more interested in a global analysis that includes all the Latin American countries. Although this option has obvious limitations, we prefer to work with the restricted set of questions on ethn racial issues for all the countries sampled in the LAPOP survey.

Despite being less informative than the PERLA survey, the LAPOP one has consolidated a new research line around ethnoracial identities, skin colour and inequalities from a comparative and Latin American perspective (Canache et al. 2014; Telles and Paschel 2014; Telles and Bailey 2013; Telles and Garcia 2013; Telles and Steele 2012). Across all of Latin America, the LAPOP survey asks about social origin, racial attitudes, and perceived discrimination based on ethnoracial identity and skin colour. Such questions, combined with the colour palette to assess respondents' skin colour, have enabled the LAPOP survey to offer global evidence supporting the thesis that Latin America has a *pigmentocratic* regime. The LAPOP survey is conducted based on a national probability design for each (18) Latin American country. However, the LAPOP team collects oversamples to allow sub-national level analyses in some cases. The LAPOP's units of observation are voting-age individuals who are interviewed face-to-face in their households.

High standards of practice ensure that the LAPOP survey offers us the highest quality information about the issues it covers. Pre-survey, these practices include 1) getting feedback from leading scholars, policymakers and practitioners, 2) using the experimental research lab from Vanderbilt University to test new items, 3) doing pre-tests on every item and every country, 4) translating the questionnaires into different languages, 5) designing national probability samples according to expert advice, and 6) protecting survey participants according to the ethical standards of the University of Vanderbilt's Institutional Review Board. Concerning the implementation of the LAPOP survey, their high standard practices include 1) thorough training of all interviewers who should follow the procedures from the training manuals, 2) forming alliances with well-known and highly skilled survey companies from Latin America, and 3) the use of tablets and software specially designed to collect information from the field, allowing interviews to be conducted in different languages and various validity checks.

Finally, post-survey, LAPOP's high standards involve 1) an open science policy that considers freely available datasets in STATA and SPSS format, 2) user-friendly web tools to create graphs or do some multivariate analysis, 3) a publishing strategy that includes customised reports for every surveyed country. To have more statistical power and compare different ethnoracial contexts, we use a cross-time and cross-nation merged database with core questions from the 2004 to 2014 waves. However, we only use the 2010, 2012 and 2014 surveys as they are the only ones with the ethnoracial questions module. The national samples

from all of these waves are the product of a multistage probabilistic design (most countries have quotas at the household level) and were stratified by the highest subnational levels, the size of the lowest subnational level and then urban and rural areas within the former.

As Table 1 shows, most of the national samples for any wave have approximately 1500 cases and sample errors of around 2.5%. However, there have been some changes over time. The 2010 wave used the 2000s round of the national censuses, the most current available, to build its national samples according to sex, age, and geographical distributions. However, to reflect the population changes in the 2010s round of the federal censuses, the sample designs from the 2012 and 2014 waves were updated. Also, this new sample design made the LAPOP survey representative at the lowest sub-national level (municipalities in most Latin American countries). This change also slightly adjusted the stratification criteria traditionally used in the LAPOP surveys. Until 2010, the LAPOP samples were stratified by the highest subnational level and urban and rural areas, but the 2012 wave sample was also stratified by the size of the lowest subnational level. These changes were made to obtain the best quality data possible and produce high standard studies about Latin American problems, such as inequality due to skin colour. Nonetheless, it is worth saying that such changes were also made to maintain the reporting continuity of previous research. Thus, it is not false to state that the LAPOP surveys and sample designs remain similar (LAPOP, 2014).

Table 1: Sample sizes and Sampling errors in 2010, 2012 and 2014 LAPOP waves

Country	2010		2012		2014	
	Sample Size	Sampling Error	Sample Size	Sampling Error	Sample Size	Sampling Error
Mexico	1,562	±2.48%	1,560	±2.5%	1,578	±2.5%
Guatemala	1,504	±2.50%	1,509	±2.5%	1,506	±2.5%
El Salvador	1,550	±2.49%	1,497	±2.5%	1,512	±2.5%
Honduras	1,596	±2.45%	1,728	±2.4%	1,561	±2.4%
Nicaragua	1,540	±2.50%	1,686	±2.4%	1,547	±2.4%
Costa Rica	1,500	±2.50%	1,498	±2.5%	1,541	±2.5%
Panama	1,536	±2.50%	1,620	±2.4%	1,508	±2.4%
Colombia	1,506	±2.50%	1,512	±2.5%	1,512	±2.5%
Ecuador	3,000	±1.79%	1,500	±2.5%	1,512	±2.5%
Peru	1,500	±2.50%	1,500	±2.5%	1,500	±2.5%
Bolivia	3,018	±1.79%	3,029	±1.8%	3,068	±1.8%
Paraguay	1,502	±2.50%	1,510	±2.5%	1,515	±2.5%
Chile	1,965	±2.21%	1,571	±2.5%	1,571	±2.5%
Uruguay	1,500	±2.53%	1,512	±2.5%	1,512	±2.5%
Brazil	2,482	±1.79%	1,500	±2.5%	1,500	±2.5%
Venezuela	1,500	±2.53%	1,500	±2.5%	1,500	±2.5%
Argentina	1,410	±2.53%	1,512	±2.5%	1,512	±2.5%
Dominican Republic	1,500	±2.52%	1,512	±2.5%	1,520	±2.5%

NOTE: Confidence intervals based on unweighted sample sizes. For cross-national analysis purposes, LAPOP weights each sample to 1,500. These sampling errors are based on SRS and not adjusted for stratification and clustering.

2.1.1 Universe, Population and Observation Units

The universe of the LAPOP surveys comprises the Latin American adult² (who were of legal age at the time of sampling) population living in rural and urban areas. However, these surveys exclude institutionalised adults, such as people living in prisons, hospitals, and military bases. Thus, the LAPOP samples are representative, at the national and sub-national levels, of every adult, but not those without freedom of movement. For unit observation, the LAPOP surveys only interview one person per household. The questionnaires mainly focus on issues directly related to that person, but on some occasions, they also ask questions related to other household members and about the house where they live. Therefore, the statistical unit of observation is the household. Nonetheless, many Latin American families share the same

² In most Latin American countries, individuals reach the legal age when they are 18 years old.

dwelling because of poverty. As a result, the LAPOP team considers it more appropriate to treat dwellings as the final selection unit.

2.1.2 Sample frame

The sampling frame covers 100% of the eligible population in every wave and country. Every eligible Latin American in each country and a specific wave has an equal chance of being interviewed. Importantly for our aims, no regions or ethnoracial groups are excluded from the sampling frame. However, in some cases, certain isolated areas (e.g., islands and extreme territories) can be excluded for economic reasons. Country-specific methodological notes give more information about each exception.

2.1.3 Sampling Method

The LAPOP survey's sampling method is stratified multistage cluster sampling in any wave or country. In the 2010 wave, the national samples were stratified by urban/rural areas and the highest subnational level (e.g., regions in Chile, provinces in Argentina or States in Brazil). However, in the 2012 wave and after that, the LAPOP survey included a third stratification factor: the size of the lowest subnational level. This sampling method has the virtue of reducing the variance of the estimates. It improves the quality of such assessments, only forcing the selection of one sampling unit per stratum and covering the total population (by country) by combining all strata. This stratification process has the cost of producing geographically dispersed samples, but it also ensures the inclusion of every subnational area.

2.1.4. Stratification process

The LAPOP survey uses stratified samples; each stratum has an independent sampling process. This peculiarity increases the sample precision by reducing the sampling error as it depends on the within and not between strata variances. Consequently, the stratification ensures that any interest group (Amerindians or Black in our case) is included in the sample. The last point is crucial because some ethnoracial groups, which must be included in the sample to draw

correct conclusions about ethnoracial inequalities in Latin America, may have been excluded from the LAPOP sample based on their geographical or socioeconomic isolation. In the absence of stratification, this kind of problem can occur due to the aleatory nature of the selection unit process.

2.1.5 Weighting scheme

In any wave, the LAPOP samples are self-weighted. However, there are some exceptions. For those cases, the LAPOP dataset includes a weighting factor called WT, whose values are country specific. In addition, the LAPOP dataset has another weighting factor called WEIGHT1500 to ensure that every country has the same weight in the pooled sample. After activating this factor, each country in the merged dataset has a sample size of 1500 cases. It must be considered that to get nationally representative results, the combined dataset must be weighted. It is incorrect to assume that the LAPOP's data collection process followed a simple random sampling. In fact, the LAPOP samples use stratification, clustering, and weighting. Thus, it is imperative to consider the complex nature of every national piece included in the merged dataset when working on it. It is preferable to weigh our dataset using the pre-fix svy on STATA instead of doing it on SPSS, which does not consider such complexity. Following this advice, as we did, researchers believe the design effects of these surveys and receive more precise estimations. Otherwise, the confidence intervals will either expand or reduce.

2.1.6. Design Effects

Every time a sample is collected instead of the entire population, mistakes can occur. This kind of problem is called sampling errors, which are defined as the variability among all of the possible samples. We use the sample variance to estimate this since it is impossible to know such a variance. Thus, every time a statistic is calculated (e.g., mean, regression coefficient or percentage), its standard error is also calculated. We measure the difference between that statistic and the value we would have obtained if we had used the entire population instead of a sample. To calculate the standard error, the complex design of the LAPOP survey should be considered. The design effect shows how efficiently that design contrasts with limited random sampling (URS). To calculate the design effect, we use the following formula:

$$DEFF = \frac{SE_{complex}}{SE_{urs}}$$

In this formula, the design effect is represented by *DEFF*. In contrast, *SE_{complex}* and *SE_{urs}* represent the standard error in a complex design and the standard error in an unrestricted random sampling design, respectively. A value of 1 indicates that there is no difference between them, which means that the intricate design is as efficient as the URS one with the same sample size. In contrast, if the value is larger than one, the complex design produces higher standard errors than the URS one. To illustrate this problem, Table 2 shows the mean, the standard error, and the design effect of the "support for democracy" variable for the 2014 LAPOP wave. Furthermore, this table shows the design effects of the 2012 and 2010 waves for the same variable. We use this variable as one of the primary objectives of the LAPOP survey is to assess the state of democratic legitimacy across Latin America (Zechmeister and Lupu, 2019). Thus, it is a quality proxy for the LAPOP survey.

Table 2: Design effects, 2014, 2012 and 2010

LAPOP surveys					
Country	<i>Support for Democracy</i>				
	<i>Design Effects</i>				
	<i>Mean</i>	<i>SE</i>	<i>2014</i>	<i>2012</i>	<i>2010</i>
Mexico	66.41	1.18	1.66	1.33	1.53
Guatemala	67.27	1.05	1.47	1.32	1.22
El Salvador	65.86	0.68	0.99	0.98	1.1
Honduras	65.77	1.06	1.37	1.05	1.74
Nicaragua	68.43	0.74	0.97	1.07	1.39
Costa Rica	74.19	1.11	1.63	1.31	1.52
Panama	58.87	1.18	1.51	1.37	1.84
Colombia	71.48	1.05	1.46	1.36	1.22
Ecuador	71.31	1.35	1.93	1.23	1.8
Bolivia	67.37	0.71	1.68	1.87	2.27
Peru	62.49	1.16	1.63	1.21	1.49
Paraguay	62.59	0.97	1.08	1.1	1.46
Chile	75.33	1.1	1.81	1.38	1.29
Uruguay	85.08	0.79	1.3	1.15	1.22
Brazil	66.13	1.35	1.69	1.25	3.22
Venezuela	76.13	2.02	2.49	1.35	1.8
Argentina	81.72	0.9	1.33	1.23	2.11
Dominican Rep.	72.58	0.84	1.21	0.96	1.03

NOTE: For more information on country samples, please see the country reports and technical information sheets on <https://www.vanderbilt.edu/lapop/>.

It is worth noting that highly segregated areas from a socio-economic standpoint reduce the efficiency of the cluster sampling method (used by the LAPOP survey), which, in turn, produces high standard errors in some cases. Sampling errors using a complex design are 10% to 40% larger than those obtained from an unrestricted random sampling design. Well-designed surveys usually have design effects of between 1 and 3 (Shackman, G. 2001). In the LAPOP survey, for the case of Chile, the support for democracy has a design effect of 1.81, which means that the confidence interval for that variable is 81% greater than that obtained using a URS design. In the 2014 wave, the design effect reached its peak in Venezuela (2.49) and its

lowest value in Nicaragua (0.97), which are close to the accepted range. Moreover, by comparing the design effects across time, we can see that the sampling errors tend to decrease after the design improvement in 2012, although they increased slightly again in 2014. Only in 15 out of 54 country-wave samples do we find design effects above 1.5. This represents a decent quality standard for the surveys we are working with.

2.2 Variables

In the following lines, we will explain the essential variables for our work in detail. We will start by defining our most significant independent variable: skin colour. After that, we will give details on the other independent variables of our study. Finally, we will explain the dependent variables we will work on within this research.

2.2.1 Skin colour

Skin colour is our most important independent variable. Indeed, it is the most relevant innovation made by PERLA and then included in the LAPOP survey. Studies on racial inequalities in the United States have used skin colour evaluations for a long time (Guilickson, 2005; Keith and Herring, 1991). Nonetheless, they have infrequently been used in Latin America. For example, in 2010, the LAPOP survey was the first to include a skin colour rating instrument in a regional research design. Such an instrument measures the skin colour of the respondent according to the interviewer's criteria. This solution allows us to have more options to assess skin tone rather than depending only on self-identification. Furthermore, it is a better instrument to determine skin colour inequalities when researchers assume that discrimination is the primary cause of these inequalities. We think that way because skin colour-based discrimination depends more on the perception of those who execute discriminatory actions than of those who suffer from discrimination.

The LAPOP survey uses a colour palette designed by PERLA (Figure 3) to assess the skin tone of respondents. Using this palette as a reference, which is not shown to the respondents, interviewers look at the respondent's face to classify their skin colour. This palette includes eleven skin tones, ranging from the lightest (1) to the darkest (11). The skin tones included in this palette come from photos from the internet. The palette was extensively pre-tested with two aims: first, to make the palette an easy-to-use instrument, and second, to ensure it covered the whole skin colour range present in Latin America. The PERLA and LAPOP teams told their interviewers that the skin colour measures were relevant for social science. They were also told that previous research suggests that individuals evaluate it in everyday life in Latin America and, most appropriately for our purpose, adjust their behaviour according to that evaluation. Although this evaluation is not perfect, we consider it functional to our research question and thereby we collected as many variations as the actual skin colour range has in Latin America. The LAPOP team stated that "the main objective of using colour palettes to collect data about the skin tone of the interviewee is that they provide a more objective measure than the self-reported ethnic identification questions" (LAPOP, 2016). We do not fully agree with this definition since we do not believe that it is possible to talk about objective measures regarding race or ethnicity. For this reason, we prefer to say that the LAPOP approach to skin colour is better to assess social phenomena, such as skin colour-based discrimination, which depend on others' perceptions.

Figure 3: the PERLA colour palette



It is also worth noting that this instrument is neither the only way to assess skin colour nor the best one. It complements traditional self-ascription measures, as each one points to different things. Each country received these colour palette cards from the LAPOP team, which should have belonged to the same printing batch. From a methodological standpoint, such a procedure was critical to ensure that all the cards within a given country were equal in terms of shade variations. Before its application, every team of interviewers received thorough training on using the colour palettes. Such an activity comprised six steps. First, the team leaders explained why it was essential to use this palette correctly. Second, every interviewer got a card and explored it. At this stage, they were told that although the cards did not perfectly match the actual colour range, there was always an option close enough to a given person's skin tone. Third, the interviewers learnt to use the colour palette to assess respondents' face skin tone. Fourth, they familiarised themselves with the colour continuum by rating their own skin colour and that of their colleagues. Fifth, the team leaders explained that the interviewers must also place their skin tone and register it. To establish control, the same eyes assessing the interviewees had to assess themselves. Moreover, the interviewers had to learn that the code used by themselves to classify their tone must not change from one form to another, even if their tone changed due to tanning. Finally, the team leaders taught the interviewers to use the colour palette at the end of the interview without showing it to the respondents.

2.2.2 Ethnoracial self-classification and social origin

Besides skin colour, two other competing independent factors are ethnoracial self-classification and social origin. These two variables are the primary bricks of the theoretical approaches that compete with the pigmentocratic thesis developed by Edward Telles. The first of those approaches, which we call the canonical one, explains ethnoracial inequalities due to inherited inequalities from the colonial past (Torche, 2014; Franco et al., 2005). Consequently, to evaluate such a theory, it is crucial to include a variable that captures the social origin of the respondents. The LAPOP survey has two variables about social origin: the father's occupation and the mother's education. The former is used a great deal in social mobility studies, but in the LAPOP survey, it is only available for eight countries. In contrast, the second one is available for all Latin American countries, although it is not commonly used as a social origin proxy. However, we prefer the second variable based on two reasons: first, it enables us to

maintain our regional approach instead of choosing a subset of countries; and second, a mother's education is a crucial predictor of a person's education, health, and skills in Latin America (Winkler, 2004), even more so than the father's occupation. Thus, it represents a better variable than the father's occupation to analyse the impact of social origin on socioeconomic outcomes.

This survey measures the mother's education using the following question: "What educational level did your mother complete?". The possible answers to this question are none, primary incomplete, primary complete, secondary incomplete, secondary complete, technical vague, technical full, university unfinished, university entire, do not know, no response, not applicable, and not asked in this country or year. The second of those approaches mentioned above is the multiculturalist one, whose primary focus is on the effect of ethnoracial identities on social dynamics (Wade, 2008). This approach does not deny the existence of discrimination based on skin colour. However, it still assumes that the racial stratification process organises itself around traditional ethnoracial categories such as Black or Amerindian.

The LAPOP survey asks the following question to measure ethnoracial identities: "Do you consider yourself White, Mestizo, Indigenous, Black, Mulato, or of another race?". Of course, these answers represent general terms that do not always match the local language. In some countries, to avoid this problem, the LAPOP survey uses more specific concepts: "Oriental", "Quechua", "Aymara", "Amazonian", "Zambo", "Yellow", "Moreno", and "Afro-Dominican". These options were decoded to make them comparable across Latin America. Thus, in Peru, Quechuas, Aymaras, Amazonian, and Zambo, were collapsed categories into the Indigenous category while treating Oriental as Other. In Brazil, Yellow was treated as Other. In Venezuela, Moreno was recoded as Mulato. Finally, in the Dominican Republic, Afro-Dominican was recoded as Black. In some cases, such a recodification process only implied a simple translation, implying that a certain degree of information was lost in other possible translations.

For example, in Peru and Brazil, those whose ethnoracial identity is Oriental and Yellow represent a small proportion. Furthermore, people from Asia are numerically relevant only in those countries. As a result, they were added to the other category to maintain just five categories for all the Latin American countries. Again, in Peru, Quechuas, Aymaras, and Amazonians undoubtedly refer to indigenous groups, so they were recoded as Indigenous.

However, the word *Moreno* in Venezuela may describe an individual with Indigenous, Black or both ancestries. Therefore, we lost information to add both to the *Mulatto* category. Still, we made this decision since the concept of *Moreno* has a stronger connection with Black heritage than with Amerindian heritage (National Institute of Statistics from Venezuela, 2017).

2.2.3 *Ethnoracial context*

Our third independent variable refers to the influence of the ethnoracial composition at the national level. This variable, which we call "ethnoracial context", was measured by estimating a hierarchical cluster analysis with the 18 Latin American countries as cases and considering a set of variables that account for different dimensions of the ethnoracial composition of the country. The variables used to estimate this cluster analysis were the national mean of skin colour, the national proportion of each ethnoracial group, and the skin colour fractionalisation index. The first of these variables is the country's average skin colour variable, described above. A set of six variables describing the national percentage of each ethnoracial group (e.g., White, Mestizo, Mulatto, Indigenous, Black, and Other) represents the second one. Finally, we measured skin colour fractionalisation using Alesina et al.'s (2003) formula:

$$FRACT_j = 1 - \sum_{i=1}^N S_{ij}^2$$

This formula shows the probability that two randomly sampled individuals from a population belong to different skin colour groups (from 1 to 11), where S_{ij}^2 is the proportion of group i ($i = 1 \dots N$) in country j . To construct the skin colour index, we used three skin colour groups by recoding the 11-point skin colour variable in three categories: light (1 to 3), medium (4 to 5) and dark (6 to 11).³ These groups were then used to determine the national skin colour fractionalisation index proportions. The range of the index varies between 0 and 1. A value of 0 describes a homogenous society in terms of skin colour, while a value of 1 represents the highest level of skin colour heterogeneity. We show a group of choropleth maps to describe Latin America according to the variables described above in the following pages. For example,

³ These categories were proposed and used by Telles and the PERLA team (Telles, 2014).

Figure 4 displays the national mean of skin colour for 18 countries. Since the LAPOP's skin colour palette ranges from 1 (the lightest) to 11 (the darkest), this map tells us that the Southern Cone (Chile, Argentina, and Uruguay) and Costa Rica have the lightest skin colour means. In contrast, Bolivia, Panama and the Dominican Rep. have the darkest ones.

Figure 4: Latin American countries by skin colour mean, LAPOP 2010-2014



Since all the variables we plotted onto the map of Latin America have different scales, they were standardised in z scores before estimating the hierarchical cluster analysis. Then, we used Ward's method to minimise the in-group variance and have more homogeneous clusters. Thus, cases were merged if their addition produced the slightest increase in the sum of the squared deviation. Finally, as we only have continuous variables, we used the squared Euclidian distance as a proximity measure. Once the hierarchal cluster analysis had been estimated, according to the dendrogram and the most significant jump criteria, five clusters emerged as the optimal solution. However, to validate this result regarding the history of racial

relations in Latin America, we estimated a two-step cluster analysis to include a categorical variable: Lizano's (2005) classification. After forcing the study to form five clusters and accordingly comparing both results, we got a clusterisation that entirely resembles the work of Lizcano. We prefer this solution as it matches our technical criteria and is also in line with the Latin American history of racial relations.

On the other hand, Figure 5 portrays the Latin American countries according to their largest ethnoracial identity with three groups. The first one, composed of the same countries with the lightest skin colour, has White as its most recurrent ethnoracial identity. The second group, Brazil and Venezuela, has Mulato as its primary ethnoracial identity. Finally, the rest of Latin America is predominantly Mestizo. Figure 6 represents Latin America according to the skin colour fractionalisation index. In this map, dark green represents the most diverse countries, and light green symbolises the most homogenous ones. As this map shows, Brazil and the Dominican Republic are the most varied Latin American societies regarding skin colour. In contrast, Chile, Uruguay, and Nicaragua are the most homogenous ones.

Figure 5: Latin American countries by largest ethnoracial identity, LAPOP 2010-2014



Figure 6: Latin American countries by skin colour fractionalisation index, LAPOP 2010-2014



Figure 7 displays a map of Latin America that shows which of those five clusters each country belongs to. The first cluster, which includes Chile, Argentina, Uruguay, and Costa Rica represents those countries that Lizcano (2005) called "criollos" (creoles) due to their strong Spanish and European roots. This group, which is labelled "White countries", is characterised by having the lowest levels of skin colour fractionalisation, the highest proportion of people with a White identity, and the lightest mean of skin colour. The second cluster, composed of Brazil and the Dominican Republic, has the highest proportions of Afro-descendants and the darkest and most heterogeneous skin tones. We call this group "the Mulato countries". The third cluster, which we call "Indomestizo countries", includes Peru, Bolivia, Ecuador and Guatemala, and its most salient feature is that they have the highest percentage of Indigenous and Mestizos.

Figure 7: Latin American countries by ethnoracial composition, LAPOP 2010-2014



From a historical point of view, some of the best-known Amerindian civilisations, the Incas, and Mayas, flourished on these countries' soil. The fourth cluster, which we call "Mestizo countries" (Mexico, Nicaragua, El Salvador, Honduras, and Paraguay), has the second-highest percentage of Mestizo and the second lightest skin colour. Finally, the fifth cluster, Panama, Colombia, and Venezuela, has the second darkest mean of skin colour, a high proportion of Afro-descendants, and the second-highest skin colour diversity. So, we label it "Afromestizo countries".

2.2.4 Other Independent Variables

We also use a set of sociodemographic controls to estimate our models. Socioeconomic outcomes are not solely influenced by skin colour, ethnoracial identity and social origin. Other factors include age, size of residency, native language, survey wave, and gender. All of these variables, through different channels, may affect socioeconomic outcomes. There are also other variables that could have been included in our models. However, we do not have them in our dataset or prefer to maintain the parsimony of the models. In the LAPOP dataset, age is a continuous variable whose lower limit is 18 years old. The size of residence place is a categorical variable with the following possible answers: rural, town/small city, medium city, large city, and national capital. Gender is a dichotomous variable with female and male as answers. The survey wave variable is a definite factor that shows whether a given case belongs to the 2010, 2012 or 2014 wave. The native language variable is also categorical and has possible responses of Spanish/Portuguese, Indigenous or foreign languages. Finally, alongside ethnoracial context, we also include the natural log of the GDP per capita's mean for the period from 1990 to 2016.

2.2.5 Dependent variables

We aim to work with different socioeconomic outcomes as our dependent variables in line with our research questions. Thus, we work with education and income since they are the most relevant socioeconomic variables available in our dataset. Education is one of the most relevant factors to explain income inequality. Such importance has increased since the second half of the XX century (Altimir, 1997), and it seems more appropriate in Latin America than in the US (Lam and Levison, 1992). In Latin America, as in many other cases, education and income have a circular relation. Children from high-class families can afford private schools, are admitted in higher numbers to higher education, and get higher incomes. Thus, this cycle perpetuates socioeconomic inequalities in the region (Hoffman and Centeno, 2003).

Rurality and gender also help to explain those inequalities. Latin Americans living in rural areas have poorer access to education, which, in turn, affects their income. On the other hand, Latin American women's higher rates of illiteracy and school dropout help explain the educational and income gaps amongst Latin Americans and, more precisely, between males

and females (Hoffman and Centeno, 2003). Furthermore, and more critically to our objectives, we have evidence of the relevance of Whiteness for obtaining good jobs or high educational achievements since the second half of the XX century (Dillon Soares and Reyna, 1967). Therefore, when scholars study educational or income inequalities in Latin America they should not deny the solid causal relationships between those variables and different ethnoracial dimensions (Hoffman and Centeno, 2003). The LAPOP survey operationalises education as years of schooling completed, ranging from 0 to 18. Like other studies working on skin colour gaps in Latin American education (Telles et al., 2014; Telles and Steele, 2012), we use this variable to respond to our research questions. Hence, our results can be compared to previous studies. In the case of income, the LAPOP survey has a set of questions about household income and personal monthly payments, and many questions on goods and material possessions, which serve as an indirect way to determine income. Some previous studies have used the monthly household income variable to analyse skin colour inequalities (Bailey et al., 2014, 2015), while others have studied such problems by considering Latin Americans' assets (Painter II et al., 2019). Both variables have advantages over personal monthly income since they have fewer missing cases. For example, someone studying or unemployed (and not receiving any public benefits) does not have a personal income, but their household has some source of income or material possessions.

However, we prefer to analyse skin colour gaps using personal monthly income because this variable better fits our theoretical framework. Our primary causal mechanism to explain skin colour inequality is colour-based discrimination. Nevertheless, if we were to use household income or goods, as these variables are neither directly nor uniquely related to personal characteristics, it would be questionable to assume that income differences are due to colour-based discrimination at the individual level. In contrast, in the case of personal monthly income, as it associates directly with individuals' characteristics, we have the chance -in the absence of experimental designs- to theoretically assume that income gaps result from colour-based discrimination in the labour market. In the LAPOP dataset, personal monthly income is measured through the following question: " How much money do you personally earn each month in your work or retirement or pension?". To answer this question, every respondent has 16 intervals based on each country's currency, which considers the country's income distribution. Then by privately choosing a number from a card, every respondent states what income band they fall into. Besides these socioeconomic variables, to answer our last research

question, we finally evaluate the effect of some of the interviewer's features on the respondent's skin colour, turning our primary independent variable into a dependent one.

2.3 Analytical approach

We wrote three independent papers to address our research questions. In the first one, we analyse the effect of skin colour on education. In the second one, we study the influence of skin tone on income. Finally, in the last one, we evaluate the impact of interviewer effects on skin colour assessment and, in turn, how the effect of skin colour on education and income could change due to interviewer effect.

2.3.1. Skin colour and education

We used Tobit models to explore the relationship between skin colour and years of schooling. We chose the Tobit models considering that our dependent variable in these models, education, is right-censored (18 years or more)⁴. To assess our hypothesis regarding the moderation role of social origin, gender, and ethnoracial context in the effect of skin colour, we estimated different models, with one model for each interaction term. This sequence of models facilitates our interpretation of the main effects before and after the inclusion of every interaction term. Six models were tested in total. We included all of the independent variables in the first model but no interaction effect. We added an interaction effect between gender and skin colour in the second one. In the third model, the interaction term between ethnoracial identity and skin colour was tested. After that, the moderation effect of the ethnoracial context was tested in the fourth model. In the fifth model, we included an interaction term between skin colour and social origin. Finally, in the sixth model, we considered all of the significant

⁴ Some of the most prestigious bachelor's degrees in Latin American countries, such as medicine and engineering, require six or seven years of college education. Moreover, almost all university degrees in Latin America take five years of study to complete. Thus, every person with a postgraduate degree—two years or more—and those with medicine or engineering degrees have more than 18 years of schooling. This is why we consider it a right-censored variable. Thus, assuming that years of schooling are a latent continuous variable (...) (...) not observed over its entire range, we model its relationship with skin colour using a Tobit model. This is the same methodological decision made by Telles et al. (2015), whose paper's contributions we are trying to expand.

interaction terms to assess possible changes in their strength and direction after controlling for all variables.

In all models, we accounted for the size of residence place, age, survey wave, Ln GDP per capita (1990-2016), mother's education and mother tongue. The predictive margins of our interactions were plotted to identify the skin colour range where the gap between women and men, ethnoracial identities, social origins or different ethnoracial contexts increases or decreases. Finally, the average marginal effects of skin colour were plotted by ethnoracial identity and ethnoracial context, fixing the mother's education at its mean. This was done to ease the interpretation of these interaction terms when they were included in the same model. Our dataset was weighted using probability weights. Thus, every national sample has about 4500 cases. We estimated all of our models in STATA 13. As it is impossible to get BIC, AIC or any other goodness-of-fit statistics in Stata when probability weights are used, the inclusion of new variables in the subsequent models was assessed using the Wald Test.

2.3.2. Skin colour and income

In our paper on skin colour's influence on income, we followed a similar step-by-step procedure as in the first one. However, since our dependent variable is from a different type, we had to make some adjustments. Income is an ordinal variable, but we treated it as a continuous one. This was done to allow for more flexibility in our choice of analysis rather than maintaining it as ordinal and preserving the ranking information. This allowed us to process our data using techniques that can ease the understanding of a broader audience. The downside of this option was that it forced us to assume that the distance between each of our 16 income bands was equal. Nonetheless, since those bands were made considering each country's income distribution, everyone represents a specific percentile, which allowed us to assume that the distance between them was similar. Besides the symmetric categories, our income variable has more than seven categories. According to Rhemtulla et al. (2012), after running various simulations, we can treat this variable as either ordinal or numerical without significant changes.

Indeed, there were other options to treat our income variable. For example, we could have used each band's midpoints to carefully consider our variable as a continuous one (Bailey

et al.,2014, 2015). However, as we were interested in working with the pooled sample and not estimating country-specific regression models, that option did not seem particularly useful. It would have been challenging to transform the mid-points based on local currencies into a standard scale for all of the Latin American countries if we had taken it. As the samples were collected in three different waves and within them in several months, transforming the country-specific mid-points into a standard scale (e.g., dollar) would have implied considering multiple exchanges and inflation rates. Otherwise, we would have been wrongly assuming that the values in our ranking were not relative to time and country.

Thus, we used ordinary least square regression and six models for our pooled sample, treating our income variable as continuous. Our outcome variable in all of the models is the natural logarithm of personal monthly income. The independent variables are the same as we used in the previous paper, plus education. The first model has all of the predictors but no interactions. Then, all of the models are the same as Model 1 plus one interaction term in the following order: skin colour and gender (Model 2), skin colour and ethnoracial identity (Model 3), skin tone and ethnoracial context (Model 4), social origin and skin tone (Model 5). Finally, we estimated a model with all of the predictors and statistically significant interactions (Model 6). Following the same strategy as in paper 1, we plotted the predictive margins of all of our interactions. Finally, we fixed the mother's education variable at its mean to plan all of our significant interactions' predictive margins when they were included in the same model. In doing so, we eased their interpretation.

2.3.3. Interviewer effects on skin colour assessment

Finally, to answer the research questions in our third paper regarding the interviewer's effects on the assessment of skin colour and the magnitude of the influence of skin colour on income and education, we used multilevel models (Snijders & Bosker, 2011). These models allowed us to analyse the variation in respondents' skin colour explained by the interviewers. Also, these models made it possible to avoid some pitfalls. For example, they consider the confounding of cluster and interviewer effects and account for the cross-national dimension, especially concerning the ethnoracial context. To solve the first of these problems, we included clusters and interviewers as levels where respondents were nested. To consider the second one, which explicitly refers to the influence of different dimensions of ethnoracial diversity, a fourth

level was added: countries. Hence, our final model had respondents nested in interviewers and clusters (these two levels are cross-classified), all of which were nested within countries. From a statistical point of view, the final model can be expressed as:

$$Y_{i(j,k)l} = \gamma_0 + \sum \gamma_h x_{i(j,k)l} + U_{0j} + U_{0k} + U_{0l} + R_{i(j,k)l}$$

In this model, the dependent variable Y varies by the respondent (i), cluster (j), interviewer (k) and country (l). The term (γ_0) denotes the intercept while the term h represents the number of control variables. As a whole, these terms represent the fixed part of the model. On the other hand, all of these terms ($U_{0j} + U_{0k} + U_{0l} + R_{i(j,k)l}$) denote the random effects for the area (cluster), interviewer, country, and residual term. First, in Model 1, we ran a model without controls to shed light on the overall sizes of the variation of different levels (interviewer, area and country). It is important to note that we did not have an experimental design where interviewers were randomly allocated to respondents. We used some respondent level variables to account for potential confounders in Model 2. In addition, we included our country level's ethnoracial context variable to control for differences in ethnoracial diversity between countries. In Model 3, we included two interviewer-level variables: gender and skin colour. Moreover, we had an interaction term between the interviewer's skin colour and the respondent's ethnoracial identity since it has previously been shown to be significant (Cernat et al., 2019). Finally, to assess whether the influence of interviewers can bias the effect of skin colour on education and income, we estimated another set of models. In addition to skin colour as the primary independent variable, all of these models included the same controls used in papers 1 and 2. However, they differed in how they dealt with the interviewer's influence. In Model 1, we regressed income and education on skin colour using a multilevel model that considered clustering by areas, which resembles what most scholars would do. In Model 2, we included a random effect to assess the interviewers' influence, which implies using a cross-classified multilevel model (clusters and interviewers) to control the clustering within the interviewer. Finally, in Model 3, we considered any systemic biases the interviewers could have had by adding their skin colour to the previous model. In this way, we assessed whether the interviewers' features modified the influence of skin colour on education and income.

We used the R 4.0 statistical software and the lme4 package (Bates et al., 2015) to estimate these models.

3. PAPER 1: *Educational Pigmentocracy in Latin America: A Study of Skin Colour Effects on Educational Attainment from an Intersectional perspective*

Javier Castillo^a, Yaojun Li^a, Anthony Heath^b

^a Cathie Marsh Institute, The University of Manchester, Oxford Road, Manchester, M13 9PL, the United Kingdom; ^b Nuffield College, Oxford University, New Road, Oxford, OX1 1NF, the United Kingdom

Contact:

Javier Castillo, Cathie Marsh Institute, Humanities Bridgeford St. Building, Manchester, M13 9PL, javier.castillojaramillo@postgrad.manchester.ac.uk

ABSTRACT

Since Telles and the Project for Ethnicity and Race in Latin America team included a colour palette in the Latin American Public Opinion (LAPOP) survey in 2010, skin colour has become a critical factor to consider in understanding how inequalities in Latin America occur. Regarding education, previous studies have found that skin colour captures most of the racial gap that traditional questions on race in Latin America dismissed. However, some research gaps remain unclear. A vast amount of historical and qualitative evidence suggests that skin colour's influence on years of schooling could be moderated by gender, ethnoracial identity, the ethnoracial configuration at the country level, and social origin. We modelled all these relationships using the 2010, 2012 and 2014 waves of the LAPOP survey, including all Latin American countries except Cuba. We found that darker skin colour was negatively related to years of schooling, but, as we suspected, this association was moderated by social origin, ethnoracial identity, and the ethnoracial configuration at the country level. In contrast, gender did not moderate the influence of skin colour on years of schooling. These findings lead us to conclude that skin colour does not influence Black people, and that this effect is slightly flatter in White and Afro-mestizo countries than in Indo-mestizo ones. That skin colour impact progressively loses its influence as mothers' education increases.

Keywords: *racial discrimination, skin colour hierarchies, Latin America, social stratification, inequality*

3.1 Introduction

Since Alejandro Lipschutz's work, *The Racial Problem in the Conquest of America* (1963), was published, the most relevant feature of Latin American racial hierarchies has become clear. In contrast to the one-drop rule, which is predominant in the United States, the racial system in this region can be described as a smooth continuum of skin tones, from darkest at the bottom to lightest at the top. Following Lipschutz's language, this particularity has been conceptualised as the *pigmentocratic* trait of Latin America. Nevertheless, social stratification scholars did not broadly accept this novel idea until Telles's (2012; 2014) work was published. Before the concept of pigmentocracy was revealed by researchers interested in Latin American inequalities, racial differences were considered as a causal factor (Reichmann, 2010; Winddance Twine, 1998). In other Latin American countries, the only ethnoracial⁵ differences considered are those between ethnic minorities and the rest of the population (Bello and Rangel, 2000; Hopenhayn and Bello, 2001).

Nowadays, Telles's contribution makes it clear that ethnoracial differences, mainly that of skin colour, are essential to understanding how Latin American hierarchies were constructed. However, its impact on different social outcomes has been chiefly tested in countries with high proportions of Afro-descendant or indigenous populations (Telles et al., 2015; Perreira and Telles, 2014). The approaches used are mainly exploratory (Bailey et al., 2014; 2016). Hence, the whole picture of ethnoracial differences in Latin America remains hidden. One of the main reasons behind the difficulty of researching ethnoracial differences in Latin America is the *mestizo* ideology (Telles, 2014). Latin American states boosted this idea after their independence from the Iberian Empires, intending to avoid turmoil in the face of the *criollo* elites based on the racial hierarchies designed by Spain and Portugal. For a long time, Latin American politicians and intellectuals sustained the idea that the miscegenation process was so intense that all racial differences between Latin Americans were finally blurred. Inspired by that mestizo ideology, all Latin American states banned questions about race or ethnicity from their national censuses (Loveman, 2014), which helped maintain the myth of a homogeneous population. That is why talking about ethnoracial differences turned into a taboo for Latin American thinkers; it was hard to talk about them. However, during the second half of the twentieth century, the treatment of race and ethnicity issues in Latin America underwent

⁵ We use the concept of ethnoracial instead of race or ethnicity since the racial mixture process has blurred the differences between them in Latin America (Telles, 2014).

a multiculturalist turn (Wade, 2006). In this new period, states started to collect information on race and ethnicity again. Many countries recognised Afro-descendent and indigenous populations in their political constitutions, and relevant laws were enacted to improve the situation of various ethnic minority groups (PNUD, 2013). The influx of this sociopolitical change made the inclusion of ethnoracial variables in social stratification studies in Latin America possible; nonetheless, how this variable has been operationalised has led to incomplete conclusions regarding ethnoracial inequality (Telles, 2014).

There are three crucial problems related to how ethnoracial questions designed by Latin American states are used to analyse socioeconomic inequalities. First, they may be influenced by social class (Telles and Flores, 2013). Just as the whitening hypothesis suggests, mixed-race people from lower classes could describe themselves as White to compensate for the discrimination they suffer for being poor and non-White. Second, political reasons are still behind many national census questions on race and ethnicity (Loveman, 2014, Bailey et al., 2013). Although the multiculturalist turn has made different ethnic minorities visible, White and mestizo categories are rarely used by state offices despite representing appropriate proportions of the Latin American population. Third, self-ascribed identities do not capture how others perceive people, which is crucial for understanding inequality dynamics. Since discrimination is a significant causal factor of socioeconomic inequalities in Latin America, and it depends on others' perceptions (Chavez-Dueñas et al., 2014; Uhlmann et al., 2002), official questions on race and ethnicity obscure ethnoracial hierarchies in Latin America. In this context, the role of skin colour as perceived by others has been relegated, even though it has been proved to be better than self-ascribed identities for measuring the impact of ethnoracial features on different socio-economic outcomes (Telles et al., 2015; Perreira and Telles, 2014; Bailey et al. 2014; 2016).

Considering previous caveats, a more comprehensive approach to ethnoracial inequalities in Latin America should consider both ethnoracial categories –as used by national censuses– and skin colour perceived by others in tandem. This combination enables us to do a twofold operation: first, it helps us capture differences within different ethnoracial categories; and second, it gives an external perception of the ethnoracial classification process, which is closely related to the discriminatory actions that cause socio-economic gaps. Telles et al. (2015) used this methodological strategy when researching educational inequalities in Latin America. The authors found that darker-skinned individuals had progressively fewer years of schooling

than their lighter-skinned counterparts. In contrast, ethnoracial categories, as used by national censuses, showed inconsistent results. On the contrary, in many cases, non-White groups exhibited more years of schooling than White groups. However, it is relevant that class origin –just as Torche (2005) suggested– remains the most pertinent causal factor of educational attainment.

These results are relevant for two reasons. First, they clarify that ethnoracial features, mainly skin colour, still have a role in the social stratification process in Latin America. Second, they suggest that the effect of social origin on education may depend mainly on racial disadvantages accumulated through history. These results make the inclusion of an ethnoracial dimension in the study of Latin American inequalities necessary. Unfortunately, as far as we know, this is the only published study on skin colour's effect on education in Latin America. Thus, there are still some critical gaps that could be filled by scholars interested in this research area. The relevance of developing this research area has to do with the crucial role of education. In the last decades, educational attainment has increasingly become a key explanatory factor of the income gap, and it partially explains the high levels of inequality in Latin America (Hoffman and Centeno, 2002). The current importance of education relies on three facts: the gender gap, because of the increasing rate of female students; the disadvantage of rural sectors, because most of the ethnic minority groups –which usually speak a non-majoritarian language and suffer from discrimination– live there; and the rising educational advantages for more affluent families, since they have access to better schools and universities (Reygadas, 2010; Centeno and Hoffman, 2002; Winkler, 2004).

The educational system reinforces the social inequality in Latin America, and, as Telles et al. (2015) show, skin colour plays a vital role in this equation. Nevertheless, we still do not know if skin tone exerts the same influence in countries where indigenous and Afro-descendant populations are not as relevant –e.g. Chile, Argentina, Uruguay and Costa Rica. Similarly, the intersectionality between gender and skin colour remains unchecked, even though evidence suggests that women from ethnic minority groups –which tend to be darker than the rest of the population– have even poorer educational performance than their male counterparts (Tas et al. 2014). From another standpoint, the potentially differential effect of skin colour on different ethnoracial groups has been ignored, although historically, this factor has had more importance for some identities than others (Morner, 1967).

Finally, while some authors suggest that the ethnoracial composition at the national level influences different social outcomes in Latin America (Alesina et al. 2003), its influence on the skin colour effect has never been checked. This study aims to fill these gaps following the innovative approach that Telles and his team proposed in the Project for Ethnicity and Race in Latin America. We examine the mutual influence between skin colour and gender, ethnoracial category and ethnoracial composition at the national level after controlling for other relevant factors such as social origin and GDP. Furthermore, we expand the scope of the previous study by Telles et al. (2015), as we analyse these relationships in all Latin American countries except Cuba. We add another more complex layer to the picture of skin colour hierarchies in Latin America.

3.1.1 Skin Colour and Social Origin

The impact of skin colour on educational attainment, which receives the colourism label, has been extensively tested in the United States (Campbell, 2009; Murguia and Telles, 1996). The relevance of this phenomenon has proven to be exceptionally sharp in multiracial groups such as Latin Americans. This aspect is in line with skin colour's relevance for constructing social hierarchies in this region. Following Lipschutz's (1963) argument, privileges and social positions amongst Latin Americans are assigned according to their skin tone, as their degree of Whiteness represents how close they are to the European stereotype of beauty and respectableness. Thus, while lighter-skinned individuals tend to be at the top, darker-skinned people are at the bottom.

For this reason, skin colour is a standard cognitive tool used by individuals to decide what social position people occupy. Hence, in the United States and Latin America, how people are treated partially depends on their skin colour (Madox, 2004; Canache et al., 2014). Consequently, this variable represents an efficient mode to capture the subtle differences in an ethnoracial stratification process built on a colour continuum. As explained above, skin colour is particularly relevant to understanding ethnoracial hierarchies in mixed race groups. Since most Latin Americans identify themselves as Mestizos and that identity has been publicly extolled by intellectuals from diverse countries (Vasconcelos, 1925; Freyre, 1933; Palacios, 1904), such a variable seems especially useful in this context. Since both a high-class individual who looks like a European and a poor rural one who looks like a native American may probably feel comfortable with a Mestizo identity, skin tone as perceived by others helps us to have a

better picture of ethnoracial inequalities in Latin America and, at the same time, to unveil those inequalities that self-ascribed ethnoracial identities mask.

Ethnoracially related problems are twofold: one is based on how people construct their own identity, and another is based on how others perceive them (Telles, 2014). The range of possible combinations between these two dimensions determines different experiences and opportunities (Telles, 2004; Telles and Lim, 1998). To enrich the picture of Latin American inequalities, we use both dimensions as causal factors of educational attainment. However, the picture would not be complete if we did not include social origin in the equation. Traditionally, scholars interested in Latin America have appealed to this variable to explain the socioeconomic inequalities in this region (Atria, 2004; Hoffman and Centeno, 2002). According to this mainstream perspective, wherever ethnoracial disparities exist, they are primarily inherited from the colonial period. Discrimination based on ethnoracial features only affects ethnic minorities and groups (Reygadas, 2010; Winkler, 2004); all other differences are due to having less access to public services, urban segregation and social class discrimination.

Although this approach has largely neglected the influence of ethnoracial factors such as skin colour, studies in different Latin American countries (Villarreal, 2010; Telles and Lim, 1998) have shown that those variables complement the social origin effect independently shaping the life outcomes of Latin Americans. Nonetheless, it is relevant to assert that the most potent predictor of educational attainment is social origin (Telles et al., 2015). This assertion does not imply that social origin is solely the product of social class dynamics. It could also be shaped by accumulated ethnoracial disadvantages born during the colonial regime (Morner, 1970; Andrews, 2004; Psacharopoulos and Patrinos, 1994). So, as ethnoracial and social origin factors are closely related, both should be considered for understanding educational inequalities in Latin America.

3.1.2 Skin colour and Gender

The new approach founded by Telles has given us evidence of skin colour's influence on educational attainment (Telles and Steel, 2012; Telles et al., 2015); however, it does not have a single word to say about the likely intersectionality between gender and skin colour. Previous studies have shown that Latin American women from ethnic minority groups suffer from cumulative disadvantages in education outcomes (Tas et al., 2014; Ñopo et al., 2010).

These authors explain that this intersectionality is due to domestic work division and ethnoracially-based prejudices. Excitingly, in recent decades, the gender gap in educational homes has disappeared, but it remains strong among ethnic minority groups (Winkler, 2004). For example, in Peru and Ecuador, women from ethnic minority groups have higher school dropout rates than non-native women; such a difference is not as sharp for men. In Brazil, Black women have lower literacy rates than Black men and white women. According to Winkler (2004), traditions and domestic labour force indigenous women to leave school.

From a feminist perspective, the reasons behind this intersectionality are a little bit more complicated. Darker-skinned women have a tense relationship with the concept of beauty that is prevalent in Latin American societies, configuring a critical element of racism, discrimination and self-esteem (Figueroa and Moore, 2013; Dixon and Telles, 2017). Darker-skinned women are suitable for domestic work and are sexually available to lighter-skinned males (Wade, 2013). Thus, the close association between skin tone and beauty has substantial consequences in Latin American women's daily life. Regarding educational attainment, the association between skin colour and gender reduces darker-skinned women's expectations and affects their teachers' belief in their academic performance, as they treat dark-skinned women as less able. For this reason, our first hypothesis is: *darker-skinned Latin Americans have fewer years of schooling than lighter-skinned ones, but this effect is steeper for women than men.*

3.1.3 Skin Colour and Ethnoracial Identification

Previous studies assume that skin colour's effect on educational attainment affects all ethnoracial groups. No research has evaluated the possibility that this variable has a differential impact depending on the ethnoracial group being analysed. However, some authors argue that the gap between Whites and Amerindians cannot be explained in the same way as the gap between Blacks and Whites. While the first is primarily due to cultural differences (Friedlander, 1975) and geographical isolation (Telles and Bailey, 2013), the second relies on skin colour discrimination (Hooker, 2005). Based on this explanation, the educational experience of people of the same skin colour partially depends on the ethnoracial group they belong to. This picture becomes more complicated when considering one of the primary causal mechanisms behind ethnoracial gaps in education: discrimination (Bello and Rangel, 2000; Hopenhayn and Bello, 2001; Winkler, 2004). Discriminatory actions against darker-skinned individuals affect their

self-esteem and, as a consequence, their academic performance. Although this kind of action is challenging to measure, perceived discrimination based on skin colour is an indirect way to measure discriminatory acts, which may also correlate with the consequences for self-esteem as commented above. This aspect is relevant to comprehending the intersectionality between skin colour and ethnoracial identification since Caneche et al. (2014) propose that perceived discrimination based on skin colour depends simultaneously on both variables. According to their study, skin colour's effect reaches its lowest value in White and Mestizo populations; it has a moderate influence in Black and indigenous groups and achieves its most substantial impact in Mulatos. Thus, our second hypothesis is that *skin colour's effect on educational attainment is the strongest in the Mulato population and that it has a minor effect on White and Mestizo populations.*

3.1.4 Skin Colour and Ethnoracial Configuration at the Country Level

Ethnoracially based problems, such as skin colour's influence on educational attainment, vary across different social contexts. Previous research has shown that one of the most relevant contextual factors is ethnoracial composition (Frost, 2007; Lucas and Berends, 2007; Hall and Leeson, 2010). In Latin America, past evidence suggests that ethnoracially fractionalised countries have poorer educational results than homogenous ones (Alesina et al., 2003). Behind this association, there is a high probability of disagreement in ethnoracially diverse countries, which could damage the quality of public services. Since poor people –most of whom are darker-skinned– attend public schools, the association between skin colour and educational attainment should be more potent in such countries. Nonetheless, this hypothesis has never been tested.

Regarding discrimination and its potential effect on educational attainment, Caneche et al. (2014) show that perceived skin colour discrimination is more considerable where ethnic minority groups are large enough to threaten the majority's power and status. This evidence suggests that discrimination's adverse effect on educational performance should be higher in ethnoracially heterogeneous countries. As race and ethnicity represent complex social constructs that work in tandem (Telles, 2014), measuring ethnoracial composition at the country level is a challenging problem. Given that skin colour and self-ascribed identities comprise two complementary dimensions in terms of analysing this issue in Latin America, the

two variables should be considered simultaneously to determine ethnoracial composition at the country level. Considering that Mestizo and White are the most common self-ascribed identities in all Latin American countries, our third hypothesis states that *skin colour's effect on educational attainment is more significant in countries with high proportions of non-White non-Mestizo populations and a more comprehensive range of skin tones.*

3.1.5 Interaction Effect between Skin Colour and Social Origin

Historically, Latin Americans at the top of social hierarchies have developed whitening strategies (Telles and Flores, 2013). In colonial times, mixed-race people in high social positions removed their non-White ancestries from their genealogical trees thanks to “*gracias al sacar*” certificates (Chambers, 1999). Even nowadays, wealthier Mulatos and Blacks are usually treated as Whites (Harris, 1963). These facts confirm a common saying about the whitening effect of money in Latin America. At the top of social hierarchies, Blacks, indigenous and mixed-race people can change their racial classification and receive better treatment than their poorer counterparts. Although there is no clear evidence that supports the change of racial self-classification (Telles and Flores, 2013), some research suggests that money whitening works concerning others’ perceptions and treatment (Telles, 2014). Considering this last statement, we should expect skin colour’s effect on education to diminish as the social origin of Latin Americans increases, which constitutes our fourth hypothesis.

3.2 Data and Methods

3.2.1 Data Source

We relied on one nationally representative survey in 18 Latin American countries: the Grande Merge Data File from the AmericasBarometer, including the 2010, 2012 and 2014 waves. It was collected by the Latin American Public Opinion Project (LAPOP) based at Vanderbilt University. These data consist of face-to-face surveys of adults in all Latin American countries (except Cuba) and usually comprise 1500 cases per country wave. However, there are larger samples in some countries and waves. This dataset includes an item on interviewer-rated skin colour, a question on ethnic-racial identification, and another on the mother's schooling level to capture social origin. This factor was chosen instead of father's

socio-economic information because women and mothers lead many Latin American families, significantly impacting their children's education (Winkler, 2004).

3.2.2 *Dependent Variable*

Our first dependent variable was years of schooling completed, ranging from 0 to 18 years, as reported in Table 2. This variable was used to measure social position because it allowed for the organisation of nearly all respondents in the dataset on the same scale across several countries.

3.2.3 *Independent Variables*

For ethnoracial identification, we used a similar question to that used in national censuses. In some countries, such as Bolivia, Peru, Venezuela, the Dominican Republic, Brazil, and Guatemala, the ethnoracial categories are slightly different from in Latin America. In the case of native populations from Bolivia and Peru, we merged them into the indigenous category. In Venezuela, we added *Morenos* to the *Mulato* population since both represent individuals with African heritage. For historical reasons, the term Mestizo is not mainstream in the Dominican Republic and Guatemala. Instead they use *Indio* and *ladino*, respectively. To allow comparability among countries, we recoded both alternatives as Mestizo. Finally, in Brazil, Asians were added to the other category. Thus, in our final analysis, we used individual dummy variables for six ethnoracial categories: White, Mestizo, Indigenous, Mulato, Black and other. As White should represent the dominant group in almost all Latin American societies, we used it as the reference category in our models. For skin colour, we used the interviewer's evaluation of the respondent's facial tone using an 11-point colour palette, from the lightest (1) to the darkest (11). Even though the respondent's status may have biased evaluations of skin tone, interviewers were instructed to fill in this information at first contact to avoid possible distortions. As each country has a particular skin colour distribution, the meaning of being darker or lighter varies from one society to another. We standardised the values (z scores) using the national mean and standard deviation to prevent this problem.

To model social origin, we considered a question on the mother's level of schooling. The responses to this question ranged from level 1 to 9: no education, primary incomplete,

primary complete, secondary preliminary, secondary comprehensive, technical school incomplete, technical school complete, university incomplete, and university complete. Although this variable represents only one way to capture social origin, this is an essential step to contrast class vs the impact of skin colour on education. Unfortunately, about 49% of the data for this variable was missing. To deal with this problem, a two-step procedure was adopted. First, a new variable was created that indicated if one value was missing. Then, the missing values were imputed by the respective country's mean of mother's education. Since this lost data was entirely random, using mean imputation did not represent a considerable risk (van Buuren, 2018). It is fair to say that operationalising social origin using a question on mothers' education maybe not be the best option. Social stratification scholars usually prefer parents' occupations to operationalise this variable. Unfortunately, our dataset does not have this information, making mothers' education our only available option. Nevertheless, to counterbalance this problem, it is also fair to say that this is not the worst scenario since scholars focusing on educational attainment consider it a critical variable. For example, Harding et al. (2015) claim that mothers' education is one of the best predictors of their children's academic performance, exerting its influence through three different forms of capital: human, cultural and social.

To measure ethnoracial configuration at the country level, a hierarchical cluster analysis with the 18 Latin American countries as cases was conducted with the average skin colour, the skin colour fractionalisation index,⁶ and the national percentage of each ethnoracial group (White, Mestizo, indigenous, Mulato, Black, other) as variables. Since these factors use different scales, we standardised them in z scores. We used Ward's method to minimise the in-group variance and have more homogeneous clusters. Thus, cases were merged if their addition produced the slightest increase in the sum of the squared deviation. Finally, as there were only continuous variables, the squared euclidean distance was used as a proximity measure.

According to the dendrogram observation and the most prominent jump criteria, the optimal solution seems to be five clusters. This solution is optimal as it matches our technical

⁶ To get this value we used the same formula proposed by Alesina et al. (2003).

$$FRACT_j = 1 - \sum_{i=1}^N S_{ij}^2$$

This formula shows the probability that two randomly sampled individuals from a population belong to different ethnoracial or skin colour groups, where S_{ij} is the proportion of group i ($i = 1...N$) in country j .

standards and aligns with the Latin American history of racial relations (see Figure 8 below). To contrast this result with the history of racial relations in Latin America, we estimated a two-step cluster analysis to include a categorical variable: Lizano's (2005) classification. After forcing the study to get five clusters and accordingly comparing the two results, we got a clusterisation that entirely resembled the work of Lizcano. The Mulato cluster, composed of Brazil and the Dominican Republic, represents countries with the highest proportion of Afrodescendants and the darkest but most diverse skin colours (Table 3). The White cluster, formed by Uruguay, Chile, Argentina and Costa Rica, has the lightest and most homogenous populations and the most considerable proportions of Whites. The Indomestizo cluster includes Peru, Ecuador, Guatemala and Bolivia and group countries with the highest percentages of Mestizos and Indigenous. The Mestizo cluster, composed of Mexico, Honduras, Nicaragua, Paraguay and El Salvador, is characterised by the second-highest proportions of Mestizos. Moreover, these countries have the second lightest mean skin colour. Finally, the Afromestizo cluster, formed by Panama, Venezuela and Colombia, stands out for having significant proportions of Whites and Afrodescendants and a wide range of skin colours.

Table 3. Variable means by cluster

	Ward Method				
	White	Mulato	Indomest.	Mestizo	Afromest.
	Mean	Mean	Mean	Mean	Mean
Zscore: Skin Colour Mean	-1.48	0.79	0.53	0.22	0.38
Zscore: Percentage of White Population	1.54	-0.31	-1.14	-0.24	0.07
Zscore: Percentage of Mestizo Population	-0.91	-0.83	0.99	0.55	-0.46
Zscore: Percentage of Indigenous Population	-0.49	-0.58	1.17	-0.18	-0.22
Zscore: Percentage of Black Population	-0.59	2.01	-0.72	-0.24	0.81
Zscore: Percentage of Mullato Population	-0.28	1.59	-0.43	-0.44	0.62
Zscore: Percentage of Other Population	-0.3	0.35	-0.45	0.79	-0.55
Zscore: Skin Colour Fractionalisation	-0.72	1.44	-0.34	-0.16	0.73

Source: LAPOP 2010-2014.

Figure 8
Latin American countries by ethnoracial composition,
LAPOP 2010-2014



Finally, a set of control variables were included: age, the size of residence place, mother's tongue, survey wave, gender, and the natural log of GDP per capita (average for the 1990/2016 period). Age is a continuous variable from 18 up. The residency options are rural, town/small city, medium city, large city and national capital. In terms of mother tongue, the options are Spanish or Portuguese, native language and foreign language. Finally, 2010, 2012 and 2014 represent the survey waves.

3.2.4 Methods

Since our dependent variable, years of education, is right-censored, we used Tobit models to examine the explanatory factors of educational attainment in Latin America, which are shown in Table 3. To test our three hypotheses, we created four interaction effects between

skin colour and, in turn, female, ethnoracial identification, social origin and ethnoracial configuration at the country level. As all of these interaction effects consider the variable of skin colour, a sequence of six models was created to facilitate their interpretation and fully understand the change in the impact of social origin. The first model included all of the independent variables but no interaction effect. The second one added the interaction between skin colour and gender. In the third model, we tested the moderation effect of ethnoracial identity on the relationship between skin colour and years of schooling. The fourth model considered an interaction term between skin colour and ethnoracial configuration at the country level. The fifth model considered an interaction term between skin colour and social origin. Finally, in the sixth model, we added all of the interactions whose inclusion was statistically significant to assess possible changes in their strength and direction after accounting for them simultaneously. Residency, age, survey wave, Ln GDP per capita (1990-2016), and mother language were controlled for in all of the models.

The predictive margins of our interactions were plotted to identify the skin colour range where the gap between women and men, ethnoracial identities, social origins or different ethnoracial compositions increased or decreased. Finally, the average marginal effects of skin colour by ethnoracial identity and ethnoracial configuration were plotted at the country level, when mother's education was fixed at its mean. This was done to ease the interpretation of these interactions when they were included in the same model. The dataset was weighted using probability weights. Thus, every national sample has about 4500 cases. Since it is impossible to get BIC, AIC or other goodness-of-fit statistics when probability weights are used, the inclusion of new variables in subsequent models was assessed using the Wald Test.

3.3 Findings

Table 4 presents the models for assessing the moderation effect of gender, ethnoracial identity, social origin and ethnoracial configuration at the country level on the relationship between skin colour and years of schooling in Latin America. The unstandardised means and standard deviations for each of these variables are shown in Table 5. A model of skin colour's effect on years of schooling while controlling for the mother's level of education, ethnoracial identity, the ethnoracial configuration at the country level, gender and other relevant control variables traditionally associated with educational attainment is presented first. Then, Model 2

assesses the interaction effect between skin colour and ethnoracial identity. Model 3 tests the moderation effect of ethnoracial configuration at the country level, and Model 4 evaluates the interaction effect between skin colour and gender. In Model 5, the moderation effect of social origin was tested. Finally, Model 6 considers all of the previously mentioned variables and the statistically significant interaction effects.

Table 4. Descriptive Statistics

		Mean or %	SD
Years of Schooling		9.32	4.48
Ethnoracial Identity			
	White	30.5	
	Mestizo	49.5	
	Indigenous	6.7	
	Black	4.4	
	Mulato	7.2	
	Other	1.8	
Ethnoracial Configuration			
	White countries	22.2	
	Mestizo Countries	11.1	
	Indo-mestizo Countries	33.3	
	Afro-mestizo Countries	22.2	
	Mulato Countries	11.1	
Gender			
	Female	50.8	
	Male	49.2	
Educational Level of Mother		1.97	1.92
Age		39.77	16.03
Survey Wave			
	2010	33.3	
	2012	33.3	
	2014	33.3	
Size of Location			
	National Capital	23.2	
	Large City	18.2	
	Medium City	18.1	
	Small City	14.5	
	Rural Area	26.1	
Ln GDP per capita (1990-2016)		8.96	0.46

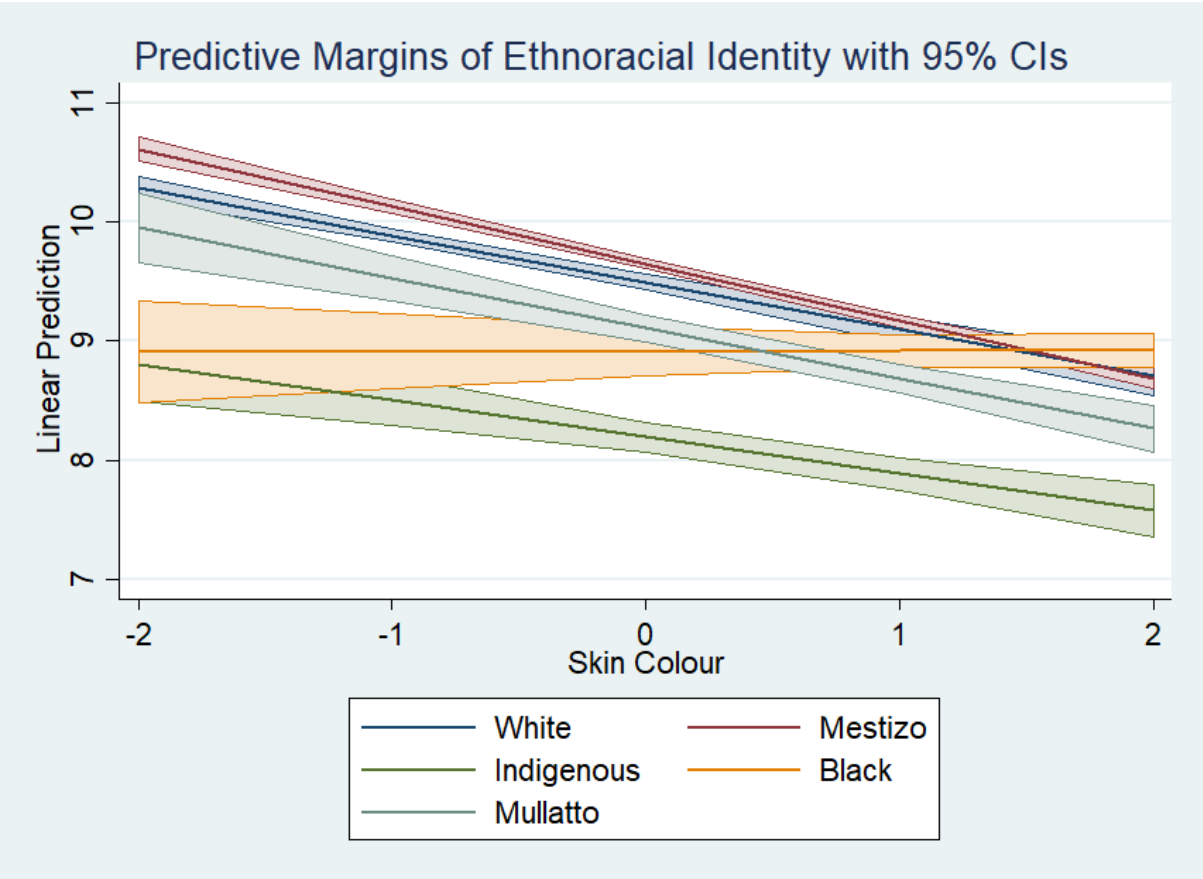
Source: LAPOP 2010-2014

Model 1 shows that darker-skinned Latin Americans have fewer years of schooling than their lighter-skinned counterparts, at a highly significant level. The skin colour disadvantage was about one-third (-0.41) of a year of education for individuals with one standard deviation darker than their country's average skin tone. This effect confirms previous findings on the relationship between the two variables in the region. Regarding ethnoracial identities, (mestizos have, on average and) after controlling for other factors, surprisingly, Mestizos have more years

of schooling than Whites. This inconsistent result confirms what Telles et al. (2015) and Bailey et al. (2016) found in previous research. Because of the mestizaje ideology and the money whitening effect, self-ascribed identities are not the best tool to analyse ethnoracial inequalities in Latin America. In terms of gender, males have more years of schooling than females. Considering ethnoracial configuration at the country level, Indo-mestizo countries have the highest number of average years of education, while Mulato nations have the lowest.

Model 2 shows that the effect of skin colour across the six ethnoracial identities (Whites are the omitted category) does not vary significantly, except for Blacks. Contrarily to our expectations, the effect of skin colour for Black Latin Americans is flatter than for any other group, and even more surprisingly, it seems not to be affected. As Blacks turn one standard deviation darker than their country's average skin tone, the gap between them and Mestizos decreases by 0.40 years of schooling. This effect is significant at the 0.001 level. Hence, darker-skinned Blacks have as many years of education as lighter-skinned individuals. For any other ethnoracial identity, skin colour negatively influences the educational performance of Latin Americans, reaching its most significant influence for Mulatos and Mestizos (Figure 9). However, only the contrast between the Mestizo and White slopes is statistically significant at the 0.05 level. Moreover, skin colour's effect on the Mestizo population is the strongest (-0.48) among all of the ethnoracial identities.

Figure 9: Skin colour influences the educational performance of Latin Americans ⁷



The abnormal result for Blacks may be due to a large concentration of cases in the darkest values. Nonetheless, looking at Table 5, we can confirm that almost 95% per cent of Blacks are within the -0.4 to 3 skin tone range (which means that they fluctuate between people who are 0.4 standard deviations lighter than their national mean and those who are three standard deviations lighter than it). This means that most Latin Americans who self-describe as Blacks are between their countries' average values and the darkest ones. Consequently, there is a broad distribution to trace a prediction line based on real cases.

⁷ -1 on the skin colour variable means “one standard deviation lighter than the national skin colour mean”.

Table 5. Tobit regression of years of schooling in 18 Latin American countries

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	B	sig	B	sig	B	sig	B	sig	B	sig	B	sig
Skin Colour	-0.41	***	-0.39	***	-0.45	***	-0.43	***	-0.53	***	-0.58	***
Ethnoracial Identity												
<i>Mestizo</i>	0.16	***	0.16	***	0.14	***	0.16	***	0.15	***	0.16	***
<i>Indigenous</i>	-1.25	***	-1.30	***	-1.26	***	-1.25	***	-1.25	***	-1.30	***
<i>Black</i>	0.01		-0.58	***	-0.02		0.01		-0.01		-0.57	***
<i>Mulato</i>	-0.38	***	-0.39	***	-0.41	***	-0.38	***	-0.40	***	-0.39	***
<i>Other</i>	-0.54	***	-0.50	***	-0.56	***	-0.54	***	-0.55	***	-0.51	***
Ethnoracial Configuration												
<i>Mestizo countries</i>	-1.08	***	-1.06	***	-1.08	***	-1.08	***	-1.08	***	-1.07	***
<i>Afromestizo countries</i>	-1.08	***	-1.07	***	-1.08	***	-1.08	***	-1.08	***	-1.09	***
<i>Mulatto countries</i>	-1.70	***	-1.69	***	-1.69	***	-1.70	***	-1.70	***	-1.69	***
<i>White countries</i>	-0.89	***	-0.88	***	-0.90	***	-0.89	***	-0.90	***	-0.89	***
Male	0.34	***	0.34	***	0.34	***	0.34	***	0.34	***	0.34	***
Skin Colour*Ethnoracial iden.												
<i>Mestizo</i>			-0.09	**							-0.06	
<i>Indigenous</i>			0.09								0.17	**
<i>Black</i>			0.40	***							0.43	***
<i>Mulatto</i>			-0.03								0.00	
<i>Other</i>			-0.18								-0.14	
Skin Colour*Ethnoracial conf.												
<i>Mestizo countries</i>					0.04						0.07	
<i>Afromestizo countries</i>					0.13	**					0.04	
<i>Mulatto countries</i>					-0.01						-0.05	
<i>White countries</i>					0.07	+					0.05	
Skin Colour*Male							0.03					
Skin Colour*Mother Education									0.06	***	0.07	***
Mother Tongue												
<i>Indigenous Language</i>	-0.43	***	-0.44	***	-0.43	***	-0.43	***	-0.43	***	-0.44	***
<i>Foreign Language</i>	0.42	**	0.36	+	0.41	**	0.42	**	0.42	**	0.35	+
Mother Education	0.84	***	0.84	***	0.84	***	0.84	***	0.85	***	0.85	***
Mother Education (missing)	-0.51	***	-0.51	***	-0.52	***	-0.51	***	-0.53	***	-0.53	***
Observations							84.716					
Wald Test			12.44	***	2.98	**	1.12		41.85	***		

Source: LAPOP 2010-2014.

Note: All models consider probability weights to give each country an identical size in the pooled sample and produce nationally representative results. In addition, robust standard errors were used to deal with straightforward cases and heteroskedasticity.

Omitted categories: Indomestizo countries (Ethnoracial configuration), Spanish or Portuguese (Mother tongue), White (Ethnoracial identity), Female (Gender)

Omitted controls: Age, Survey wave, Ln GDP per capita (1990-2016), and location size.

- *** P < 0.001
- ** P < 0.01
- * P < 0.05
- + P < 0.1 (two-tailed)

Model 3 shows that the effect of skin colour is slightly lower in Afro-mestizo and White countries than in Indo-mestizo ones. However, these effects are only significant at the 0.05 and the 0.1 levels, respectively. In contrast, Mestizo and Mulato countries are not statistically distinct from Indo-mestizo ones. On the other hand, the steepest skin colour slopes are those for Indo-mestizo (-0.45) and Mulato countries (-0.46). In contrast to the prior result, this outcome supports the idea that the weakest skin colour effect occurs in those countries where Whites and Mestizos represent the vast majority and the skin tone range is more extensive than in the rest of Latin America. Model 4 shows that the effect of skin colour is stronger for women than men. As Latin Americans move one standard deviation away from their country's average skin tone, the gap between males and females increases by 0.03. Nonetheless, this interaction effect is not statistically significant. Even though this result goes in the expected direction, it does not support our hypothesis about the moderation effect of gender on the relationship between years of schooling and skin colour. Model 5 informs us that the interaction effect between skin colour and social origin is statistically significant at the 0.001 level. Thus, it is possible to say that skin colour's effect becomes flatter as educational levels rise (Figure 10). To be more precise, every time we move one academic level upwards, the impact of skin colour on years of schooling increases by 0.06. Hence, skin colour has a noticeably adverse effect on years of schooling when mothers have no education, primary incomplete or primary complete levels. Still, it does not affect years of schooling in mothers with bachelor's degrees or higher (Figure 11).

Figure 10: Ethnoracial Configuration

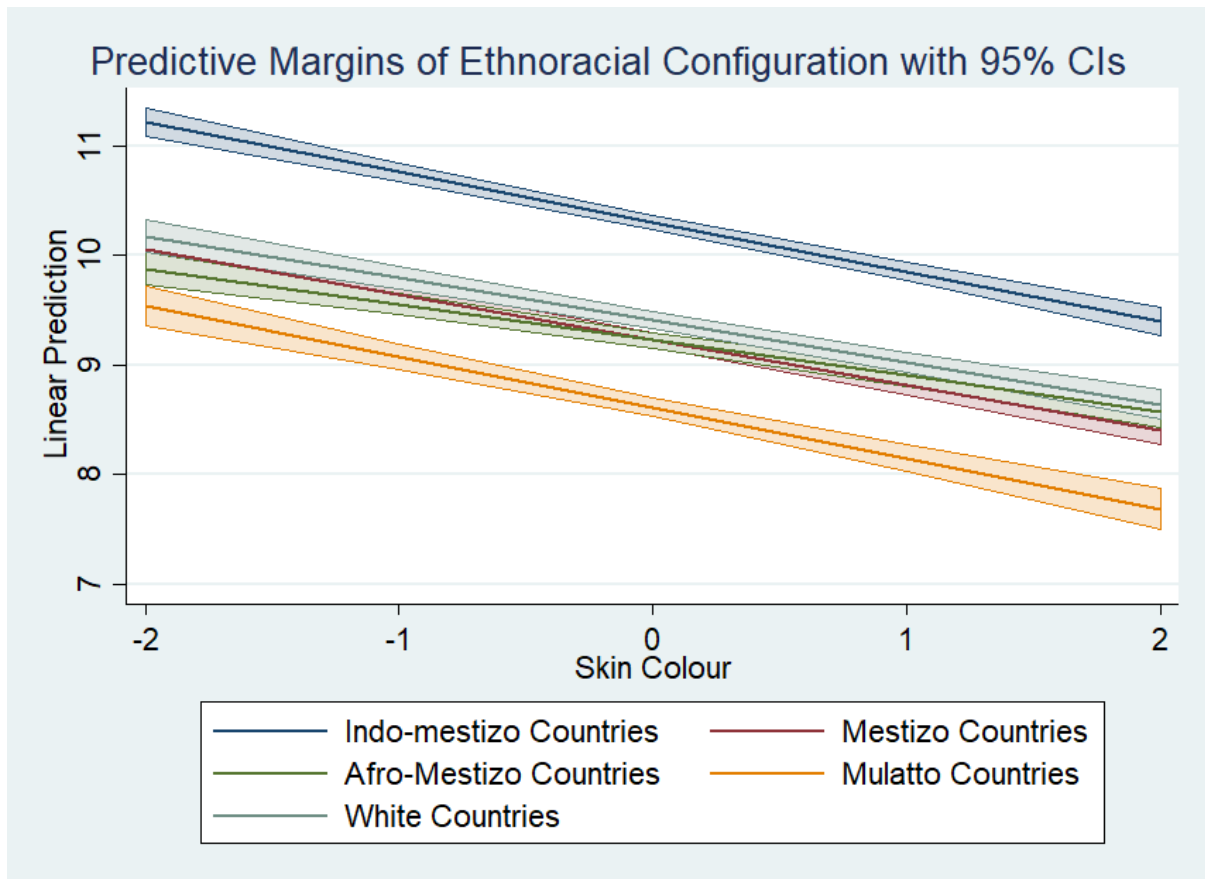
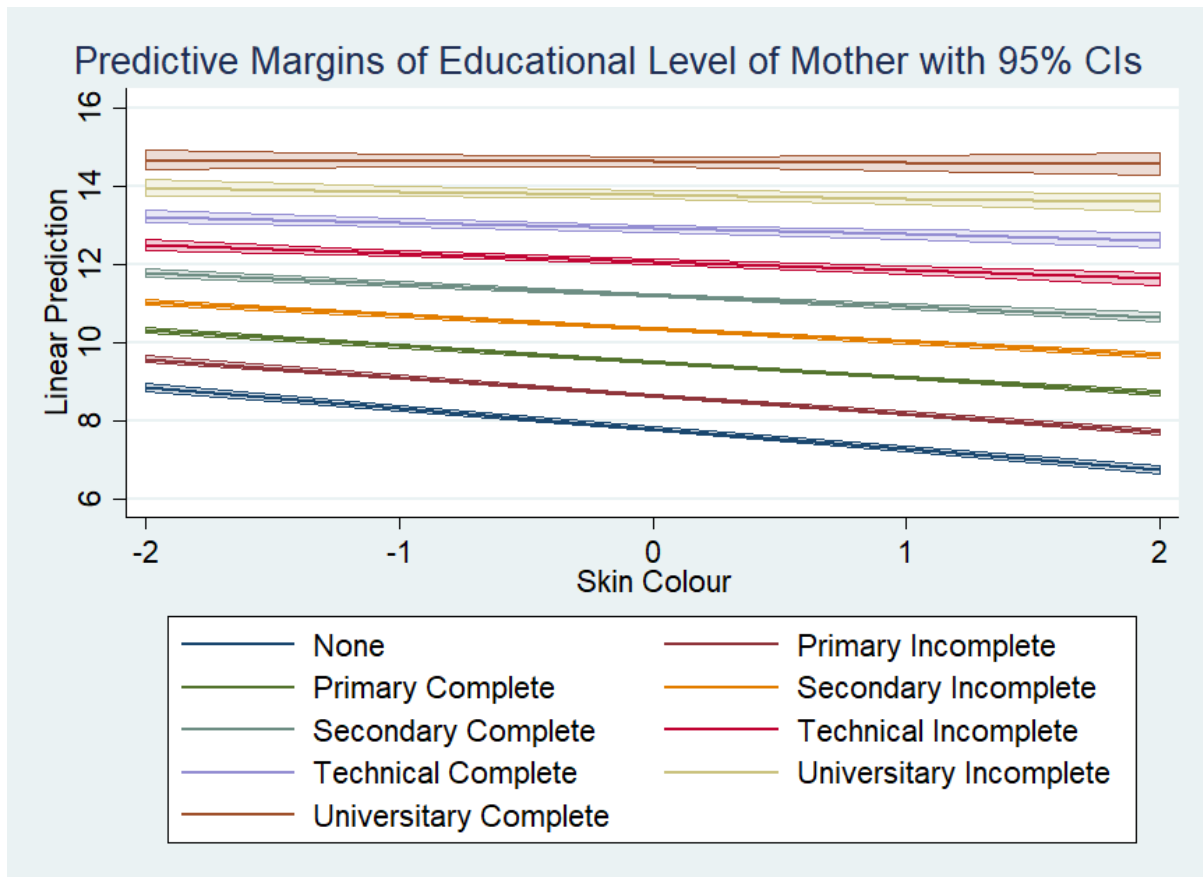


Figure 11: Education level of the mother and skin colour



Finally, Model 6 specifies our previous results. After including all the statistically significant interactions in the same model, some changed in magnitude and direction. Regarding the interaction between skin colour and ethnoracial identity, the effect of skin colour for Mestizos is no longer significant. Still, the contrast between the skin colour slope for Indigenous and Whites is now statistically significant. However, the effect of skin colour on Black Latin Americans is still essential, which confirms that skin colour does not influence years of schooling. Regarding the interaction between skin colour and ethnoracial configuration at the country level, no effect is statistically significant, suggesting that this variable's moderation effect is affected by the moderation effect of ethnoracial identity or social origin. Finally, the moderation effect of social origin has not significantly changed, which supports the idea that both variables should be treated in tandem to analyse social hierarchies in Latin America, as skin colour has a more significant influence on Latin Americans whose mothers have lower educational credentials. This fact is interesting as it has never been tested in the most influential research on the pigmentocratic trait of Latin American inequalities (Telles et al., 2015; Bailey et al., 2016).

Table 6. Ethnoracial Identity * Skin Colour Cross-tabulation (percentage by row)

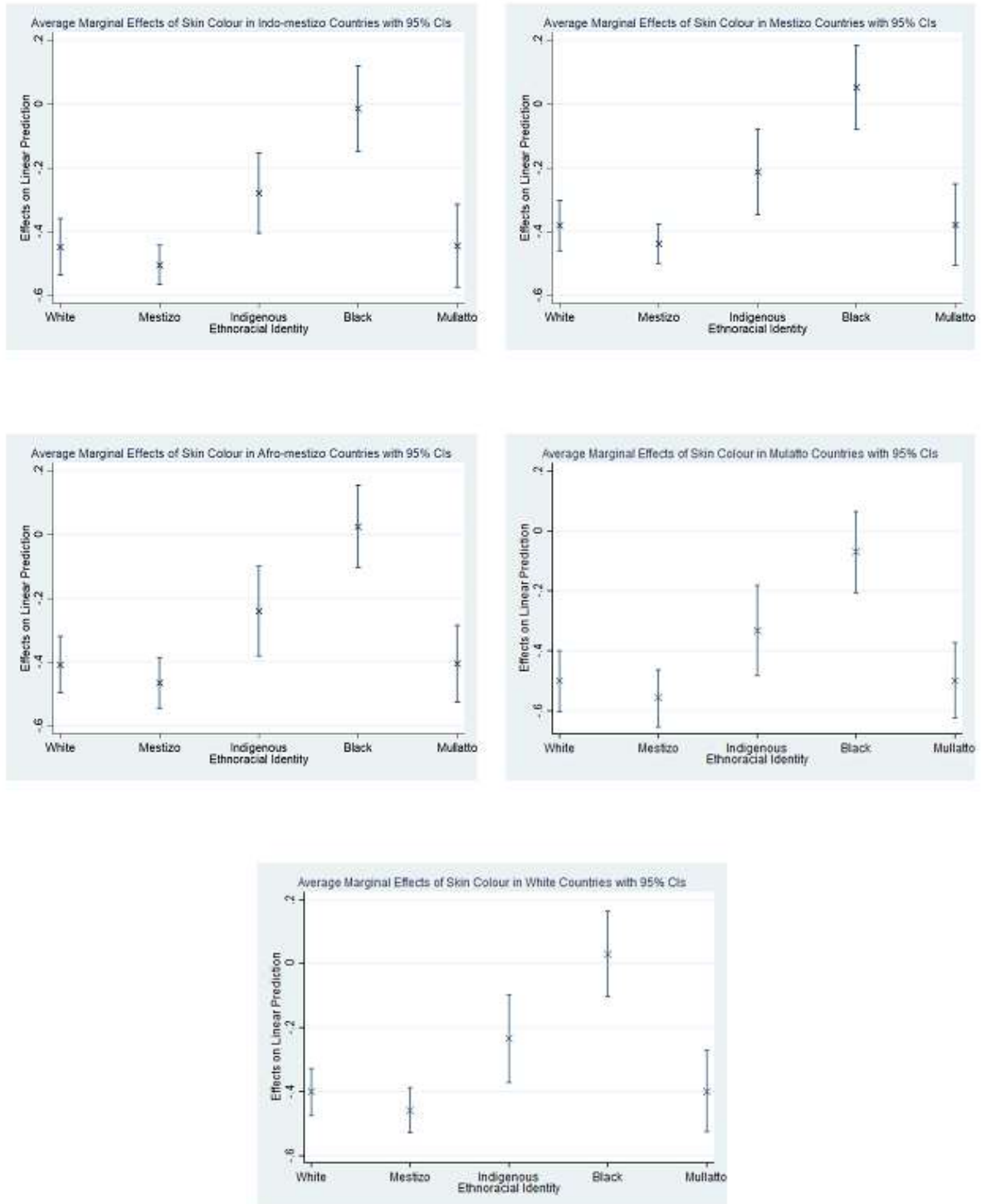
		Skin Colour							Total
		-2.5 >	-2.4 to -1.5	-1.4 to -0.5	-0.4 to 0.4	0.5 to 1.4	1.5 to 2.4	< 2.5	
Ethnoracial Identity	White	0.3%	11.2%	42.5%	38.2%	6.0%	1.5%	0.3%	100.0%
	Mestizo	0.2%	2.6%	23.2%	47.1%	20.1%	6.0%	0.8%	100.0%
	Indigenous	0.2%	1.4%	17.6%	38.5%	29.2%	11.7%	1.3%	100.0%
	Black	0.1%	0.4%	3.4%	19.9%	23.7%	34.4%	18.0%	100.0%
	Mulato	0.0%	0.9%	13.4%	43.0%	28.2%	12.7%	1.7%	100.0%
	Other	0.0%	1.9%	18.7%	43.7%	21.9%	12.9%	1.0%	100.0%
Total		0.2%	4.9%	27.1%	42.3%	17.2%	6.9%	1.5%	100.0%

Source: LAPOP 2010-2014

Since those interactions have one term in common, to better understand all these effects, they have been plotted (Figure 12) considering the average marginal impact of skin colour for each ethnoracial identity in all of the clusters of countries by ethnoracial configuration and fixing the educational level of the mother at its mean value. This analysis confirms that skin colour influences years of schooling for Latin American Blacks in none of the countries. Moreover, the sharpest effects in all clusters are those for Whites, Mestizos and Mulatos, and there are no statistically significant differences. The impact of skin colour on indigenous people is statistically indistinguishable from that of other ethnoracial identities in almost all cases. However, as Mestizo populations exhibit the most substantial effect of skin colour in all countries, the difference between it and that of Indigenous is statistically significant in White, Mestizo and Indomestizo countries.

Figure 12

Average Marginal Effects of Skin Colour by Ethnoracial Identity and Ethnoracial Configuration at the Country Level (Mother Education at its Mean)



3.4 Conclusion

This paper has tested four moderation effects on the relationship between skin colour and educational attainment: gender, ethnoracial identities, ethnoracial configuration at the country level, and social origin. Previously, social scientists have provided evidence of skin colour's influence on Latin American social hierarchies, but they have not considered likely intersectionalities or contextual factors. Thus, this study is guided by four hypothesis whose aim is to explore such possible effects, but our results offer partial –and sometimes contradictory– support for them. In relation to our first hypothesis and in contrast to what has been suggested by previous research on ethnoracial inequalities, no gender difference in the skin colour effect was found across Latin America.

Concerning our second hypothesis, the interaction effect between skin colour and ethnoracial identities provides inconsistent and sometimes unexpected evidence, as shown in the case of Latin American Blacks. On the other hand, no differences were found between other ethnoracial groups, which tells us how systematic educational penalties associated with darker skin tones are. However, it does not support our suppositions regarding perceived discrimination. This unexpected result suggests a lack of association between actual discriminatory actions and their perception. Regarding the third hypothesis, we found that the skin colour effect is more potent in Indomestizo –Peru, Bolivia, Ecuador, Guatemala– and Mulato countries –Brazil and the Dominican Republic– than in any other cluster. However, these effects are not statistically significant and do not support our assumptions.

Finally, in relation to the fourth hypothesis, the statistically significant moderation effect of social origin sheds light on the longstanding relevance of the phenomenon of money whitening. Thus, although previous studies on race and ethnicity in Latin America have dismissed the significance of the money whitening hypothesis for the ethnoracial self-identification process, this research proposes that darker-skinned Latin Americans from higher-status families could receive fairer social treatment than their darker-skinned counterparts from lower-status families. However, despite the relevance of this finding, we should recognise some limitations regarding disentangling the effect of ethnoracial identity and social origin (class). Indeed, although interracial families are not an exception in Latin America, it is likely that respondents and their mothers share an ethnoracial identification. Thus, future research will require innovative methodological decisions to deal with this problem.

Since the results only partially support our hypotheses and sometimes offer unexpected evidence, future research is needed to clarify doubts emerged from this study. For instance, to understand why gender is not moderating the skin colour effect on education, it is necessary to explore if the gender stereotypes associated with darker-skinned women affect their self-esteem, but not their educational performance. Then, to explain the unexpected skin colour effect for Blacks, future studies could inquire the relationship between the skin colour's relevance for defining Black identity and affirmative action policies in education. Since being darker-skinned is crucial for being perceived as Black (Telles, 2014; Morner, 1967), most people who apply for Black quotas in Brazilian or Colombian universities could be darker-skinned than others who self-perceive as Black (Wade, 2006). Also, to better understand this surprising result, future research should inquire the role of Mestizaje ideology since it could exert a more decisive influence on dominant groups –White and Mestizo – and explains why they refuse to be victims of skin colour discrimination and, at the same time, do not develop political or personal strategies to fight against it. The fact that the effect of skin colour is flatter for Black and Indigenous Latin Americans may support this alternative explanation.

Last but not least, since our hypothesis regarding ethnoracial configuration at the country level also come from contextual factors in relation to perceived skin colour discrimination, in the future, scholars from this field could explore the role of Mestizaje ideology in our unexpected results. It seems plausible that in those countries where White and mixed race populations are not so relevant, such an ideology has been put into question by Indigenous and Black movements, as Wade illustrates (2006). Thus, if that is true, it is likewise likely that skin colour's influence on education has been mitigated by political actions derived from being more conscious of ethnoracial hierarchies. The novel approach of Edward Telles has shed light on a long-lasting forgotten aspect of Latin American inequalities. Nowadays, it is not possible to continue neglecting the influence of skin colour. However, it is still necessary to develop more complex theories to understand what contextual and individual factors affect the direction and strength of the relation between skin colour and education.

4. PAPER 2: *Income and Skin Colour Inequality in Latin America: An Intersectional Approach*

Javier Castillo^a, Yaojun Li^a, Anthony Heath^b

^a Cathie Marsh Institute, The University of Manchester, Oxford Road, Manchester, M13 9PL, the United Kingdom; ^b Nuffield College, Oxford University, New Road, Oxford, OX1 1NF, the United Kingdom

Contact:

Javier Castillo, Cathie Marsh Institute, Humanities Bridgeford St. Building, Manchester, M13 9PL, javier.castillojaramillo@postgrad.manchester.ac.uk

ABSTRACT

Previous research has shown how relevant skin colour is to fully understand racial inequalities in Latin America. These studies give evidence of skin colour's influence on Latin American social hierarchies. However, relevant interaction effects have been excluded from previous analyses. In the case of skin colour's impact on income, empirical and historical evidence suggests that gender, socioeconomic status, and ethnoracial context may moderate such an effect. We use the 2012 and 2014 waves of the LAPOP survey, including all Latin American countries except Cuba, to perform various linear regression analyses to test these interactions. Our findings suggest that the income gap between women and men increases as we move from lighter to darker skin tones. The findings also show the effect of social status on income is sharper for lighter than darker-skinned Latin Americans. Finally, our results indicate that skin colour's impact on revenue is the largest in countries with a high proportion of Afro-descendants, a more comprehensive skin tone range, and a significant history of Black slavery.

Keywords: racial discrimination, skin colour hierarchies, Latin America, social stratification, inequality

4.1 Introduction

Ethnoracial inequalities in Latin America are a recently debated topic. While some researchers argue that fixed and well-defined categories better describe ethnoracial hierarchies in this region, others question that assumption and propose a multidimensional approach that includes skin colour continuums and self-ascribed identities (Telles and Lim, 1998; Bailey, Loveman, and Muniz 2013, Saperstein, 2012). Following this approach, Bailey et al. (2014) concluded that skin colour and ethnoracial categories play a role in defining income hierarchies in Latin America. However, they also state that the degree of influence of skin colour and ethnoracial types should not be assumed to be constant. The availability of new data sources, including multiple questions to measure race and ethnicity, makes it possible to identify what facts explain income inequalities in Latin American regions. Moreover, such an innovative approach to race and ethnicity enables scholars to refine their Latin American ethnoracial hierarchies. Thus, by treating race and ethnicity as complex concepts, scholars and policymakers can avoid concluding that racial inequality improves in Latin America by forgetting some meaningful dimensions of such ideas (Bailey et al., 2013).

In a most relative way, American countries have a linear relationship between income and skin colour. On average, light-skinned Latin Americans have higher incomes than dark-skinned ones (Bailey et al., 2014, 2016). Nonetheless, this tendency has significant differences across the region. For example, the income gap between the lightest Latin Americans and those with an average skin colour peaks in the Dominican Republic and Guatemala. In contrast, the most considerable differences between the former and the darkest Latin Americans occur in El Salvador and Colombia. The rarest cases are Panama and Honduras, where dark-skinned inhabitants have higher incomes than light-skinned ones. To understand these differences, scholars need to go further in their analyses of Latin American racial hierarchies. Looking at the picture from the self-ascribed identities side, Whites have the highest income level in most Latin American countries. On the other hand, Latin American Blacks are almost always in a worse situation than Whites in four countries (Brazil, El Salvador, Ecuador and Nicaragua). As before, Panama and Honduras represent the rarest cases where Blacks are at the top of the income hierarchy. Something similar occurs with the Indigenous population since they are almost always at the lowest income levels. In contrast, Mestizos are relatively better off than

any other group except Whites. The only exception is Venezuela, where they have slightly better incomes than Whites

In most Latin American countries, skin colour is a better predictor of income than self-ascribed identities. However, in some nations, both in tandem are better predictors than skin colour alone. At the other extreme, only in Brazil, Costa Rica, and Panama do self-ascribed identities better explain income than skin tone (Bailey et al., 2014, 2016). These results summarise the current state of the research about the effect of skin colour on income in Latin America. Hereafter, two different research lines are needed to deepen our knowledge in this area. First, scholars need to consider macro-level variables to explain the differences between countries. Second, moderation effects must be included at the micro-level that refine our understanding of the effect of skin colour. This new analytical approach will explain why the nature of the relationship between income and skin tone varies from one country to another and the degree to which this variation is due to macro or micro-level variables.

4.1.1 Skin colour and income inequality in Latin America

Latin America is a relevant context to study the influence of skin tone on income distribution. In this region, high levels of income inequality coexist with a wide range of skin colours and ethnoracial diversity. Considerable proportions of Amerindians, Blacks, Whites, and various types of mixed-race people live on Latin American soil, which is one of the unequal regions in the world (De Ferranti et al., 2004; Torche and Spilerman, 2009; Torche, 2014). Interestingly, although Latin America is characterised by high levels of ethnoracial and skin colour diversity, research on wealth inequality shows that the preference for Whiteness (or pale skin tones) produces social hierarchies where light-skinned Latin Americans have a higher probability of being at the top. However, as we said previously, the magnitude of such preference for Whiteness varies across the region, leaving an open space for future research (Painter II et al., 2020).

4.1.2 Skin colour and ethnoracial categories

There are different ways of measuring phenotypical features associated with race. For example, skin tone and self-ascribed ethnoracial identities are among the most used in social

research. However, they are not equally valuable for assessing ethnoracial hierarchies in Latin America. Indeed, different scholars state that skin colour is more efficient in capturing what motivates discrimination and, in turn, creates income gaps among Latin Americans (Banton, 2012; Telles and PERLA, 2014). This assumption has proven true in most Latin American countries (Bailey et al., 2016). Nonetheless, it is worth saying that race and ethnicity-related problems are complex; therefore, researchers need to consider skin colour and ethnoracial identities in tandem to determine what creates income differences.

As Telles and the PERLA team have shown (2014), darker-skinned individuals face a more challenging life path than lighter-skinned ones, across all Latin American contexts. Thus, as with many other outcomes, having a dark skin tone also affects the chances of getting a good job and, consequently, a higher salary (Bailey et al., 2014, 2016). Skin colour plays a role in income distribution because people use others' skin tones to guess their position on the social pyramid (Banton, 2012). Of course, people also use other phenotypical features (e.g., hair type or height) to evaluate others' social position. However, previous research posits that skin tone is the most salient heuristic tool in this evaluation process (Wade, 2012; Banton, 2012). Thus, people usually invoke racial stereotypes that match colours to social positions when assessing others according to their skin colour. In the case of income inequality, such stereotypes establish a negative correlation between darkness and skills that hamper the chance of dark-skinned people getting good jobs and, consequently, high incomes (Gravlee, 2005; Maddox, 2004).

Previous evidence suggests that skin colour and ethnoracial categories, sometimes in tandem and sometimes separately, can explain income inequality better than skin colour alone. Nonetheless, skin colour has an advantage over ethnoracial types: as a continuum, skin colour can capture differences within ethnoracial categories and, thus, it can help us explain why two individuals who share the same ethnoracial identity can have different incomes (Painter II et al., 2020). For example, mixed-race people are simultaneously stratified by their identity and skin tone. Thus, they are below Whites in the income hierarchy, and within the mixed-race group, light-skinned people have higher incomes than dark-skinned ones (Villarreal, 2010; Flores and Telles, 2012).

To understand why both factors work simultaneously, we should define two concepts: ethnoracial status and ethnoracial identity. The former is related to how people are perceived by others, while the last points to how people perceive themselves. Both dimensions have a

shared basis in some physical features. For example, hair texture, height, and fundamentally skin tone affects people's description of themselves and also others' perception. Thus, skin tone links ethnoracial status and identity, triggering stereotypes and negative feelings that affect life chances (Omi and Winant, 1994). However, it is also crucial to remember that socioeconomic status affects how skin colour is perceived (Defina and Hannon 2016). Skin tone is part of a causal cycle wherein it influences access to vital economic or social resources, ultimately affecting its perception.

From a methodological standpoint, this potential endogeneity makes controlling for social origin an unavoidable step in assessing the actual effect of skin colour on income or other socioeconomic outcomes. Hence, two complementary cognitive processes explain why skin colour variations correlate with income gaps. First, people classify others around them following an in-group/out-group criterion and favour in-group members (Brewer and Brown 1998). Second, ethnoracial variables, such as identity or skin tone, are primary forms of classifying people, within them, Whiteness is the critical factor in defining in-group membership (Painter, 2016). Given that Whites and light-skinned people were entitled to many privileges during the colonial period (Mörner, 1970), being treated as part of these groups eased access to higher-income jobs. Therefore, there is an income gap between light and dark-skinned Latin Americans nowadays. When such membership is active, when people feel that they and those with similar skin tones belong to the same group, the propensity is to favour those who look alike and discriminate against those who are different (Brewer and Brown, 1998). Moreover, those who, historically, were discriminated against do not actively question their position in the social hierarchy; they also tend to favour high-status group members (Tajfel and Turner, 1986). Therefore, light-skinned people are privileged when the effect of belonging to a given ethnoracial group is weaker than the tendency to favour high-status group members, which results in dark and light-skinned people favouring latter (Goldsmith et al., 2007).

In Latin America, the preference for Whiteness or light-skinned people manifests directly in the mass media (Ryvaneira, 2011) and indirectly in the association between skin tone and income (Bailey et al., 2014; 2016) and education (Telles et al., 2015). In addition, there is evidence suggesting that even dark-skinned people show some preference for Whiteness (Uhlmann et al., 2002). Thus, it is possible to describe Latin America as a pigmentocratic regime with a manifest preference for Whiteness, where someone's skin tone partially determines his life opportunities. Nonetheless, some research gaps regarding the

specific association between skin colour and income need to be addressed (Bailey et al., 2016). To be more precise, previous empirical and theoretical works in this field suggest an interaction between skin colour and social origin, ethnoracial context and gender that needs to be studied.

4.1.3 Skin colour and social origin

Traditionally, scholars have assumed that social class functions independently from skin colour in determining social inequalities in the United States, whereas both factors intersect in determining privileges in Latin America (Banton, 2012; Blau and Duncan, 1967). Social class is a crucial concept when studying social inequalities in Latin America. In terms of income, it is one of the most unequal regions globally (Torche, 2014). Therefore, most traditional approaches state that skin colour gaps, or any other form of ethnoracial inequality, are the direct consequence of inequalities inherited from the colonial period (Wagley, 1952). It is essential to keep in mind that this view neglects the crucial role of skin colour discrimination in shaping modern social hierarchies.

Social origin is an essential variable to understand the relevance of social background impact to skin colour's effect on social inequalities. Typically understood as parents' socioeconomic status, social origin helps link living conditions in early childhood with socioeconomic outcomes in adulthood. Hence, the social origin should partially or fully explain socioeconomic status in an unfair society. However, in colour-based discrimination, skin colour should affect income independent of social origin, creating a social hierarchy shaped by both factors. Using social origin as a proxy variable, Bailey et al. (2014; 2016) show that social class partially mediates the effect of skin colour on income, but it does not completely negate it. This critical research states that skin colour and social origin are intertwined. Still, this does not explain how the two factors combine to build the specific pattern of inequality we observe in Latin America. Consequently, the potential interaction between social origin and skin tone can be explored, hopefully producing substantial new evidence on this topic.

Previous studies have provided evidence of the increasing importance of skin colour discrimination as we ascend the social pyramid. While some research suggests that perceived discrimination against dark-skinned people is more considerable in high SES contexts (Gravlee et al., 2005), other research shows that high-class people use skin colour to assess others more than any other group SES (Torres et al., 2019). Thus, taking this evidence as a premise, skin

colour's effect on income should increase as social origin rises. In other words, having dark skin should have a more negative impact on revenue among people whose parents are from higher classes.

However, social origin does not have a direct impact on income. In contrast, its influence is channelled through education, a factor that has a decisive influence on income inequality in Latin America (Hoffman and Centeno, 2003). Compared with Europe and the United States, this region has a more considerable variance in years of schooling and a much greater return on education (Lam & Levison, 1992). Even after the enormous education expansion that occurred in Latin America during the last decades, income inequality increased due to the convexity of returns on education (Battistón et al., 2014). Furthermore, Tas et al. (2014) identified that social origin is the best predictor of educational attainment in Latin America using the same dataset that we use. Therefore, to assess the potential moderation effect of social origin on the influence of skin colour on income, either an interaction term between the two factors or another between skin colour and education should be evaluated.

4.1.4 Skin colour and ethnoracial context

Previous studies show a persistent influence of skin colour on income inequality in Latin America (Bailey et al., 2014, 2016). However, that influence should not be summarised into a single pattern. As such studies illustrate, the effect of having dark skin fluctuates by region. For example, skin colour is a potent predictor of income in Argentina and Mexico, but it does not explain the income gaps in Costa Rica and Honduras. Thus, as Bailey recognises, skin colour's effect needs to be analysed in broader contexts to understand it better. To be more precise, knowing which contextual variables to study will help us explain such differences in the effect of skin colour. One of these contextual variables, which is closely linked to ethnoracial inequality and can affect different social outcomes such as income, is ethnoracial diversity. In Latin America, the effect of this variable has been tested in regard to economic success and the quality of policies (Alesina et al., 2003) as well as income inequality (Meisenberg, 2008). On the one hand, these studies show that ethnoracial diversity is strongly inversely related to economic growth and the quality of policies. On the other hand, they show that ethnoracial diversity is positively associated with income inequality.

Latin America's income distribution is one of the most unequal into world regions and is probably the most racially diverse (Meisenberg, 2008). In contrast, more homogeneous areas, like the United States and Europe, are also more egalitarian. However, income inequality is higher in the former than in the latter, which is in line with their differences regarding racial diversity. Two theories try to explain why racial diversity increases income inequality. The first one is a eugenicist approach that suggests that different racial groups have different intellectual abilities. As a result, when other groups live in the same country or region, educational inequality increases and, in turn, income inequality does too (Lynn, 2006; Lynn et al., 2007). The second theory, which relies on a social conflict approach, proposes that racial diversity increases political and social tensions between ethnoracial groups, worsening the quality of policies. As a result, it limits the state's efficacy in regard to reducing inequality via taxes and direct or indirect transfers, linking racially heterogeneous societies to higher-income gaps (Alesina et al., 2003).

Another explanation, derived from the second theory mentioned above, states that people are prone to act altruistically towards those who resemble them (Rushton and Bons, 2005; Rushton, 1989). Thus, in racially diverse contexts, mainly where racial inequality is related to a colonial past's inheritance, such heterogeneity maintains or reinforces income gaps between different racial groups. In such a context, while solidarity exists within racially homogenous groups, discrimination intensifies between those who are not alike. As a result of this association, as racial diversity increases, support for wealth redistribution policies decreases, creating the social conditions in which income inequality is free to expand. The previous explanations explicitly link racial diversity and income inequality. However, they do not discuss the potential interaction effect between ethnoracial variety and skin colour, nor how Latin American particularities affect such an association.

So far, we have talked about racial diversity. Nonetheless, it is preferable to use another concept, ethnoracial variety, to analyse similar phenomena in Latin America. The idea of race is rarely used in the common language of Latin Americans, and its principal connotations are frequently confounded with ethnicity or skin colour (Banton, 2012, Telles and PERLA, 2014). In addition, given that the racially related problems in Latin America have different dimensions, mainly traditional racial categories, ethnic identities, and skin colours, rather than being related to racial diversity, we prefer to use the concept of ethnoracial configuration. The idea behind this new concept is that scholars should deal with different levels of diversity when

they analyse Latin American societies. For example, some subregions can be very diverse in terms of skin colour but, at the same time, homogenous in terms of self-ascribed identities.

Having made this adjustment, we can offer three different arguments to explain the potential moderation effect of ethnoracial configuration on the relationship between skin colour and income. First, following the reasoning linking racial diversity with income inequality, we may expect a more potent skin colour effect in regions with a broad skin tone spectrum or, in other words, higher levels of skin colour diversity. Second, as previous studies suggest, skin colour seems less relevant in regions without a long history of legally sanctioned racial discrimination (van den Berghe, 2012). Thus, it would be expected to find a more substantial skin colour effect in regions where Black slavery was a massive phenomenon. Other forms of legally sanctioned discrimination against the native population, and even slavery, existed across Latin America. However, none of them was as brutal and permanent as Black slavery (Mira Caballos, 1997). Third, as Lizano (2005) concludes, different kinds and levels of mixing races support different types of discrimination. In our case in and Latin America, evidence suggests that skin colour's relevance increases in contexts where the process of mixing races has been more intense (Sue and Golash-Boza, 2013).

4.1.5 Skin colour and gender

A vast amount of research claims that attractiveness plays a crucial role in determining people's life opportunities. Attractive people are frequently better treated than unattractive ones (Alam and Dover, 2001; Mobius and Rosenblat, 2006). However, this effect seems remarkably sharp for women and dark-skinned Latin Americans (Moreno-Figueroa and Rivers-Moore, 2013; Hersh, 2011). Therefore, in countries with Western beauty standards like Latin America, dark-skinned people and particularly dark-skinned women, are considered less attractive and, as a result, receive lower incomes and worse treatment (Hersh, 2008; Goldsmith et al., 2007). Such Western standards can be seen on Latin American TV, where light-skinned characters are high SES and dark-skinned characters are inferior and sexualised (Masi de Casanova, 2018). Many Latin American women colour their hair and use products to bleach their skin to hide their indigenous ancestry and avoid these negative stereotypes. Unfortunately, this is not the only consequence of this beauty standard. It also seems to negatively affect dark-skinned women's chances of getting a job (Dias, 2020).

4.1.6 Hypotheses

In this section, to summarise the previous reflections, we offer three clearly stated hypotheses regarding the moderation effects of social origin, ethnoracial context, and gender on the relationship between skin colour and income. In terms of social origin, as the historical and theoretical evidence suggests, the effect of skin colour becomes more acute as social origin increases. Hence, the average income gap between light and dark-skinned Latin Americans grows as their social origin moves from low to high SES families. Regarding ethnoracial context, everything we know so far makes us believe that skin colour's effect becomes more potent in regions or contexts where the process of race-mixing has been more intense. The skin colour spectrum is broader and has a long and relevant history related to Black slavery. This is the case of a set of countries labelled "mulatos"⁸, of which Brazil and the Dominican Republic are part. Finally, regarding the potential interaction between gender and skin colour, given the evidence described above, we can expect to find a more substantial effect of skin tone on income amongst Latin American women than men. To be more precise, in line with the intersectionality commented on above between being female and dark-skinned, this interaction is particularly notorious.

4.2 Data and Methods

4.2.1 Dataset

Our data are from the 2012 and 2014 waves of the LAPOP survey, including national representative samples from 18 Latin American countries. Every country survey, in both waves, is based on face-to-face interviews with voting-age adults.⁹ The sample size is about 1,500 cases per country in each wave, except Bolivia, where the sample size is about 3000 cases. The LAPOP's sample design process is multistage and considers stratification by primary subnational levels, the size of each country and rural and urban areas within them.

⁸ In the Data and Method section we will further explain what this term means.

⁹ In almost all Latin American countries this limit is (about) 18 years old.

4.2.2 Key independent variables

Skin colour was measured by the interviewers using an 11-point scale as a benchmark. This scale, which includes colour references, was specially designed for assessing Latin Americans' skin colour. Every interviewer was trained to classify respondents' skin colour using this colour palette without showing it. Since the countries have different skin colour distributions, darker or lighter depends on which country we are analysing. We standardised (z scores) using the national mean and standard deviation to prevent this problem. Ethnoracial identity was measured using the following question: "Do you consider yourself White, Mestizo, Indigenous, Mulato or Other?" These are the standard ethnoracial categories in most of countries. However, in (some) others, the answer options differed. For example, in Brazil, the LAPOP survey used the following alternative: White, Brown (mixed or Mulato), Black, Asian, and Indigenous. In Venezuela, they also included the term "Moreno", which resembles the meaning of Mulato. In Guatemala, they used "Ladino" (a synonym of Mestizo). Finally, the LAPOP team used the term "Indio" to ask about Mestizo's identity in the Dominican Republic. To have the same categories across all of Latin America (we recoded), previous alternatives considering their closest match among the standard set of ethnoracial types were recorded. Thus, Brazilian Browns and Venezuelan Morenos were treated as Mulatos, and Guatemalan Ladinos and Dominican Indios were coded as Mestizos.

As other scholars propose (Bailey et al., 2016; Torche, 2014), we use the educational level of each person's mother to determine their social origin. As with other ascribed conditions, the mother's level of education allows us to focus on privileges and disadvantages inherited from the parents' social class. Other variables like father's education or parental occupation also capture social origin and add a different perspective, but the LAPOP survey does not include them. However, since the mother's education represents an international standard to measure social origin, not including those variables does not present a big problem. In the LAPOP survey, the mother's level of education was operationalised using the following question: "And what educational level did your mother/mom complete?". The possible responses ranged from primary incomplete to university complete, adding eight categories. Unluckily, the LAPOP survey only asked for the mother's education in one of two questionnaires. Nonetheless, as this data is missing entirely at random (van Buuren, 2018), a mean imputation method was adopted to deal with this problem. First, a new variable was

created that informs us if one value is missing. Then the missing values were imputed by the respective country's mean of the mother's educational level.

To classify the countries according to their ethnoracial context, we estimated two cluster analyses with the 18 Latin American countries as cases and the following variables: average skin colour, skin colour fractionalisation index,¹⁰ ethnoracial group proportion, and Lizcano's (2005) typology of countries according to their ethnoracial composition, which was included in the second analysis to validate our previous result. First, we estimated a hierarchical cluster analysis using Ward's method to minimise in-group variance and obtain more homogeneous clusters. Our proximity measure was the squared Euclidian distance as we only have continuous variables. Dendrogram and the most prominent jump criteria suggest five clusters as the optimal solution. Then, to theoretically validate this result, we estimated a two-step cluster analysis, including Lizcano's typology. Finally, we forced the study to process a study of five clusters to compare the two results. Both results were quite similar. Nonetheless, we prefer the last one to align with what the theory and history suggest.

The first cluster, called "Mulato" (Brazil and the Dominican Republic), represents those countries with the most Afrodescendants and the darkest and most diverse skin tones. We labelled the second cluster "White" (Chile, Uruguay, Argentina, and Costa Rica), which comprises the whitest, most homogenous, and lightest-skinned populations. The third cluster is the "Indomestizo" one, and it characterises countries (Peru, Ecuador, Guatemala, and Bolivia) with the highest proportions of Indigenous and Mestizo populations. Then, the "Mestizo" cluster represents those countries (Mexico, Honduras, Nicaragua, Paraguay, and El Salvador) with higher proportions of Mestizos and the second lightest (before White countries) skin tone. Finally, the Afromestizo cluster (Panama, Venezuela, and Colombia) depicts countries with high proportions of Whites and Afrodescendant populations and a broad skin colour spectrum. Lastly, education is a continuous variable represented by years of schooling from 0 years to 18 years or more.

¹⁰ To obtain this value we used the same formula proposed by Alesina et al. (2003).

$$FRAC_{j} = 1 - \sum_{i=1}^N S_{ij}^2$$

This formula shows the probability that two randomly sampled individuals from a population belong to different ethnoracial or skin colour groups, where S_{ij} is the proportion of group i ($i = 1...N$) in country j .

4.2.3 Dependent variable

Our dependent variable is "personal monthly income". We prefer this option over other more commonly used variables, such as "per capita household income", because it better captures discrimination, our hypothetical causal mechanism of skin colour inequalities in Latin America. In contrast to other options that capture a broader definition of inequality (Torche, 2011), "personal monthly income" enables us to assume that the effect of skin colour on income is due to discrimination in the labour market. To measure this variable, the LAPOP survey asks: "How much money do you personally earn each month in your work or retirement or pension?". To minimise non-responses, only interviewees who had previously said that they were working, not working but had a job, retired or a pensioner, or not working and not looking for a job were asked this question. Personal monthly income in the LAPOP survey is self-reported using 16 bands based on each country's currency and income distribution (Córdova, 2009).

Hence, this variable is a ranking that indicates in which income percentile each respondent falls. Other studies have transformed the income bands into precise values using each band's midpoint (Bailey et al., 2014, 2016). Nonetheless, we prefer to maintain this variable to have comparable values across Latin America. Transforming the income bands into local currency values would help us estimate skin colour inequality in Latin America. However, this would be at the cost of resigning ourselves to putting all the issues together in the same model. In addition, given that the data were collected on different dates within three years, it would be not easy to find a standard measure (e.g., US dollars) that considers the multiple conversion and inflation rates. Contrarily, treating the income variable as a ranking ensures that two different respondents from different waves and countries with the same value have the same position within their countries' income distribution.

4.2.4 Control Variables

As control variables, we also work with age, the size of residence place, mother tongue, survey wave, gender, and the natural log of GDP per capita (average for the 1990/2016 period). Age is a continuous variable, with 18 years old as the lower limit and no upper limit. The residence place is a categorical variable with the following options: rural, town/small city, medium city, large city and national capital. Mother's tongue is another categorical variable

whose possible answers are Spanish or Portuguese, native or foreign languages. Finally, the survey wave is a dummy variable with 2012 and 2014 as its options.

4.2.5 Analytical Approach

Since "personal monthly income", our dependent variable, has 16 categories and is treated as a ranking, various OLS models have explored different dimensions of skin colour's influence on income across Latin America. Before analysing our models, we present the summary descriptive statistics of all the variables included in this research. First, we show the descriptive statistics of income by country (Table 7). Then, we present all the other variables' values using the pooled sample (Table 8). We created various interaction effects between skin colour and, in turn, gender, social origin, education, and ethnoracial configuration to test our hypothesis. Although it is not part of our hypothesis, a fifth interaction effect was added between skin colour and ethnoracial identity to clarify which ethnoracial group is most affected by the influence of skin tone. To ease the interpretation of each interaction and fully understand the changes in other relevant factors such as education and social origin, we estimate one model for each interaction effect. Thus, considering a first model without interactions and a final one that includes every statistically significant interaction to evaluate possible changes in their strength and directions after taking them into account simultaneously, we have seven models. The size of residence place, age, survey wave, Ln GDP per capita (1990-2016) and mother tongue were included as control variables in all our models.

Table 7: Descriptive statistic of personal monthly income by country

	Mean	SD	Valid N	Missing	%Missing
Country Mexico	7.0	3.6	1429	390	0.21
Guatemala	5.2	3.7	1596	257	0.14
El Salvador	6.8	3.8	1351	304	0.18
Honduras	5.3	3.6	1420	299	0.17
Nicaragua	6.3	3.9	1622	131	0.07
Costa Rica	6.2	3.8	1264	490	0.28
Panama	5.6	3.4	1787	226	0.11
Colombia	6.9	4.1	1771	199	0.10
Ecuador	7.0	3.6	1763	200	0.10
Bolivia	7.4	3.6	1650	396	0.19
Peru	7.0	3.9	1621	407	0.20
Paraguay	6.8	3.9	1645	337	0.17
Chile	7.7	4.2	1617	374	0.19
Uruguay	7.7	4.2	2150	205	0.09
Brazil	7.6	4.5	2095	159	0.07
Venezuela	6.8	3.6	1522	546	0.26
Argentina	6.6	3.9	1488	759	0.34
Dominican Republic	7.7	4.0	1511	233	0.13
Total	6.8	3.9	29301	5911	0.17

Source: LAPOP 2012-2014

Table 8: Descriptive statistic of independent variables

		Mean or %	SD
Skin Color		4.5	1.7
Educational Level of Mother		2.0	1.6
Age		42.2	15.8
Years of Schooling		9.6	4.5
GDP per capita (1990-2016)		8846.0	3469.6
Survey Wave	2012	50.6	
	2014	49.4	
Size of Location	National Capital	23.7	
	Large City	19.2	
	Medium City	17.8	
	Small City	14.4	
	Rural Area	24.9	
Ethnoracial Configuration	Indomestizo	22.4	
	Mestizo	25.4	
	Afromestizo	17.2	
	Mulatto	11.4	
	White	23.7	
Mother Language	Spanish or Portuguese	91.2	
	Indigenous Language	8.0	
	Foreign Language	0.7	
Ethnoracial Identity	White	31.1	
	Mestizo	48.2	
	Indigenous	7.3	
	Black	4.6	
	Mullatto	7.4	
	Other	1.4	
Gender	Female	36.1	
	Male	63.9	

Source: LAPOP 2012-2014

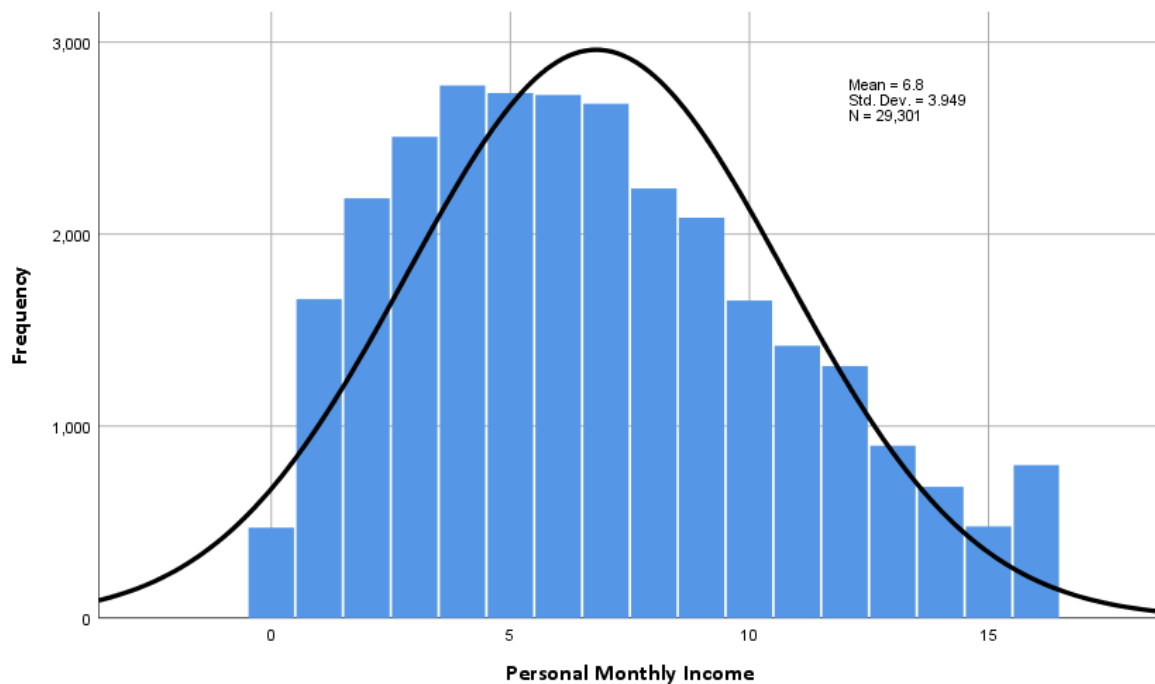
Predictive margins were used to analyse all of the statistically significant interaction effects. More precisely, was used to report the skin colour range where the income gaps between genders, social origins, educational levels and ethnoracial configurations become relevant. Finally, the average marginal effects of skin colour were reported by ethnoracial arrangement and gender when education is fixed at its mean. In this manner, we aim to ease the interpretation of these interactions when they are included in the same model. Every time scholars work with income measures, they face an enormous problem: many missing data. The LAPOP survey tried to deal with this problem by asking respondents to select (privately) a band where their income fell instead of asking them to say an exact amount of money. By following this procedure, the LAPOP survey minimised non-responses and, probably, under or over-reporting. However, and unluckily, the relative weight of the missing data is still relevant.

Multiple imputation techniques were used to address this problem, and then, using imputed values, the same models as were previously described were estimated. Then, by contrasting the two results, we determined whether our results were significantly affected by income missing data. Following the LAPOP recommendations, we estimated our models using probability weights. To assess their quality, BIC and AIC statistics were used. Finally, all of the analyses were conducted in STATA/MP 14 except for multiple imputations and models with imputed data in SPSS 25.

4.3 Findings

Descriptive statistics of the income variable are presented in Figure 13 and Table 7. In the pooled sample, the average income band is 6.8, which is close to the national income distributions' central values. However, when analysing this variable, the Latin American income distribution is left-skewed. Analysing personal monthly income by country (Table 7), we observe that the average income bands are similar with Chile, Uruguay, and the Dominican Republic at the top (7.7) and Guatemala at the bottom (5.2). As the income bands reflect the local income distributions, it was expected that we would find minor differences between countries. However, more critical than the previous results is that the missing cases vary from 7% in Brazil to 34% in Argentina (17% in the pooled sample). It is essential to know whether our results are biased due to the missing data structure to deal with this problem.

Figure 13: Descriptive Statistics of Income Variable



On the other hand, Table 8 summarises the descriptive statistics for the independent variables included in our models. According to these figures, Latin America's average skin colour is light brown (4.5), and the mean of the mother's level of education is 2, which means primary complete. In addition, the standard of years of schooling is 9.6, which in most Latin American countries represents secondary education incomplete. Most people live in cities in our sample, while almost 25% live in rural areas. In terms of ethnoracial configuration, most people live in Mestizo countries (Mexico, Honduras, Nicaragua, Paraguay, and El Salvador). In contrast, only a small proportion live in Mulato countries (Brazil and the Dominican Republic). The vast majority speak Spanish or Portuguese; just 8% speak different indigenous languages. Regarding ethnoracial identity, most respondents were White or Mestizo; just a few described themselves as Black, Mulato or Indigenous. Finally, there were almost twice as many male respondents as female ones. This result could be worrying, but it is in line with the labour participation gender gap in Latin America (ECLAC, 2021). Table 9 shows a sequence of models to analyse the influence of different dimensions of skin colour on income. For example, model 1, without interactions, shows that skin colour has a negative and statistically significant effect (-0.12) on income after controlling for different socio-demographic factors. Thus, as Latin Americans' skin tone turns darker than their country's skin colour, their position in the national income distribution worsens.

Table 9. OLS regression of income in 18 Latin American countries

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7	
	<i>B</i>	sig	<i>B</i>	sig	<i>B</i>	sig	<i>B</i>	sig	<i>B</i>	sig	<i>B</i>	sig	<i>B</i>	sig
Skin colour	-0.12	***	-0.12	**	-0.10	**	-0.19	***	-0.03		0.08	†	0.11	
Years of schooling	0.35	***	0.35	***	0.35	***	0.35	***	0.35	***	0.35	***	0.35	***
Ethnoracial identity														
<i>White (omitted)</i>														
<i>Mestizo</i>	-0.22	***	-0.21	***	-0.22	***	-0.22	***	-0.20	***	-0.22	***	-0.20	***
<i>Indigenous</i>	-0.56	***	-0.56	***	-0.56	***	-0.56	***	-0.54	***	-0.57	***	-0.55	***
<i>Black</i>	-0.23	*	-0.40	**	-0.23	*	-0.23	*	-0.11		-0.24	*	-0.12	
<i>Mulato</i>	-0.34		-0.37	**	-0.34	***	-0.34	***	-0.28	**	-0.34	***	-0.28	**
<i>Other</i>	-0.34	*	-0.24		-0.34	*	-0.33	†	-0.33	†	-0.34	*	-0.32	†
Ethnoracial configuration														
<i>Indomestizo countries (omitted)</i>														
<i>Mestizo countries</i>	0.16	**	0.16	**	0.16	**	0.16	**	0.17	**	0.16	**	0.16	**
<i>Afromestizo countries</i>	-0.56	***	-0.56	***	-0.56	***	-0.56	***	-0.56	***	-0.56	***	-0.55	***
<i>Mulatto countries</i>	1.20	***	1.21	***	1.20	***	1.20	***	1.20	***	1.20	***	1.20	***
<i>White countries</i>	0.23	**	0.23	**	0.23	**	0.23	**	0.25	**	0.23	**	0.25	**
Male	1.63	***	1.63	***	1.63	***	1.63	***	1.63	***	1.63	***	1.63	***
Skin Colour*Ethnoracial iden.														
<i>Mestizo</i>			-0.01											
<i>Indigenous</i>			0.02											
<i>Black</i>			0.13											
<i>Mulatto</i>			0.08											
<i>Other</i>			-0.35	*										
Skin colour*Mother education														
					-0.01									
Skin Colour*Male														
							0.11	**					0.09	*
Skin colour*Ethnoracial conf.														
<i>Mestizo countries</i>									-0.03				-0.07	
<i>Afromestizo countries</i>									-0.12	†			-0.11	
<i>Mulatto countries</i>									-0.28	***			-0.29	***
<i>White countries</i>									-0.14	*			-0.14	*
Skin Colour*Years of schooling														
											-0.02	***	-0.02	***
Mother tongue														
<i>Spanish or Portuguese (omitted)</i>														
<i>Indigenous language</i>	-0.22	**	-0.22	**	-0.22	**	-0.22	**	-0.23	**	-0.22	**	-0.24	**
<i>Foreign language</i>	0.68	*	0.67	*	0.68	*	0.68	*	0.68	*	0.67	*	0.67	*
Mother education	0.18	***	0.18	***	0.18	***	0.18	***	0.18	***	0.17	***	0.18	***
Mother education (missing)	-0.08	†	-0.08	†	-0.08	†	-0.08	†	-0.08	†	-0.08	†	-0.08	†
Observations														
AIC	162160.7		162162.8		162161.9		162155.1		162149.5		162140.3		162125.5	
BIC	162360.6		162404.3		162370.1		162363.3		162382.7		162348.5		162375.3	
Adjusted R squared	0.2538		0.2539		0.2538		0.254		0.2542		0.2543		0.2548	

Source: LAPOP 2012-2014.

Note: All models consider probability weights to give each country an identical size in the pooled sample and produce nationally representative results. In addition, we use robust standard errors to deal with straightforward cases and heteroskedasticity.

Omitted controls: Age, Survey wave, Ln GDP per capita (1990-2016), and location size.

*** P < 0.001

** P < 0.01

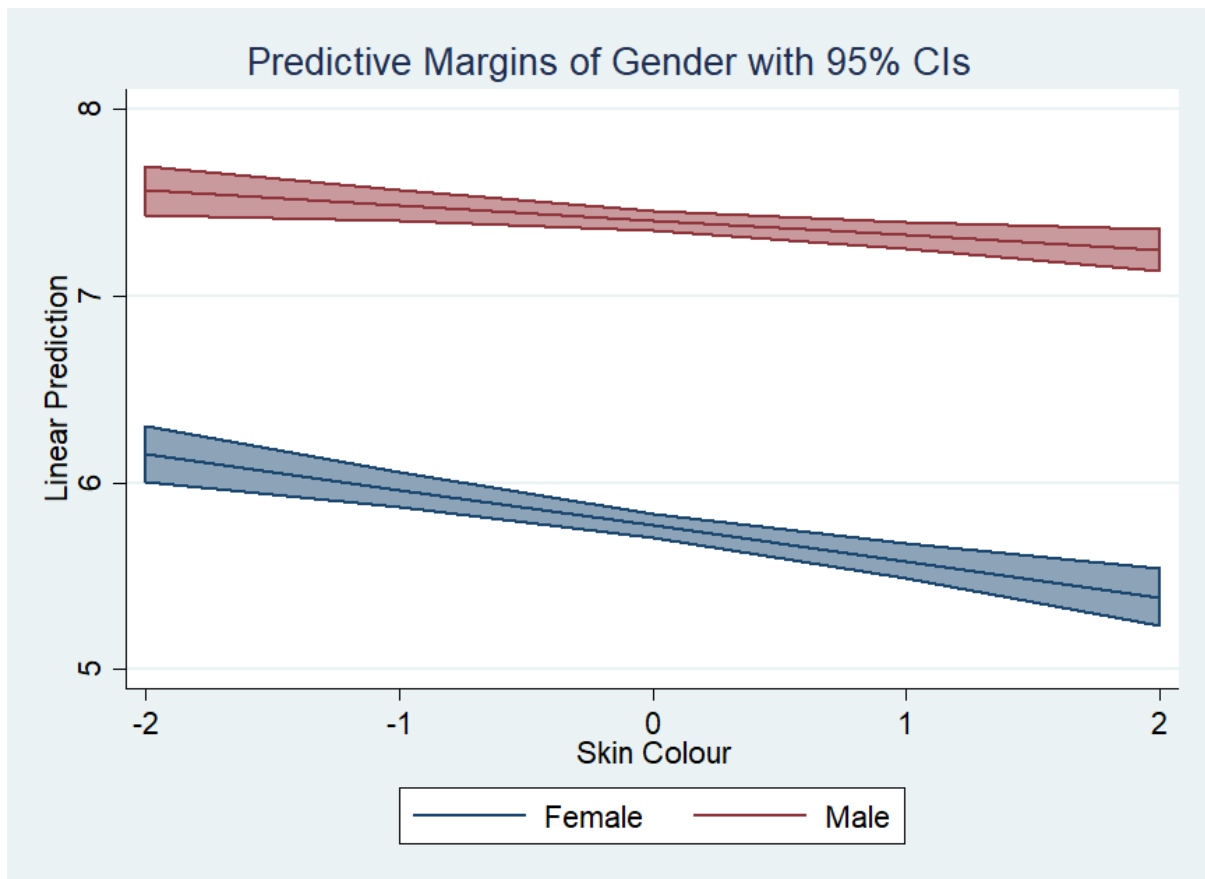
* P < 0.05

† P < 0.1 (two-tailed tests)

Models 2 to 7 include various interaction effects to clarify different aspects of the above-mentioned development. For instance, Model 2 shows the moderation effect of ethnoracial identity on the influence of such skin colour. Unfortunately, the interaction between the group "Other" and skin colour is statistically significant. However, this group size, which represents people who do not feel White, Mestizo, Mulato, Black or Indigenous, is relatively insignificant across Latin America. Thus, focusing on this result could lead to overinterpreting skin colour's effect on income. Model 3, which assesses the moderation effect of social origin (mother's level of education), is also non-conclusive. To be more precise, this interaction effect is not statistically significant, obscuring the hypothetical relation between social origin and skin colour that we stated in the theory section.

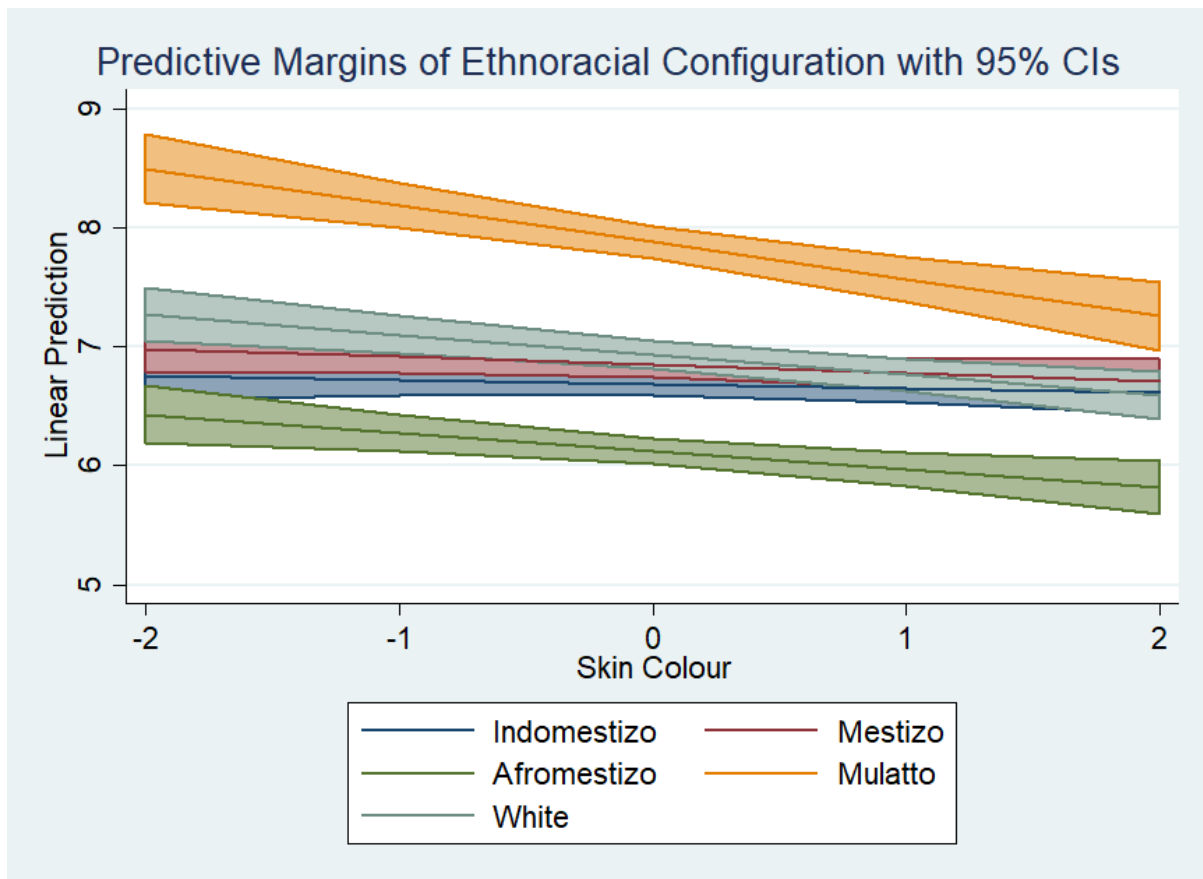
Fortunately, the gender and skin colour (Model 4) interaction is statistically significant and follows the earlier theoretical assumptions. In this manner, as Latin Americans turn darker than their country's average skin colour (mean) by one standard deviation (z-score), the income gap (1.63) in favour of males increases by 0.11. To better understand this interaction, it is displayed in Figure 14. Latin American males consistently earn higher salaries in a consistent way regardless of their skin colour. However, it is essential to note that this difference is more significant as we move from lighter to darker-skinned (about their country's average skin colour). Thus, being a dark-skinned woman in Latin America represents an uphill life path for equality. Focusing on the ethnoracial configuration, Model 5 shows that the effect of skin colour is exceptionally sharp in Mulato and White countries compared to Indomestizo ones. This is also true for Afromestizo countries, but the interaction effect is only statistically significant at the 0.1 level. The visualisation of this interaction (Figure 15) confirms previous results because the steepest lines are those of Mulato and then, White and Afromestizo countries. In contrast, the effect of skin colour in Mestizo and Indomestizo countries is significantly smaller.

Figure 14¹¹: Skin colour and gender



¹¹ -1 on the skin colour variable means “one standard deviation lighter than the mean national skin colour”.

Figure 15: Predictive Margins of Ethnoracial Configuration



In Model 6, an alternative formulation is shown for the association between skin colour and social origin. Since the mother's level of education (the variable used to capture social source) is the best predictor of years of schooling (Castillo et al., 2018a), the latter variable can probably mediate the influence of the former on income. Thus, to better understand how skin colour and social origin affect our independent variable, we explore an alternative interaction between skin colour and education. Interestingly, and in contrast to the moderation effect of social origin (mother's level of education), this new interaction's coefficient is statistically significant and negative, which means that as skin colour increases by 1 (which means darker than the country's mean by one standard deviation), the effect of education on income decreases by -0.02. In other words, and from a different perspective, lighter-skinned individuals' returns on education are higher than those of darker-skinned people in Latin America.

This association can easily be seen in Figure 16. We also note that income's skin colour gap increases as we move from lower to more highly educated Latin Americans. Thus, on average, there are almost no differences between zero and ten years of schooling between different skin colour groups. However, amongst Latin Americans with more than 14 years of education, returns on education depending on their skin colour group. When including all of the above-commented interactions in the same model (7), there are small and non-significant changes. However, to ease the interpretation, the average marginal skin colour effects were plotted by gender and ethnoracial configuration while education was fixed at its mean (Figure 17). Dark-skinned women from Mulato countries (Brazil and the Dominican Republic) face the worst scenario. In comparison, dark-skinned men from Indomestizo countries (Peru, Ecuador, Guatemala, and Bolivia) are in the best position. On average, to be more precise, an increase in 1 unit of skin colour (which means darker than the country's mean) is associated with a decrease of about 0.4 in the income variable for women from Mulato countries. On the contrary, when analysing men from Indomestizo countries, the same increment in the skin colour scale is associated with no decrease in income.

Figure 16: Predictive Margins of Skin Colour.

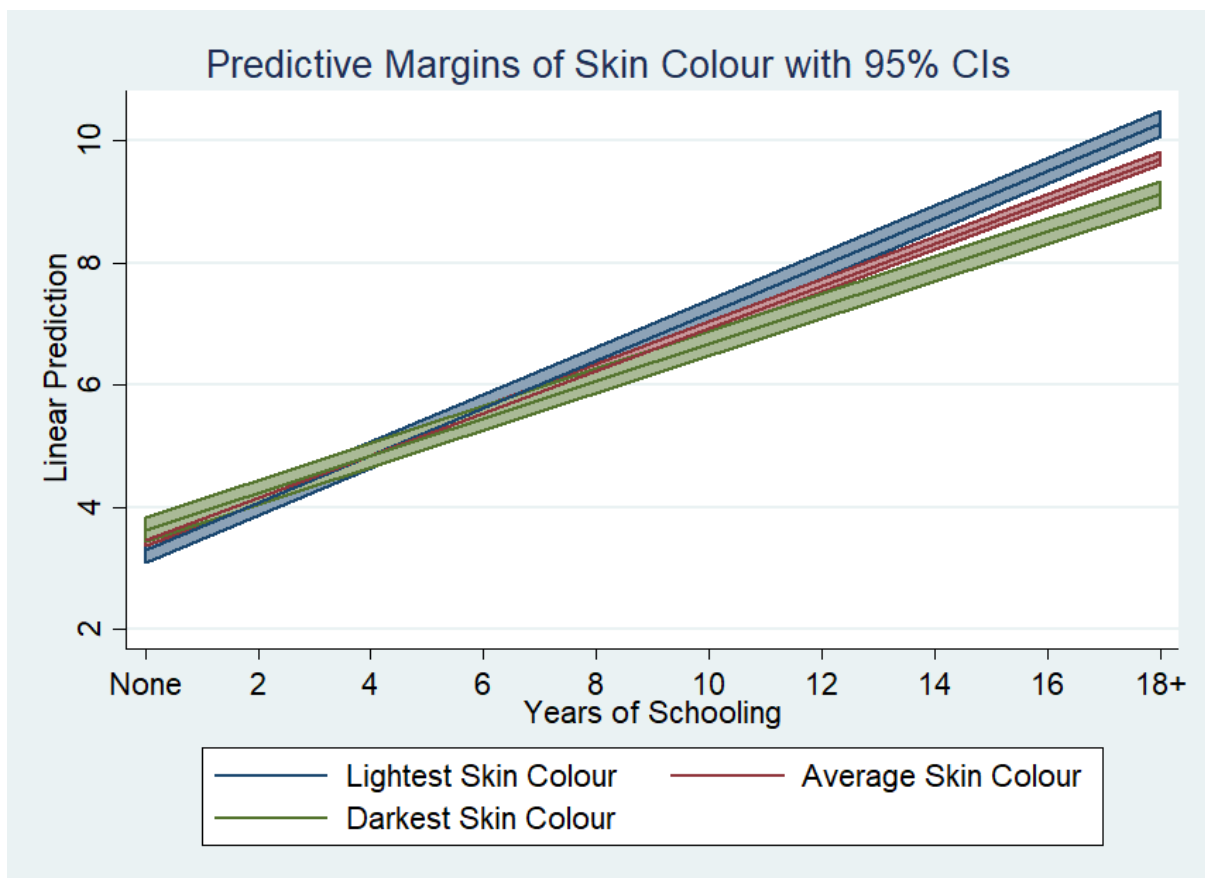
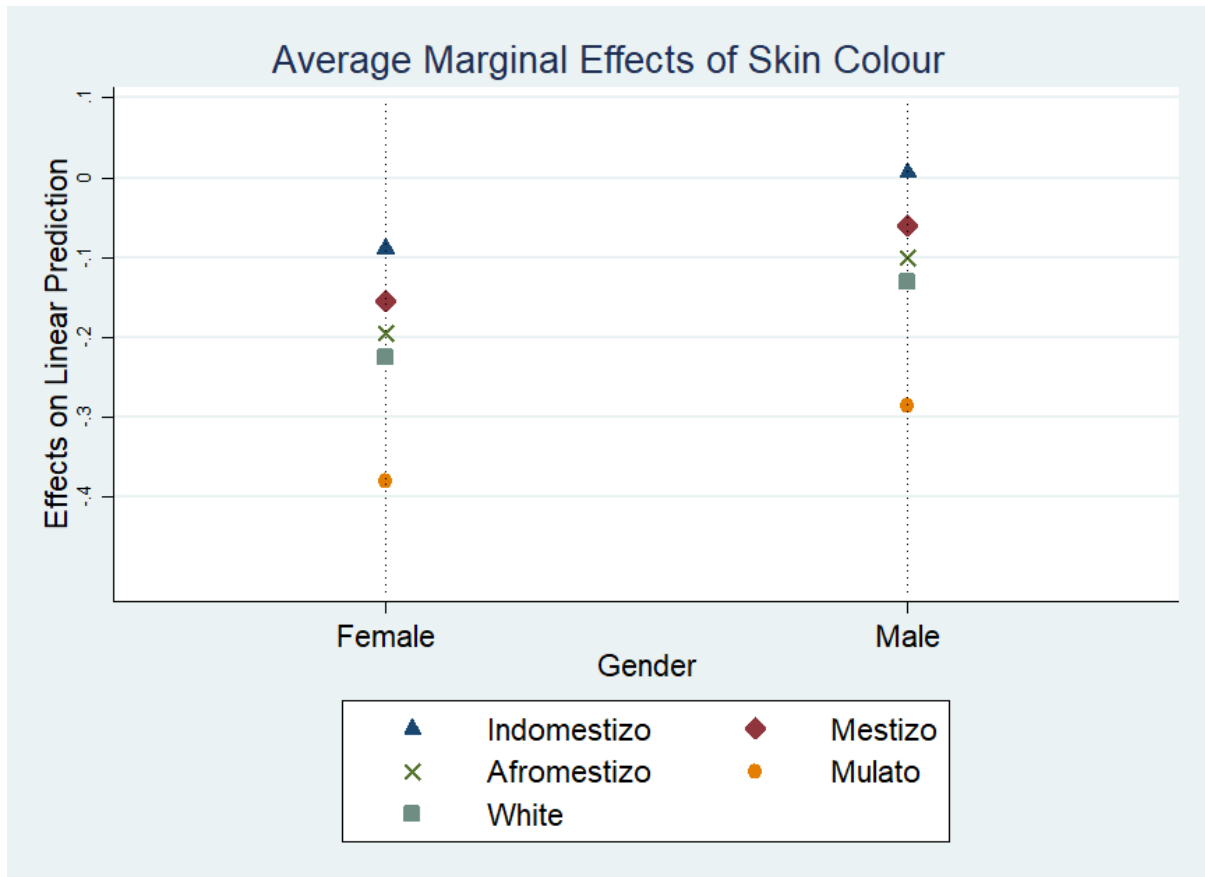


Figure 17: Average Marginal Effects of Skin Colour



Finally, to comprehensively appraise the different interactions analysed in this research, Table 9 shows the average marginal effect of skin colour by ethnoracial identity, gender, ethnoracial configuration and education. According to these figures, the effect of skin colour on income is especially acute among highly educated Latin Americans, in Mulato countries, females, and those who self-describe as Mestizos. Despite having less strength than in the previous cases, the effect of skin colour on income is also relevant for Latin American males, in White and Mestizo countries, and among Whites. Interestingly, the average marginal effect of skin colour is reversed for Blacks and the least educated Latin Americans. Nonetheless, this reversal effect is statistically significant at the 0.1 level and only in the last case. Multiple imputation techniques were used to analyse how sensitive the results are to the income missing data structure. Then, using an imputed dataset, the same models were estimated as described above. The results from this analysis can be divided into two. First, the Little MCAR's test result (whose significance is 0.000) shows that our income data are not missing

completely at random. The pattern of the missing data depends on the values of other variables included in the model. Second, and because of the previous result, we multiplied the five imputed datasets, which were identical in terms of the available information but different in terms of the assigned values for the missing data. Using these new datasets, the previous analyses were replicated. The pooled results show slight but non-significant changes compared to the models commented on above. Therefore, the results are not significantly affected by the missing data structure.

4.4 Conclusion

As part of a novel trend in studying Latin America's inequalities, researchers have studied the effect of skin colour on income and wealth (Bailey et al., 2014; Bailey et al., 2006; Painter II et al., 2019). These studies can be summarised into three main findings: first, the income distribution of most Latin American countries is racially stratified; second, social origin partially mediates the effect of skin colour on income; and finally, a general preference for whiteness emerges, which includes lighter skin tones, when analysing wealth inequality. However, as social scientists, we are blind when discussing the moderation effect of gender, social origin and ethnoracial context on the relationship between skin colour and income. Regarding gender, our research reveals that the effect of skin colour on income across Latin America varies by gender. On average, darker-skinned people have lower incomes than their lighter-skinned counterparts. However, such an income gap is more significant for women than men (table 10). Thus, although we do not have an experimental design to disentangle the causes of this moderation effect, our results support our initial hypothesis. Darker skin tones are associated with lower incomes cross-nationally. This effect could be due to colour-based discrimination because dark-skinned people are perceived as less attractive (Alam and Dover, 2001; Mobius and Rosenblat, 2006). Nonetheless, this association between attractiveness and skin tone seems stronger for women than men (Moreno-Figueroa and Rivers-Moore, 2013; Hersh, 2011). Thus, the life opportunities of the former, particularly their incomes, are more affected by their skin tone.

Table 10. Average Marginal Effects of Skin Colour by different factors

Factor	Slope	Sig.
Ethnoracial identity	<i>White</i>	-0.12 **
	<i>Mestizo</i>	-0.14 ***
	<i>Indigenous</i>	-0.11
	<i>Black</i>	0.01
	<i>Mullatto</i>	-0.05
	<i>Other</i>	-0.47 **
Gender	<i>Female</i>	-0.19 ***
	<i>Male</i>	-0.08 **
Ethnoracial configuration	<i>Indomestizo</i>	-0.03
	<i>Mestizo</i>	-0.07 †
	<i>Afromestizo</i>	-0.15 **
	<i>Mulato</i>	-0.31 ***
	<i>White</i>	-0.17 ***
Education	<i>No education</i>	0.08 †
	<i>6 years of schooling</i>	-0.04
	<i>12 years of schooling</i>	-0.17 ***
	<i>18 years of schooling or more</i>	-0.29 ***

Source: LAPOP 2012-2014.

*** P < 0.001

** P < 0.01

* P < 0.05

† P < 0.1 (two-tailed tests)

Concerning social origin, our research shows that it does not directly affect Latin Americans' income. However, it suggests an indirect influence through education, as the social source (mother's level of education) is its main explanatory factor (Castillo et al., 2018a). According to our study, the income gap between skin colour increases along with years of schooling, which indicates that the private rate of returns on education varies depending on skin tone. From another point of view, this assertion means that the increase in earnings from an additional year of schooling is higher for lighter than darker-skinned Latin Americans. Thus, the social origin is one of the best explanatory factors of education, which, in turn, moderates the effect of skin colour on income. This indirect moderation effect of social origin may not be considered entirely unexpected. Besides intelligence, social origin is probably the only and most relevant individual characteristic when children enter the educational system. Moreover, it is the best explanatory factor of academic success across Latin America and explains why the educational barriers there are higher than in industrialised economies (Telles and Steele, 2012; Torche, 2014). Therefore, scholars should analyse social origin's effect through

education on income inequality in Latin America. The previous reflection sheds light on an essential feature of Latin American societies, which Torche (2014) labelled "inherited meritocracy". This feature means that returns on education are high in Latin America, but children from low SES families face enormous difficulties in accessing more and better education. Hence, educational credentials reveal Latin American societies' skills and social origins.

Regarding ethnoracial identities, our results show an unexpected result for Blacks, whose skin colour effect is slightly positive but statistically insignificant. This finding could be counterintuitive and surprising; however, it should be analysed considering the more than two decades of affirmative action policies in countries like Brazil and Colombia (Wade, 2020), where Blacks represent a relevant share of the population. Thus, since skin colour correlates with ethnoracial identities (Telles and Paschel, 2014), the lack of association between colour and income for Blacks may be due to darker individuals that are more prone to self-identify as such and, in turn, mobilise that identity to receive some benefits. Similarly, Telles and Paschel (2014) show that education positively influences Black self-identification. Thus, since highly educated dark-skinned people are more prone to identify as Black, we suppose that this relationship could partially reverse the effect of skin colour on income for this group. The impact of skin colour on the Mulato population, which is also statistically insignificant but a bit larger, partially backs this interpretation.

Although a hypothesis for a skin colour interaction with ethnoracial identities was not presented, it is also relevant to interpret the skin colour effect for Whites and Mestizo populations. The White population reaches its peak in White countries (Chile, Argentina, Uruguay, and Costa Rica). In these societies, as Telles and Flores (2013) found, education and age whiten the identity of dark-skinned people as skin colour work as social capital. Thus, in more experienced and qualified populations, where income gaps are more extensive, discrimination against darker populations identified as White may explain the size of the effect of skin colour for people who embrace that identity. In contrast, there is a reverse effect in countries with high proportions of Mestizos: younger, light-skinned, and more educated people tend to assume a Mestizo identity (Telles and Flores, 2013). Hence, there may be Latin Americans who embrace a Mestizo identity and, at the same time, take advantage of their education and skin colour to obtain better jobs and higher salaries.

Finally, concerning ethnoracial configuration at the country level, the effect of skin colour on income reaches its peak in Mulato countries and then, is at similar levels in White and Afroestizo ones. This result partially confirms our hypothesis regarding this factor, but it also shows us an unexpectedly significant skin colour effect in White countries. Mulato countries (Brazil and the Dominican Republic) are the most diverse in terms of skin colour, have large proportions of Black populations and have a long history of Black slavery. As we expected, all of these are features that we believe lay fertile ground for the growth of racism and discrimination based on skin colour. Paradoxically, those countries where skin colour's effect on income is the largest are those with the most considerable proportion of Black population for whom skin tone has no effect. Such a paradox sheds light on the complexities behind racism and racial discrimination in contexts with high levels of miscegenation and blurred racial lines. However, it may have a logical explanation. In these countries, although many people publicly assume that they are mistreated because of their skin tone, only small proportions of them are willing to describe themselves as Blacks or Mulato (Gallur and Arias, 2021). This difficulty in assuming an Afro-descendant identity comes from the high levels of publicly admitted racism in those societies. According to the World Values Survey (Figure 6), Venezuela and the Dominican Republic are the two least racially tolerant societies in Latin America. Just these two countries have the most significant proportions of Blacks and Mulatos. Thus, dark-skinned people from those countries, despite being likely to be discriminated against because of their tone, may not embrace a Black or Mulato identity.

In the Dominican Republic, anti-Black attitudes and discourses are profoundly rooted in its national identity, which contrasts with that of Haiti, its primary and only neighbour (Pérez, 2013). Thus, racism and patriotism lead to people avoiding the assumption of an Afro-descendent identity. However, that is not the case for Brazil, the other country from the Mulato cluster. Looking at Figure 6, Brazil is one of the most racially tolerant countries in Latin America. Why does the effect of skin colour there seem to be much more relevant than in any other country? Brazil was the first country in Latin America to publicly face racial discrimination and it passed an anti-discrimination act in 1951 (Wade et al., 2019), which makes our previous explanation less likely for this case. However, discrimination based on skin colour may emerge even in the absence of an openly racist public discourse when one or more ethnoracial groups are concentrated in some areas (Saideman, 2017). This is precisely the case in Brazil, where the light-skinned and rich south contrasts with the poor and dark-skinned north. As Saideman argues, geographically separated groups have a secure base from which to

discriminate against others. To this, we would add that when such isolation occurs in conjunction with the concentration of opportunities and assets, as is the case in Brazil, dominant groups may discriminate against others without an aggressive public discourse or assuming social costs. This is partly because intermediate groups (light brown-skinned people) are vulnerable as they depend on options concentrated where dominant groups live (Saideman, 2017).

According to our initial hypothesis, a significant skin colour effect in Mulato or Afromestizo countries is expected. Nevertheless, in White countries, it is completely unexpected under our theoretical assumptions. Chile, Argentina, Uruguay, and Costa Rica have narrower skin tone ranges. Their experiences with Black slavery are less significant than in Black or Afromestizo countries, and the miscegenation process there (probably except for Chile) was less intense than in the former. Given that information, how can we explain the significant effect of skin colour in those countries? As far as we know, there are few studies on race and ethnicity topics from these countries. Therefore, a research gap must be filled to answer the previous question correctly. However, one possible answer could be in line with Saideman's theory.

This group of countries does not seem to have an openly racist discourse like Venezuela or the Dominican Republic (Figure 18). Nonetheless, as in Brazil, ethnoracial concentration could be the key to disentangling the mystery behind the considerable influence of skin colour on income distribution in the previously named White countries. Costa Rica, a country with large proportions of self-ascribed White and Mestizo populations, also has a small (about 8%) but highly concentrated Black Population in the city of Limón (Black folk). They are the descendants of Black workers from the English Caribbean who were forced to live there after working on the railroad construction. Up to the present, Black Costa Ricans have not been entirely accepted by their society. They suffer from discrimination and are concentrated in a region known for its high poverty, unemployment, and discrimination (Soto-Quiros, 2012; Hutchinson Miller, 2012). In Chile and Argentina, people with high levels of Amerindian genes (a fair enough proxy of dark skin in these countries) are highly concentrated far away from the big cities where most people live (Fuentes et al., 2014; Catelli et al., 2011). In the north and south of both countries, those areas have fewer opportunities and more social problems than the centre where the big cities are. So again, even without the presence of an openly racist discourse or attitudes, light-skinned people have more access to better life chances than their dark-

skinned co-nationals. Finally, another explanation that can shed light on the unexpected results for White countries is fluctuations in migration. As Bonhomme (in press) explains, the enormous amount of migration to Chile from other Latin American countries has a double effect: first, it reinforces the whiteness hidden behind the *mestizaje* discourse; and second, because of the previous point, it enhances the value of skin colour to establish discriminatory distinctions between “us” and “them”.

Figure 18: Racial Tolerance¹² in Latin America



Source: own elaboration based on the World Values Survey (different waves)

This study shows how many factors researchers must consider and the complexities of inquiring about racial inequalities in Latin America. We have known for a long time that minority ethnic groups, such as Indigenous and Blacks, and women suffer more discrimination and have had worse labour conditions for a long time. We also have evidence about how skin colour negatively affects life opportunities, particularly in the labour market. However, we know little about how these former factors interact with skin colour. In addition to this obscure research area, our knowledge about how contextual variables can explain the variation of skin colour effects across Latin America is also scarce. Our work hopes to be one of the first steps toward filling these research gaps.

¹² The degree of racial tolerance is based on answers to the question about the kind of people the respondents would not want as neighbours. The more frequent the response in a Latin American society that they don't want neighbours from other races, the less racially tolerant we consider that society.

In the meantime, many things must be done to go further. First, as far as we know, there are only a few surveys that have been specifically designed to study racial issues in Latin America. As this is a complex topic, more and different approaches are needed to capture race and ethnicity in the future. For example, items to analyse the impact of other physical features related to race (e.g., hair texture), not only skin colour, could help researchers better understand how race affects Latin American people. Second, it would be helpful to have panel data to analyse better how affirmative action policies implemented across Latin America in the last decades, such as cultural and political changes regarding race and ethnicity, have impacted dark-skinned people's lives. Third, putting this research area on the credibility revolution road is imperative, which implies improving the quality of research designs and using more experimental or quasi-experimental methods to do causal analysis. Previously, some authors have done experiments (Uhlmann et al., 2002) and identified causal effects (Woo-Mora, 2021) regarding skin colour in Latin America. However, they only focus on one country or use alternative techniques to do causal analysis with cross-sectional data, focusing more on an economic than a social scientific approach. So, there is still space to fill this research gap. Fourth, future research considering the contextual effects of ethnoracial configuration should inquire beyond the national level. As Monrroy-Gómez-Franco and Vélez-Grajales (2020) have shown, the impact of skin colour is not constant across countries. Indeed, researchers should consider relevant regional differences at the subnational level to understand how such contextual effects work more broadly. Last but not least, surveys including race and ethnicity questions to be applied in Latin America (e.g. LAPOP or PERLA) should include more precise sociodemographic questions, especially in relation to parental occupations, income and wellbeing, to replicate canonical social stratification and mobility analyses.

Future research should also look into more substantive question. Our most interesting results suggest that labour markets pay more attention to skin tones and increase income penalties for darker people as they come from higher SES families. However, without looking at social origin's influence on education, another interpretation of our results could be that skin colour's social significance varies depending on occupational prestige. According to this alternative explanation, high prestige occupations, usually associated with higher educational achievements, privilege lighter-skinned people, leaving highly educated darker-skinned Latin Americans with fewer job opportunities and fewer sources of income. As a result, the income gap between skin colours increases with education. This alternative interpretation is consistent with historical, qualitative, and country-specific quantitative studies, showing that skin

colour's relevance in Latin American societies increases as we move from lower to higher classes. Nevertheless, scholars interested in the study of ethnoracial inequalities in Latin American should test this alternative hypothesis in order to clarify the real cause behind the interaction effect between skin colour and education on income.

5. PAPER 3: *Measuring skin colour: some considerations before concluding skin colour hierarchies*

Javier Castillo^a, Yaojun Li^a, Anthony Heath^b

^a Cathie Marsh Institute, The University of Manchester, Oxford Road, Manchester, M13 9PL, the United Kingdom; ^b Nuffield College, Oxford University, New Road, Oxford, OX1 1NF, the United Kingdom

Contact:

Javier Castillo, Cathie Marsh Institute, Humanities Bridgeford St. Building, Manchester, M13 9PL, javier.castillojaramillo@postgrad.manchester.ac.uk

ABSTRACT

Several surveys across Latin America have used the PERLA colour scale to measure the skin tone of respondents. These datasets have proven to help highlight ethnoracial hierarchies in this region, whose relevance and persistence were long forgotten. Nonetheless, our knowledge of the influence of interviewers on this skin colour measure is still scarce. We used the LAPOP survey to expand our understanding of this problem and its consequences for substantive research on Latin American ethnoracial inequalities. Our findings show that interviewers explain about 23% of the skin colour variance. Moreover, we illustrate how vital the ethnoracial configuration at the country level is to understanding interviewer effects' variation by country. We also find that darker-skinned interviewers rate respondents' skin tone as darker than lighter-skinned interviewers. Importantly, we clarify that this effect varies depending on the respondent's ethnoracial identity and the country's ethnoracial configuration. Finally, after considering all of these problems, evidence supporting the existence of a pigmentocratic regime in Latin America does not dramatically change.

Keywords: *measurement error, skin colour hierarchies, Latin America, social stratification, inequality*

5.1 Introduction

Since Latin America is a racially diverse society, where racial lines have been blurred throughout a more than 500-year-long miscegenation process, measuring race and ethnicity variables is challenging. National censuses have traditionally distinguished between ethnoracial minorities and the other primarily mixed and White populations (Loveman, 2014). Thus, other ethnoracial variables, such as skin colour, have remained ignored (Telles, 2018). Because of that omission, we know how discriminated against some Latin Americans are due to their belonging to some ethnoracial minority (Hopenhayn and Bello, 2001; Bello and Rangel, 2000; Wade, 2020). Nonetheless, we know much less about the extent to which Latin Americans are mistreated because of the shade of their skin. Previous studies suggest that skin tone is particularly relevant for understanding hierarchies within the Black American community and other ethnoracial groups (Monk, 2021; Ennis et al., 2011). In the case of Latin American populations, evidence also suggests that skin colour is a crucial aspect of ethnoracial identities and hierarchies (Telles et al., 2014; Telles, 2018). So, omitting this variable severely limits our understanding of ethnoracial discrimination in this region.

Because of the solid evidence on the impact of skin colour in different socioeconomic domains, some surveys interested in measuring racial inequalities in Latin America (e.g. PERLA¹³, LAPOP¹⁴ and ELRI¹⁵) have included skin colour items. Hence, the need to assess skin colour precisely is becoming increasingly prominent (Dixon and Telles, 2017). But unfortunately, since this is a novel trend in Latin American social surveys, there is no explicit protocol to do it properly. As far as we know, all surveys measuring skin colour in Latin America use the PERLA's colour palette (Figure 1), an 11-point scale from the lightest to the darkest tone, used by interviewers to assess respondents' skin tone. The researchers who designed this scale claim to have tested it extensively across the region. However, only one study (in which we participated) evaluated the validity and reliability of this palette (Cernat et al., 2019).

Intuitively speaking, electronic devices could help us get more objective measures. For instance, in the United States, some researchers have used these to assess others' skin colour (Wallace et al., 2000; Jablonski and Chaplin, 2000; Pershing et al., 2008). Nonetheless, given

¹³ Project on Race and Ethnicity in Latin America.

¹⁴ Latin American Public Opinion Project.

¹⁵ Longitudinal Study of Intercultural Relationship, Chile (English translation).

the large scale required to do comparative research across Latin America, the costs of doing this kind of research can make it unachievable. Also, qualitative, and historical evidence suggests that human perception is more relevant than machine-driven “objectivity” (Villarreal, 2010). This point is essential for Latin American social research because race assessment is more subtle and complex in this region, so more subject to human perception than in the US, where the “one-drop” rule eases such an evaluation.

Nevertheless, it is essential to note that rating scales are not purely subjective. For example, one previous study (Gordon et al., 2022) shows remarkable consistency amongst evaluators when assessing the same people under similar circumstances using the PERLA scale. Although this is not the same standard as the LAPOP survey, which assigns interviewers to different sets of interviewees under various circumstances, it gives us a good idea of how reliably this scale is. This evaluation suggests that the PERLA scale can correctly assess Latin Americans' skin colour and points to some irregularities (Gordon et al., 2022). On the one hand, the skin colour variation is much higher for Blacks than Whites. On the other hand, the PERLA scale captures more variation for light-skinned people than similar scales. More precisely, regarding applying the PERLA scale in Latin American social research, the study we co-authored reveals that about 20% of the skin colour variance is due to interviewers. Moreover, we found a statistically significant association between raters' tone and the tone they assign to respondents. As the skin tone of the former turns darker, their assessment of others' skin becomes darker, too (Cernat et al., 2019). This result is consistent with findings from other contexts (Hill, 2002; Hannon and DeFina, 2014) and leads to the conclusion that interviewers' idiosyncrasy may affect their skin colour ratings.

Studies have shown that interviewers may systematically affect data collection, a problem that methodologists have labelled “interviewer effects” (West and Bloom, 2017). Unfortunately, the extent of these effects on skin colour measurement has scarcely been studied in cross-cultural contexts, and Latin America is no exception. This research gap is relevant for two complementary purposes. First, it may discount the well-documented association between skin colour and socioeconomic outcomes in Latin America (Telles et al., 2014; Telles et al., 2015). Second, if such interviewer effects exist, they could lead us to make erroneous cross-national comparisons regarding skin colour's influence in this region. In addition to what we pointed out in the previous paragraphs, the work mentioned above shows a significant variation among countries in terms of skin colour variance due to interviewers. For example, while

interviewer effects are close to zero in Venezuela, Peru and Argentina, they reach about 20% in Mexico and Nicaragua. These differences may bias cross-nation comparisons regarding skin colour discrimination, and because of that, they should lead us to nuance our conclusions when working with the LAPOP survey. Furthermore, this study suggests that the interviewer's skin tone in their appraisal of others' skin is more significant for Mestizo and indigenous populations than Whites. Nonetheless we focused more on the interviewers than on their impact on substantial research about skin colour discrimination, and its influences on socioeconomic outcomes. Moreover, we only vaguely considered the effect of the ethnoracial context, even though previous research (Castillo et al., 2018a; 2018b) has pointed out its relevance. For this reason, besides determining the reliability and validity of the PERLA scale (figure 19), it is even more crucial to define the extent to which it could affect our estimates of racial inequalities in Latin America. Answering these questions is the principal aim of this study.

Figure 19: PERLA scale



Hence, carrying out this study has a twofold benefit for social scientists. First, survey methodologists may inform their decision-making process to construct better instruments. Second, substantive scholars could amend their estimations of skin tone inequality by properly considering measurement errors and ethnoracial contexts.

5.1.1 Background on skin colour measurement

As far back as 1979, the National Survey of Black Americans and the Chicano Survey used interviewers to rate the skin tone of their respondents (Garcia and Abascal, 2016). Without using any visual aid, these studies relied on the interviewers' capability to correctly assess respondents' tone on a five-point scale ("very light" to "very dark"). But, of course, such a procedure implies some risks regarding the accuracy and reliability of the skin colour measurements. Other surveys have used visual aids or guides to orientate interviewers' evaluation (Dixon and Telles, 2017). The Project of Ethnicity and Race in Latin America (PERLA) and Massey-Martin are two of the most famous scales for measuring skin colour. Both scales have 11 points, but while the former illustrates colour differences with a chart, the latter does it with a hand picture. Since PERLA signed a joint venture agreement with the Latin American Public Opinion Project (LAPOP) in 2010, the LAPOP survey uses its colour scale in every wave.

Although the PERLA scale has a colour chart to standardise interviewers' judgements, some scholars doubt whether this procedure is objective. In this line, Villarreal (2012) states that using a colour palette gives us a naïve idea of impartiality because any evaluation based on perceptions is subjective. However, other scholars argue that these evaluations are reliable when respondents and interviewers belong to the same ethnoracial group, mainly when both are African American (Udry et al., 1971). Villarreal (2010), beyond his initial criticism, found that the 3-point scale used by the Mexico Panel Study (2006) is pretty reliable (alpha statistic of 0.80). However, in the same study, Kappa statistics showed that the level of agreement decreases as we move from the lightest (0.54) to the darkest colour (0.29). In contrast to these generally positive results, Hannon and DeFina (2016) show that the Massey-Martin (MM) scale is not as reliable as the other examples cited above. The intra-class correlation is only 0.45 for Black Americans and 0.08 for Latin Americans. When new raters are used, such figures drop to 0.28 and 0.003, respectively. When the interviewers and respondents belong to the same ethnoracial group, the levels of agreement improve somewhat. As these researchers recognise, these low levels of reliability bias skin colour's coefficient towards zero, reducing the probability of finding statistically significant effects when assessing skin colour's impact on various socio-economic outcomes.

Previous studies suggest that interviewers' race is a crucial factor in the systematic effects of assessing respondents' skin colour. For instance, using a 3-point scale, Hill (2002) shows that when interviewers and respondents are from different ethnoracial groups, the skin colour evaluations of the former differ significantly from evaluations by same race interviewer-respondent pairs. Hill reveals a higher disparity in skin colour assessments among interviewers whose ethnoracial group matches that of the respondents. Social psychologists have labelled this phenomenon the "out-group homogeneity illusion". It refers to the psychological incapacity to distinguish nuances when assessing groups that are different from ours (Quattrone and Jones, 1980). Other studies suggest that using visual aids or colour palettes to avoid misperceptions of others does not overcome that illusion. That is why Hannon and DeFina (2014; 2016) argue that not matching interviewers and respondents by race may lead us to bias our conclusion about skin colour discrimination.

The findings commented on in the above paragraphs suggest that every scholar interested in studying skin colour inequalities must evaluate and control for such interviewer effects (Villarreal, 2012). This suggestion aligns with Telles and Paschel's (2014) argument that sustaining those micro-interactions, like those of interviewers and respondents, is a critical element of the skin colour classification process. To be more precise, there are two sources of bias related to skin colour research. First, interviewer effects may produce a "regression dilution" by biasing skin colour coefficients towards zero. Second, relevant disagreements in skin colour evaluations between interviewers may create an unnecessary variation, inflating standard errors and minimising the chance of identifying statistically significant skin colour effects. Unluckily, due to the current anonymisation standards, it is not easy to access datasets with much information about interviewers, which limits our possibilities of quantifying the impact of these biases.

To guard against these problems, some studies consider the clustering of respondents within interviewers to adjust standard errors. However, they fail to inform the reader of the between-interviewer variance or the extent to which clustering influences their common mistakes (Hannon and Defina, 2014; Hill, 2002, Villarreal, 2010). So, the effect of the between-interviewer variation on the skin colour measurement and coefficient remains unknown. Another question without a proper answer is how much interviewer effects in skin colour evaluations vary across different ethnoracial contexts. To illustrate this question, let us focus on Latin America. As shown in previous works (Castillo et al., 2018a; 2018b), skin colour's

effect on education and income varies across countries depending on their ethn racial configuration. For example, dark-skinned people seem to suffer more discrimination in countries with a large Black population and a history of slavery. Consequently, we could expect interviewer effects regarding skin colour measurement to be more prominent in some contexts because of the values assumed by ethn racial variables at the country level. Thus, due to the previous assumption, biases in substantive research involving skin colour could be more acute in certain countries. In addition, it remains partially unclear the extent to which interviewers' skin colour helps us explain the between-interviewers variation regarding interviewees' skin colour rating.

Finally, just as with other research problems related to race and ethnicity in Latin America, it is expected to find an interaction effect between some respondents' features, such as their socioeconomic status and self-ascribed ethn racial categories, and interviewers' skin tone. However, this is another research gap regarding skin colour measurement in this region. As in other surveys, the interviewers work in a previously assigned area. So, what we initially attribute to interviewers could also be due to their work areas. To overcome this problem, we concurrently disentangle the two effects by applying a cross-classified mixed-effects model to estimate how significant the effects are across Latin America.

To summarise, in this study, we focus on the following four research questions:

1. To what extent does the amount of interviewer-rated skin colour variance explained by interviewers and areas vary across different ethn racial contexts in Latin America?
2. What, if any, is the relationship between the skin colour of the interviewers and that of the respondents?
3. Does the interviewer's skin colour moderate the relationship between whose socioeconomic status and self-adscribed ethn racial identity and the respondent's skin colour?
4. How much does the skin colour effect on various socioeconomic outcomes vary throughout different ethn racial contexts when the interviewer and area effects are considered?

To answer these questions and fill previously reported research gaps, we use the 2010 Latin American Public Opinion Project (LAPOP), a regional survey that includes all Latin American countries except Cuba and over 27,000 cases (approximately 1,500 per country). In this survey, interviewers used an 11-point colour palette to measure respondents' skin colour. We use cross-classified multi-level models to analyse this data, separate interviewer, and area effects, and quantify their magnitude across different ethnoracial contexts.

5.3 Hypotheses

As said previously, skin colour measurement is not free of biases. For example, underestimated variance when interviewers assess the skin colour of outgroup members, the use of one's reference group as a common value, social desirability influence, and contextual factors are among the most common potential biases affecting skin colour measurement (Dixon and Telles, 2017). However, those biases, especially the influence of contextual variables, have scarcely been tested in Latin America. Interviewer-rated skin colour is one of the most analysed measurement biases. As far back as 1971, Urdy et al. pointed out that this type of measurement is reliable when researchers do not randomly match interviewers and respondents but do so according to their race. However, when this matching does not occur, studies report significant differences in respondents' skin colour average depending on interviewers' race (Hill, 2002; Hannon and DeFina, 2014). These biases suggest that interviewers' idiosyncrasy could influence their skin colour measurement, even in the presence of colour palettes such as that used by the LAPOP survey (Dixon and Telles, 2017). It is necessary to state that interviewers' idiosyncrasy is not the mere product of an individual process but mostly a societal one. For instance, how ethnoracially diverse a social environment is directly impacting interviewers' perception of others' race or skin tone. More precisely, greater exposure to out-group members improves skin colour distinctions and diminishes own-group bias (Campbell et al., 2020). On average, raters from whiter social environments assign darker tones than observers from more diverse contexts.

As in other Latin American surveys, LAPOP usually recruits interviewers with some level of higher education, which means people from the middle or higher classes. Thus, skin colour raters represent a sub-sample of these groups. Following previous theoretical and empirical assumptions, this leads us to assume that:

H1. Countries with whiter, lighter-skinned, and more homogenous upper groups have more significant interviewer effects than the rest of Latin American countries.

It is fair to say that there is a lack of information about our second research question. Indeed, only a few studies are available, and they offer us inconsistent evidence. For example, in the US, Campbell et al. (2020) showed no association between the skin colour of interviewers and that of respondents. On the other hand, Villarreal (2010) indicates pretty similar results in Mexico. However, the two studies used different visual aids (neither used the PERLA colour scale) and incomparable methods to measure interviewers' skin colour. Also, they only focused on one country, which does not allow us to draw hypotheses for the whole Latin American region. As far as we know, the only study evaluating the influence of raters' skin tone on the respondents' ethnoracial identification at the Latin American level is that of Telles and Flores (2013). This study suggests that Latin Americans are more likely to assume a White identity in front of darker interviewers. Thus, like this evidence, we believe that darker raters may unconsciously darken their perception of others' tones to reinforce their social distance and a hypothetical White identity. Moreover, as we said previously, interviewers usually come from the middle and upper classes, commonly embracing a more potent whitening idiosyncrasy (Telles and Flores, 2013). So, it is likely that the origin of the interviewers reinforces this bias.

Therefore, in consideration of this reasoning, our second hypothesis is as follows:

H2. The darker the skin pigmentation of interviewers, the darker their appraisal of the skin tone of others.

The reasoning behind the last hypothesis also affects our expectations regarding the third research question. Suppose the skin tone of the raters influences their perception of others' skin in the way we stated above. In that case, it would be expected that the ethnoracial identity of the former would moderate such an effect in a predictable direction. Thus, as darker interviewers would darken their perception of others to reinforce their social distance and strength their White idiosyncrasy, this influence would intensify in the presence of respondents with a non-White identity and in countries where these identities represent a significant share of their populations and a constitutive part of their national identity. Therefore, our third hypothesis is as follows:

H3. The effect of interviewers' skin colour on their perception of respondents' skin tone increases when the latter embrace a non-White identity and in White countries.

Finally, although all the previous hypotheses claim that interviewer effects impact skin colour assessment in Latin America, we argue that the effect of skin colour on social hierarchies and discrimination is so vastly documented (Canache et al., 2014; Chavez-Duenas et al., 2014; Perreira and Telles, 2014; Telles et al., 2015; Bailey et al., 2014), that even after accounting for such interviewer effects it remains significant. Consequently, our last hypothesis is:

H4. Even after controlling for interviewer effects, the effect of skin colour on various socioeconomic outcomes remains statistically significant.

5.3 Dataset and variables

In this study, we analyse the 2010 LAPOP dataset. This survey is based on nationally representative samples of individuals aged 18 and older in 18 countries across Latin America. The sample size is approximately 1,500 randomly cases per country. However, the sample sizes range between 2,000 and 3000 points in Chile, Nicaragua, Bolivia, and Brazil. The data were gathered through face-to-face interviews done by well-trained survey takers. The 2010 LAPOP survey used a complex survey design, including stratification in four stages and clustering, based on the population distribution of the last national census (LAPOP, 2010). This survey included the PERLA (based at Princeton University) 11-point colour palette (from the lightest to the darkest) as a visual aid to measure skin colour. Using the PERLA colour palette, the survey supervisors rated the skin colour of each interviewer under their supervision by looking at their facial tone. Then, the interviewers ordered the skin colour of each respondent, following the same procedure but without showing the colour palette to them. The PERLA team designed this colour palette based on photographs of Latin American people available on the Internet. After that, it was widely pretested to ensure that the colour palette was easy to use and covered the whole range of colours of Latin American people. Also, this survey considered a question on ethnoracial identities. Every respondent was asked to identify themselves as White, Mestizo, Mulato, Black or Other.

The 2010 wave is the only LAPOP dataset that includes an interviewer ID variable, which allows us to quantify the magnitude of the interviewer effects. We requested the interviewer

ID variable for the other waves from the LAPOP research team, but it was denied due to the claim that it was wrongly coded. Moreover, it is relevant to note that Brazil did not record Interviewer IDs. Thus, we analysed 17 out of the 18 Latin American countries present in this survey. We constructed a country-specific variable to control the differences in ethnoraical configuration between Latin American societies. To do so, we estimated two cluster analyses with the 18 Latin American countries as cases and the following variables: average skin colour, the skin colour fractionalisation index,¹⁶ the share of different ethnoraical groups, and Lizcano's (2005) typology of countries according to the history of their ethnoraical relations, which we included in the second analysis to validate our previous result.

First, we estimated a hierarchical cluster analysis using Ward's method to minimise in-group variance and get more homogeneous clusters. Our proximity measure was the squared Euclidean distance as we only had continuous variables. Dendrogram and the most prominent jump criteria suggest five clusters as the optimal solution. Then, to theoretically validate this result, we estimated a two-step cluster analysis, including Lizcano's typology. Finally, we forced the study to get another set of five clusters to compare the two results. The results pretty much resembled each other. Nonetheless, we preferred the last one, as it aligns more with what theory and history suggest. The first cluster, called "Mulato" (Brazil and the Dominican Republic),¹⁷ represents those countries with the most Afrodescendants and the darkest and most diverse skin tones. We labelled the second cluster, formed by the whitest, most homogenous, and lightest-skinned populations, "White" (Chile, Uruguay, Argentina and Costa Rica). The third cluster is the "Indomestizo" one, and it characterises countries (Peru, Ecuador, Guatemala, and Bolivia) with the highest proportions of Indigenous and Mestizo populations. Then, the "Mestizo" cluster represents those countries (Mexico, Honduras, Nicaragua, Paraguay, and El Salvador) with higher proportions of Mestizos and the second lightest (before White countries) skin tone. Finally, the Afromestizo cluster (Panama, Venezuela and Colombia) depicts countries with high proportions of Whites and Afrodescendant populations and a broad skin

¹⁶ To get this value we used the same formula proposed by Alesina et al. (2003).

$$FRACT_j = 1 - \sum_{i=1}^N S_{ij}^2$$

This formula shows the probability that two randomly sampled individuals from a population belong to different ethnoraical or skin colour groups, where S_{ij} is the proportion of group i ($i = 1...N$) in country j .

¹⁷ Since the 2010 LAPOP survey does not include an interviewer ID variable for Brazil, this cluster only represents the Dominican Republic

colour spectrum. Furthermore, the 2010 LAPOP survey includes a set of sociodemographic variables that we also consider in our analysis. These variables are gender, place of residence (rural or urban), goods score (the number of total possessions from a battery of 13 private and household goods), age, education (years of schooling completed ranging from 0 to 18 or more) and income (a set of ten bands based on the decile distribution of income in each country, which informs us where the total household income falls). Moreover, this dataset has information about the gender and skin colour of the interviewers.

5.4 Analytical approach

We use cross-classified multilevel models (Snijders and Bosker, 2011) to answer our four research questions. These models allow us to investigate the respondent's skin colour variation, which the interviewer explains. Furthermore, we avoid ignoring confounding interviewer and area effects by using these models, considering the cross-cultural dimension. These two aspects have not usually been considered in previous research inquiring about interviewer effects regarding skin colour measurement. Therefore, we add area effects and countries as a fourth level to deal with these problems. This additional level enables us to determine if interviewer effects vary across countries due to ethnoracial factors such as skin colour heterogeneity, the national mean of skin colour, and the relative size of different ethnoracial groups. Thus, our final model has respondents as the first levels, which are nested in areas and interviewers, a cross-classified second level, and everything nested within countries. From the interviewer's standpoint, this model is expressed as:

$$Y_{i(j,k)l} = \gamma_0 + \sum \gamma_h x_{i(j,k)l} + U_{0j} + U_{0k} + U_{0l} + R_{i(j,k)l}$$

In this expression, the skin colour of the respondent (Y) is the dependent variable, which varies by individual (i), cluster(j), interviewer(k) and country(l). The fixed part of the model has an intercept and a h set of control variables with fixed effects, which are represented by (γ_0) and (γ_h) respectively. Finally, this model also has a random part, which is represented by random effects for clusters, interviewers, and countries ($U_{0j} + U_{0k} + U_{0l}$) and a residual term ($R_{i(j,k)l}$).

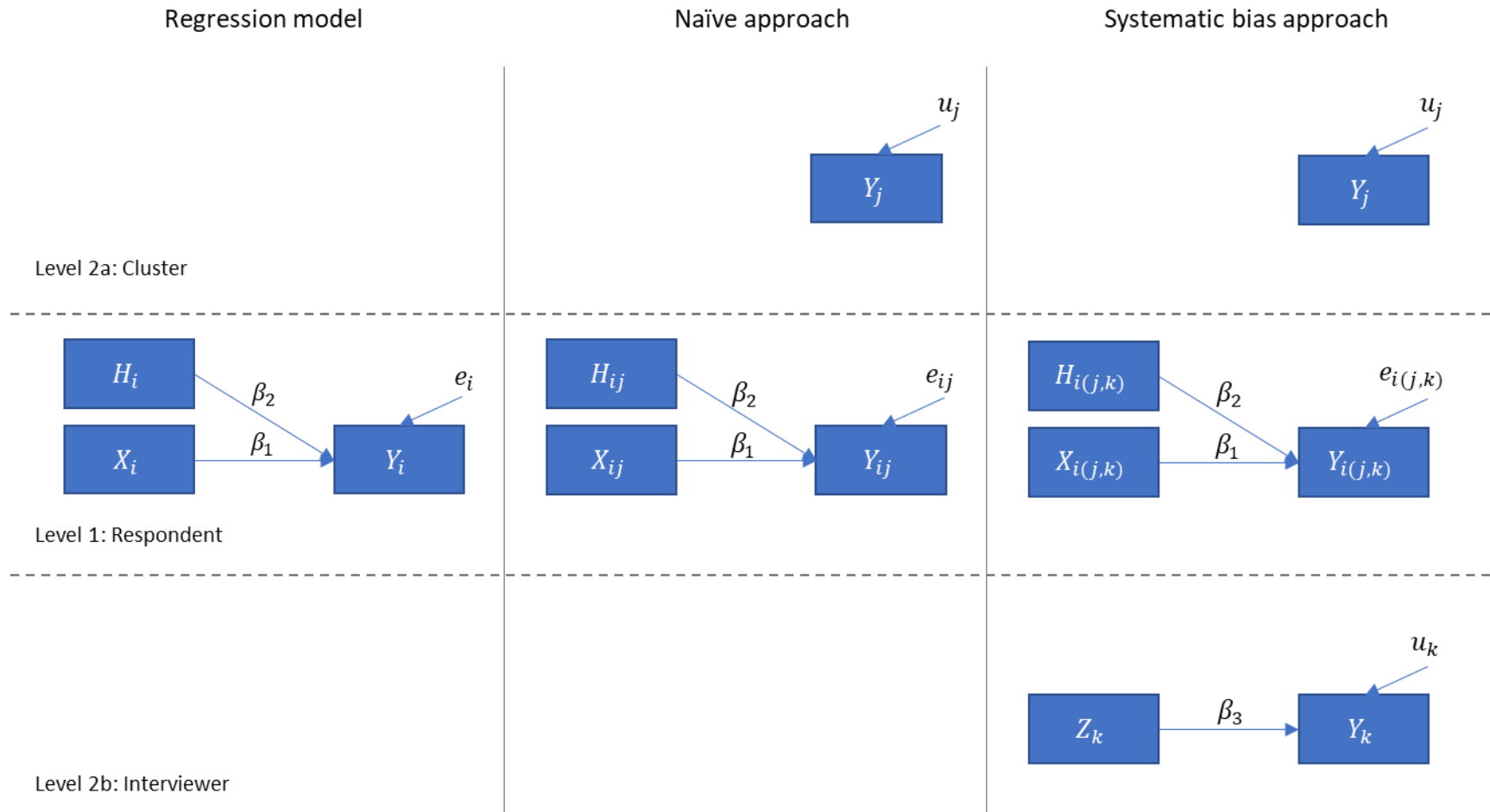
We estimate models with and without control variables. On the one hand, the models without controls give us evidence of the overall sizes of the variances at different levels (interviewers, clusters, and country). On the other hand, the models with control variables for respondents (income, education, ethnoracial identity, rural/urban area, gender, and age) and country levels (ethnoracial configuration) allow us to control some potential confounder differences in ethnoracial composition between countries. Like other surveys, the LAPOP does not randomise the allocation of interviewers in the field. As a result, a specific type of interview (e.g. light-skinned or most educated) can concentrate on some areas, negatively affecting the quality of the skin colour measurement and leading to erroneous conclusions about interviewer effects. We use cross-classified models to deal with this problem, since they enable us to separate various forms of variation and disentangle the interviewer and area effects (West and Blom, 2017).

To answer the first research question, we run the multilevel models specified above, with and without controls, separately for each of our five ethnoracial contexts. This procedure allows us to analyse and then visualise how much the skin colour variation explained by interviewers varies from one context to another. Then, to answer the second and third research questions, we add the gender and the skin colour of the interviewer to our models. Also, we include two interaction terms: one between the interviewer's skin colour and the respondent's ethnoracial identity, and the other between the gender of both interviewer and respondent. To address the last research question, we run two different-from-the-previous-one's multilevel models to answer two substantive research questions: what is skin colour's effect on 1) income and 2) education? The sociological relevance of answering these questions relies on their systematic use as proof of the Latin American *pigmentocratic* regime (Telles et al., 2014; Bailey et al., 2014; Bailey et al., 2014; Villarreal, 2010).

These models are the same in every aspect except for how they deal with the interviewer effects. Therefore, we label the first approach naïve *and* the second one *systematic bias*. While the naïve approach is represented by a multilevel regression model that explains income and education using the skin colour of the respondent and a set of sociodemographic controls, considering the clustering by areas as a second level, the second approach expands the previous model by adding the skin colour of the interviewer as an explanatory variable and also taking into account interviewers as an extra cross-classified level. The first approach resembles what most researchers do by including area as a clustering variable in a complex survey design. In

addition, the second one deals with any bias interviewers may introduce because of their characteristics. Both approaches are graphically explained in Figure 20. All these models are estimated in a two-step procedure. First, we analyse the pooled sample of all Latin American countries. Then, we run these models separately for each ethnoracial context. Hence, we aim to highlight any bias due to interviewers that might exist, altering previous conclusions about skin colour discrimination in Latin America, and then study how such a bias could vary from one context to another. All the multilevel models in this study have been estimated with R 4.1.3 for windows and the *lme4* package (Bates et al., 2015).

20. Figure Multilevel model



The first part of this figure represents a traditional regression approach to model the influence (β_1) of the skin colour of the respondents (i) on different socioeconomic outcomes (Y) after controlling for the influence (β_2) of various sociodemographic factors (H). The second one considers the clustering by areas (j) by adding a random intercept at the area level (u_j). Finally, the third is a cross-classified multilevel model with areas and interviewers (k) that includes the impact of the last ones by adding another random intercept (u_k). Also, it considers the influence (β_3) of the skin colour of the interviewers (Z) to take into account any systematic bias that they might have.

5.5 Results

Before starting more thorough analyses, we examine some descriptive statistics (Table 11). As we can observe, the Latin American mean skin colour is 4.8, which is close to light brown pigmentations. However, as the standard deviation (1.9) suggests, there is a relevant variation. Regarding racial identities, the most prominent groups are Whites and Mestizos, followed by Blacks and Indigenous. Moreover, concerning our demographic controls, almost half of the Latin American sample are males, while the average age is close to 40 years old. Finally, regarding the socioeconomic variables in our model, the mean of years of schooling is 9.4 (with a significant dispersion), and the average income value reveals that our model is slightly below the mid-point of the income distribution. The goods score informs us that, on average, our respondents had 5.7 items from our battery of household and private possessions.

Table 11. Descriptive statistics

		% or Mean	SD
Ethnoracial identity	<i>White</i>	22,4%	
	<i>Black</i>	9,2%	
	<i>Indigenous</i>	7,1%	
	<i>Mestizo</i>	48,8%	
	<i>Mulatto</i>	2,8%	
	<i>Other</i>	9,6%	
Ethnoracial configuration	<i>Indomestizo</i>	31,1%	
	<i>Mestizo</i>	26,7%	
	<i>Afromestizo</i>	16,2%	
Gender	<i>Dominican Republic</i>	5,2%	
	<i>White</i>	20,7%	
	<i>Male</i>	49,5%	
Residence place	<i>Female</i>	50,5%	
	<i>Urban</i>	63,5%	
Skin colour	<i>Rural</i>	36,5%	
		4,8	1,9
Years of schooling		9,4	4,4
Income		4,3	2,3
Goods score		5,7	2,9
Age		38,9	15,6
Skin colour (Int.)		4,6	1,6
Gender (Int.)	<i>Male</i>	40,3%	
	<i>Female</i>	59,7%	

Source: LAPOP 2010

The features of the interviewers deserve a special mention. Regarding the gender of interviewers, about 60% of them were females. However, more relevant to our research objectives are the descriptive statistics about the skin colour of the interviewers, whose average pigmentation was somewhat lighter and more homogenous than that of the respondents. This difference can be visualised in Figure 21, which shows that the skin colour gap between interviewers and respondents was the largest in White countries. This map partially confirms our assumptions about where the interviewers came from, which Figure 22 complements. According to this information, White countries have the most ethnoracially homogenous elite. We initiate our inferential analysis by examining our multilevel models, run on 17 Latin American countries (Table 12). We start by examining Model 1, which does not include any control variables and allows us to know the contribution of each level (interviewer, area, and country) to the overall skin colour estimation. For example, interviewers explain 18% of the skin colour variation, while regions and countries explain 0,03% and 10%, respectively. However, it is crucial to warn the reader that confounding factors could distort such figures.

Table 12. Cross-classified multilevel regression of respondent's skin colour in 17 Latin American countries

	Model 1		Model 2		Model 3	
	B	Sig.	B	Sig.	B	Sig.
Income			-0,005		-0,019	
Education			-0,026	***	-0,022	***
Ethnoracial Identity						
	<i>White (omitted)</i>					
			3,670	***	2,887	***
			1,767	***	1,658	***
			1,235	***	0,839	***
			1,941	***	1,755	***
			1,750	***	1,174	***
Age			-0,002	***	-0,002	***
Gender						
			-0,226	***	-0,187	***
Residence place						
	<i>Urban (omitted)</i>					
			-0,019		-0,020	
Goods score			-0,051	***	-0,050	***
Ethnoracial configuration						
	<i>Indomestizo (omitted)</i>					
			0,075		1,069	***
			0,070		1,082	***
			0,219		0,949	*
			-0,089		-0,347	

Interviewer's skin colour			0,272	***
Interviewer's gender				
	<i>Female</i>		0,078	*
Int. skin colour*Income			0,003	
Int. skin colour*Education			-0,001	
Int. skin colour*Identity				
	<i>Black</i>		0,170	***
	<i>Indigenous</i>		0,027	
	<i>Mestizo</i>		0,091	***
	<i>Mulatto</i>		0,046	
	<i>Other</i>		0,130	***
Int. Skin colour*Gender				
	<i>Female</i>		-0,009	
Int. skin colour*Configuration				
	<i>Mestizo</i>		-0,241	***
	<i>Afromestizo</i>		-0,259	***
	<i>The Dominican Republic</i>		-0,205	**
	<i>White</i>		0,112	**
AIC	88527,86	79209,81	78763,74	
BIC	88568,51	79372,42	79040,19	
Log likelihood	-44258,93	-39584,9	-39347,87	
Number of observation		25105		
Num. groups: Interviewer		734		
Num. groups: Cluster		726		
Num. groups: Country		17		
Var: Interviewer	0,484	0,402	0,34446	
Var: Cluster	0,076	0,035	0,03136	
Var: Country	0,271	0,060	0,04188	
Var: Residual	1,841	1,125	1,1152	

Source: LAPOP 2010.

*** P < 0.001

** P < 0.01

* P < 0.05

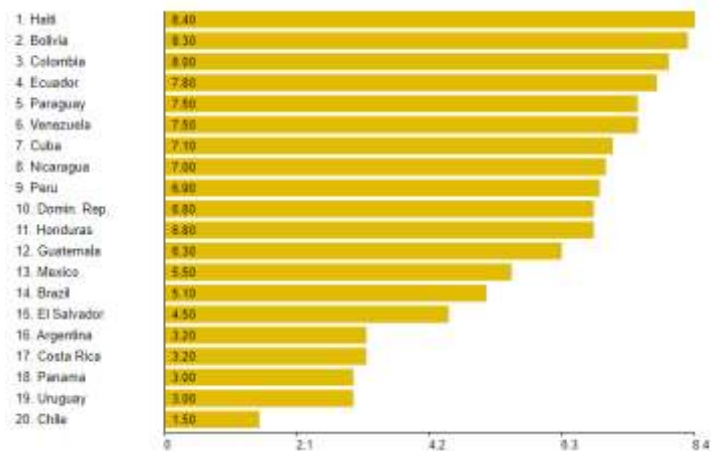
+ P < 0.1 (two-tailed tests)

Figure 21. Distribution of skin colour

Distribution of skin colour
(Lightest = 1, Darkest = 11)



Figure 22: Factionalized elites index



This index is elaborated by the Fund of Peace and goes from 0 (lowest) to 10 (highest). It measures the fragmentation of state institutions along ethnic, class, clan, racial or religious lines. Also, it considers the use of nationalistic political rhetoric by ruling elites, often in terms of nationalism or xenophobia (e.g. “ethnic cleansing”). This graph was elaborated with data from the 2010 wave.

To deal with this problem, we include country-and-respondent-level variables in Model 2. The Akaike Information Criterion (AIC) informs us that including these control variables improves our model. Every respondent-level effect is statistically significant, except income and place of residence. Thus, more educated people, females, whites, those with more goods and older people were commonly classified by the interviewers as lighter-skinned after controlling for other factors. In contrast, poorly educated people, males, those with fewer goods, younger people and non-White Latin Americans, mainly Blacks, were frequently rated as darker-skinned. In this model, about 25% of the total skin colour variance comes from the interviewers. In other words, this means that, even after controlling for other variables, there is a 0.25 correlation between two unintentionally chosen respondents from the same skin colour rater (interviewer).

To go further, we next examine how the interviewer effect varies by ethnoracial context. Figures 23 and 24 show us the variance decomposition for each ethnoracial context. We do this analysis in a two-step process. First, we estimate the relative variance that the interviewers and areas explain in the models without controls. Then, we do the same but in the models with sociodemographic variables for the respondent level. The amount of skin colour variance explained by the interviewers goes from close to 13% in the Dominican Republic to 26% in Indomestizo (Peru, Ecuador, Guatemala, and Bolivia) and 27% in White (Chile, Argentina, Uruguay and Argentina) countries. These figures change a bit after adding individual-level controls, but not significantly. Unfortunately, there is no in-depth study of the reasons behind such an order in the skin colour variance explained by the interviewers. However, it is consistent with the theoretical assumptions we previously made. Countries with more homogenous and light-skinned elites show more significant interviewer effects.

Figure 23: Variation by configuration without controls

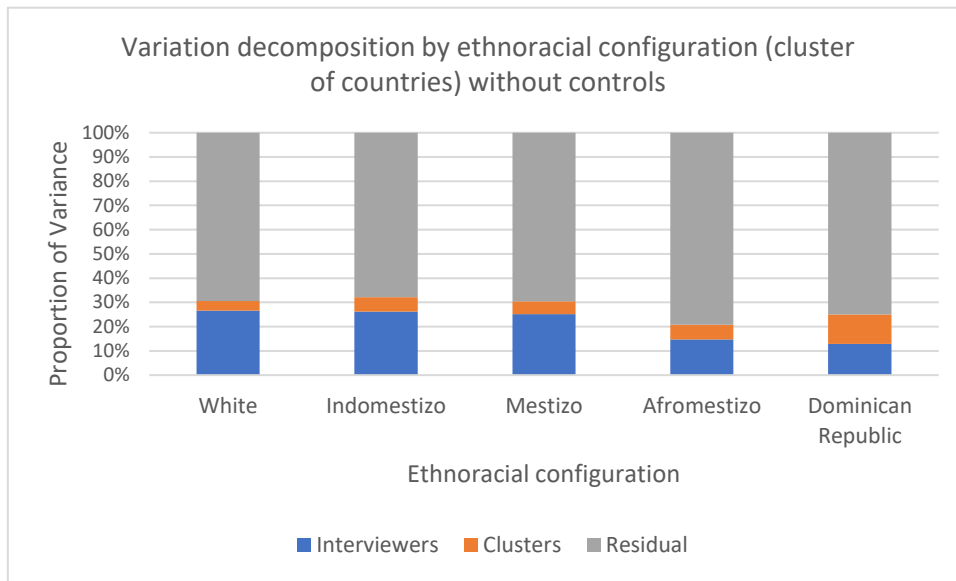
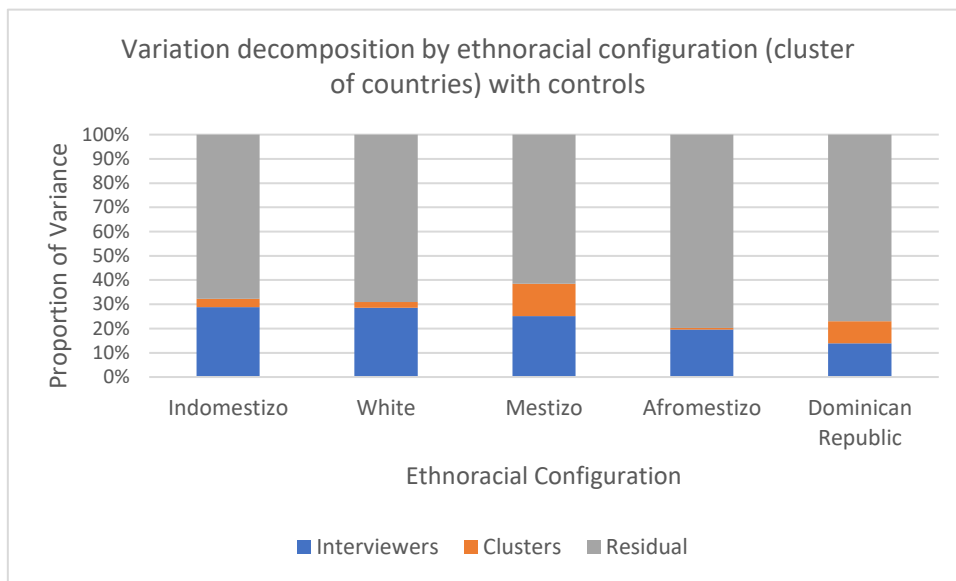


Figure 24: Variation by ethnonational configuration with controls



Different levels of interviewer effects can damage comparative research using this measure of skin colour since any difference in the skin colour effect could be due to interviewers' differential perceptions. However, to clarify how severe this influence is, it is necessary to discard the existence of any systematic error caused by the interviewer. To address this problem, Model 3 includes two interviewer-level variables: gender and skin colour. This model shows a strong association between the skin colour of the interviewer and that of the respondent. More precisely, as interviewers became darker, so did their evaluation of others. As we also control for many respondent-level controls, this influence represents a systematic bias in the way interviewers assessed respondents' shade. Finally, regarding the gender of the interviewer's effect, we observe a somewhat darker average evaluation for females than males.

Model 3 suggests that darker-skinned and female interviewers perceived respondents' skin tone as darker than males and lighter-skinned interviewers. Nonetheless, what is remarkable is that the magnitude of this effect varies depending on the ethnoracial identity of the respondent they were rating, which allows us to answer our third research question. It should be stated that the effect of interviewers' skin colour is significantly more substantial for Black and –to a lesser extent– Mestizos compared with White respondents. For instance, the interviewer's skin colour effect on their appraisal of others' skin tone is 0.28 for White males from Indomestizo countries, whose income and education are at the regional mean.¹⁸ In contrast, for Black and Mestizo respondents with the same characteristics, this effect is 0.45 and 0.37, respectively. Thus, on average and after controlling for other factors, as interviewers turned darker by one unit in the PERLA scale, their assessment of others' skin colour was associated with darker tones if they were rating Black or Mestizo respondents compared to White ones. These results reinforce our idea that there is a systematic bias regarding how interviewers evaluate respondents' skin colour.

Interestingly, the other interactions between the skin colour of the interviewer and the sociodemographic characteristics of the respondents are not statistically significant. However, the ethnoracial configuration at the country level seems to moderate this effect, which reaches its peak in White countries, followed by Indomestizo countries in second place. More precisely, such an effect is 0.39 for the former and 0.28 for the latter, in the case of male respondents who embraced a White identity and had an average income and education. It is noteworthy to say

¹⁸ All of these specifications should be mentioned since we have several interaction terms involving the skin colour of the interviewer.

here that the AIC and BIC statistics suggest that Model 3 is the best one. Moreover, it should be stated that the inclusion of the interviewers' skin colour explains at best 14% of the interviewer-level variance in Model 2. Even though this figure is higher than previous findings (Cernat et al., 2019a), future research will need to go further to explain how interviewers rate others' skin tones.

So far, this study has shown that the influence of interviewers on their rating is systematic. This problem could severely affect our capability to use this skin colour measure in substantive analysis and highlight the necessity of answering our fourth research question. To address this problem, we explain two socioeconomic outcomes previously used by social stratification researchers (education and income) using skin colour and other sociodemographic controls, comparing the two approaches described in the previous section. First, Figure 21 compares the regression results of the two approaches with the pooled sample of 17 Latin American countries. In the case of education, we see that the naïve approach underestimated the influence of skin colour. However, the confidence intervals overlap, indicating that such differences are not statistically significant. In the case of income, the two approaches offer us pretty similar results.

Second, in Figures 25 and 26, we show the regression results of the two approaches separately for each ethnoracial context. Overall, we do not observe any statistically significant variation depending on the approach used. However, in the case of education and particularly in Indomestizo, Afromestizo and White countries, minor differences suggest that the naïve approach tends to underestimate the effect of skin colour on social stratification. Regarding income, Figure 27 shows a similar pattern but with, to some extent, opposite results. For instance, there are no significant differences between the approaches in this case. Nonetheless, in Afromestizo countries and the Dominican Republic, the systematic bias approach seems to weaken the influence of skin colour. In contrast, in White countries, that approach almost makes the skin colour effect statistically significant.

Figure 25: The skin colour effect on education and income in Latin America

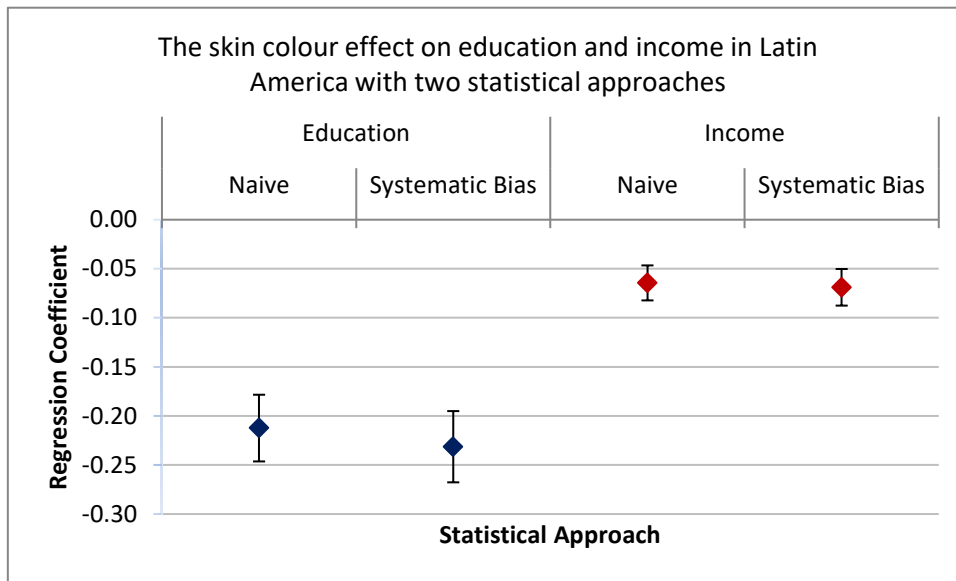


Figure 26. The skin colour on education

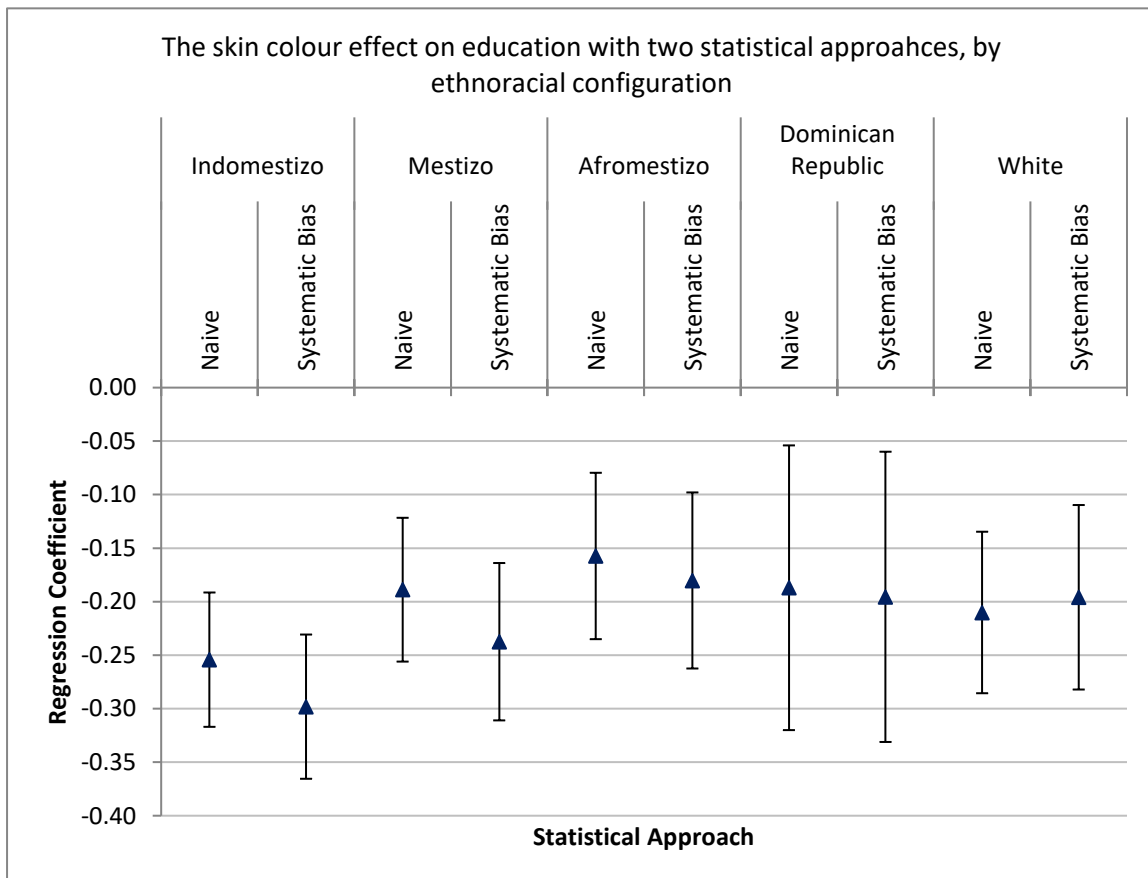
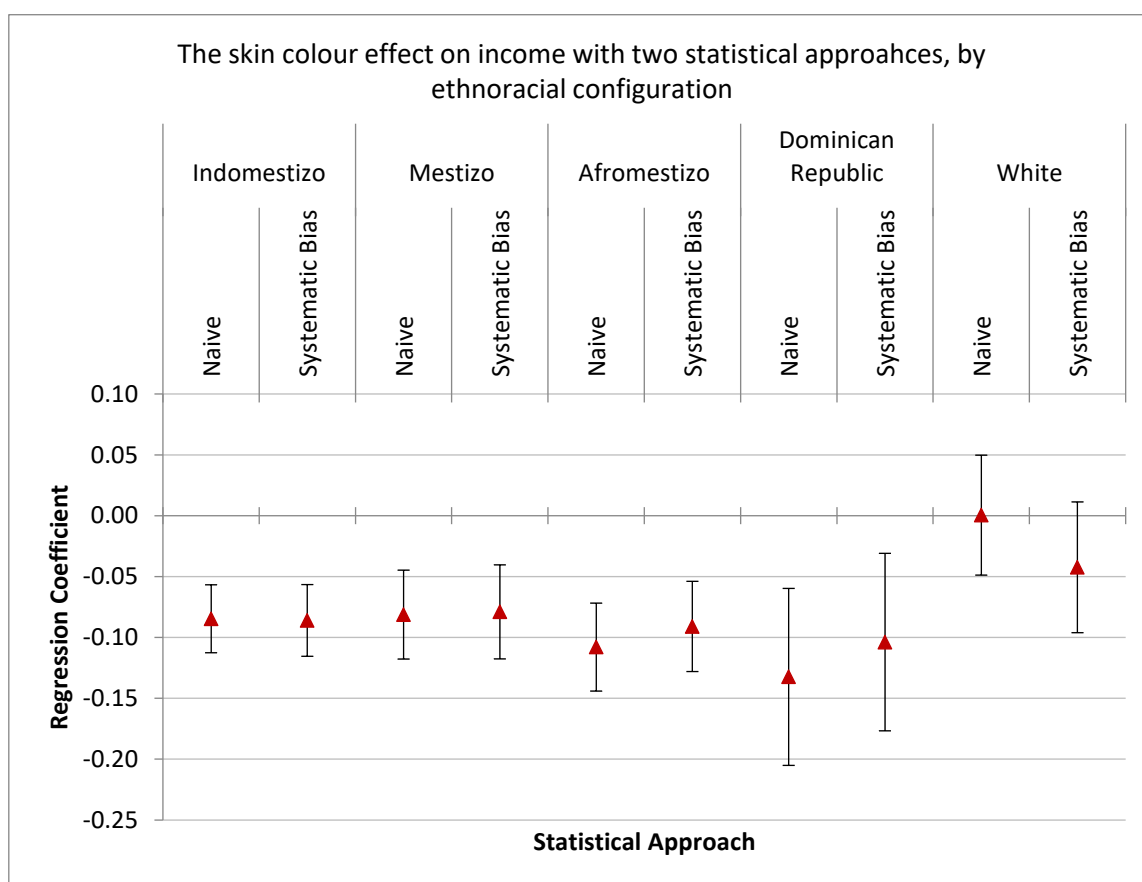


Figure 27: The skin colour effect on income



5.6. Conclusion

Previous studies have shown that the skin colour of respondents as rated by interviewers has a relevant impact on the Latin American social stratification regime and discrimination. This is what the Chilean physician Alejandro Lipschutz labelled *pigmentocracy*. These findings have boosted the inclusion of skin colour measures in Latin American social surveys. However, only one study (Cernat et al., 2019) –in which we participated– tested the influence of interviewer effects on skin colour measurements aided by the PERLA scale.

We expand the previous findings in three ways. First, we restrict our sample to only Latin American countries. Our previous study tested interviewer effects considering English-speaking countries whose ethnoracial configurations differ significantly from those of the former Spanish or Portuguese colonies, which could have led us to misleading conclusions. Second, we believe that there are new interaction effects between interviewers' skin colour and other variables, which helps us have a more comprehensive understanding of how interviewers' characteristics affect their perception of others' skin tone. Third, we include a different and

more solid classification of countries according to their ethnoracial configuration, whose relevance in understanding the skin colour effect on social hierarchies we showed before (Castillo et al., 2018a; 2018b). Thus, we can assess how much interviewer effects vary from one context to another and, in turn, evaluate how interviewer features –mainly skin colour– may have biased our previous findings using this classification.

This study's evidence can be organised into three main results. First, we showed that the interviewer-level variance is about 23% after including controls at different levels (respondents, interviewers, and countries). This figure represents an interviewer effect whose size is moderate. In addition, we showed that this effect fluctuates significantly from one ethnoracial context to another. The relevance of this result relies on the fact that such context-level variation can lead to erroneous conclusions when doing comparative research. Second, our findings show a systematic bias regarding how interviewers classify the skin colour of others. As the skin colour of the interviewer turns darker, their rating of the respondent's skin tone also does so. Furthermore, our findings suggest that such an influence is more potent for Blacks and Mestizo respondents, just as it is in White and Indomestizo countries. Finally, as the third main result of our study, we showed that after considering interviewer variance and skin colour in substantive research, there are no significant differences compared to the traditional regression models used in previous research.

The last main finding suggests that our conclusions regarding skin colour's role in the Latin American social pyramid and discrimination are not biased. However, to avoid erroneous results in future research, scholars should always consider that the interviewer-level variance and skin colour may play a crucial role depending on the data and questions they aim to answer. All these findings support what we assumed in our theory section. For example, regarding the first hypothesis, we showed that White countries have the most significant interviewer effect in our model. Although we did not directly test the influence of having more homogenous and lighter-skinned elites, our findings give indirect evidence favouring our expectations. Regarding the second hypothesis, our results are in line with our expectations. Again, although we did not directly test the relevance of all the factors involved in our theoretical reasoning, the fact that darker interviewers tended to assign darker tones to respondents suggests that the former –who on average were lighter-skinned and supposedly wealthier than the respondents– may have reinforced their social distance with respondents by darkening them. Furthermore, our findings support the third hypothesis because the effect of the interviewer's skin colour is

the largest in White countries and for Black respondents. Finally, the results we presented here also support our fourth hypothesis. This means that the skin colour inequality previously reported by other scholars interested in Latin America is not a mere consequence of measurement errors caused by interviewers. Therefore, we can assume that light-skinned people's systematic higher social position across Latin America is likely to be an actual outcome of the long-lasting inequalities that were started by the colonisation process.

Since we did not directly test any of our main theoretical suppositions, future research should go deeper to clarify the actual causes behind the associations we have tested. For example, regarding our first hypothesis, scholars should explore why the second-largest interviewer effects are seen in Indomestizo countries, whose elite and ethnoracial composition differs from that of White countries like Chile. By exploring this apparent anomaly, we could be sure that the elites' skin colour and their degree of homogeneity are indeed the causal factors behind the interviewers' effect we analysed. In relation to the second hypothesis, it is crucial to illuminate the causal mechanisms behind the interviewers' skin colour effect. This sort of bias may be oriented towards embracing a White identity, as previous research (Telles and Flores, 2013) shows that people tend to self-identify as White in front of darker raters. Therefore, the interviewer bias we analysed here could ideally be the opposite of this phenomenon. Testing these explanations is a must on the future research agenda. Finally, about the speculations behind the third hypothesis, we can guess that different dimensions of race interrelate with each other, affecting the interviewer's skin colour effect on the skin colour measure. More concretely, we believe that White idiosyncrasy could be the crucial factor behind the systematic biases that interviewers introduce into skin colour measurement. Addressing all these research questions will make it clear whether our theoretical speculations need to be updated in light of new evidence.

From a methodological viewpoint, this study sheds light on the necessity of dealing with the measurement errors caused by interviewers. Besides using multilevel models to minimise their impact on substantive research, there are two other ways to tackle them. First, we refer to conducting an extensive training of interviewers before collecting data or, in second place and in the expectation of more objective measures, using electronic devices specially designed to capture the whole range of human skin colours. The last option should be seriously considered in some cases, as the PERLA scale shows poorer results than electronic devices regarding the reduction of measuring errors when surveys can gather only a single rating

(Gordon et al., 2022). However, such advice should be nuanced by the finding that skin colour, as perceived by others, is crucial to understanding racial relations in Latin America (Telles, 2014). For all the options to be available, the survey data must include interviewers' IDs and relevant other controls for the interviewer level. In addition, we strongly recommend that both survey designers and data managers frequently perform reliability and validity analyses of their instruments to measure skin colour.

In summary, our study represents a significant contribution to the study of skin colour measurement and racial stratification. We have complemented previous findings in this field (Hill, 2002; Hannon & DeFina, 2016; Villarreal, 2012) by illustrating and expanding our understanding of interviewer effects' peculiarities and their consequences for researchers interested in Latin American inequalities. These contributions are crucial as having high-quality data, just like performing outstanding research, is essential to design policies to tackle the long-lasting racial barriers in this region.

6. CONCLUSIONS

The preference for whiteness or lighted-skinned people is a social problem that is well documented by social scientists. Even though there are enough historical and quantitative findings to show that it is a worldwide phenomenon, most of the evidence comes from the United States. Colourism, which is the label that the American Academy has given to this problem, has profound roots in countries as far away as Japan. The highly profitable cosmetic industry of skin bleaching products, whose creams and lotions are in demand from Nigeria to Indonesia, demonstrate how cross-cultural colourism is. However, the American roots of the colourism concept manifest in a constant attempt to disentangle this idea from that of race and ethnicity. For example, in Latin America, those three concepts are tightly related, reinforcing the necessity of properly understanding how the preference for light skin emerges in different contexts. Filling this research gap is the principal aim of this thesis. This section shows the obscure zones that this thesis illuminates in a six-step process. First, we discuss the historical roots of colourism globally, especially Latin America. Then, we illustrate what was known and what needed to be inquired about before conducting this research. In the third subsection, we explain the theoretical model that supports our hypotheses. Fourth, we summarise the main findings of this research and how they help or neglect our initial theoretical assumptions. Fifth, we signal the limitations we faced throughout this study, how they impacted our results and the road ahead to gain a complete understanding of skin colour inequalities in Latin America.

6.1 Origins of the preference for light skin

The beginning of colourism can be traced back to two primary sources (Dixon and Telles, 2017). First, it is usually the consequence of European colonialism in the Western World, mostly on American and African soil. On the contrary, it is usually an epiphenomenon of the historical class division of labour in primarily agricultural societies in the Eastern World, where lower classes are constantly working under the sun. In the Americas, as part of the Western World, differences in social status due to skin colour are commonly explained due to the social hierarchies imposed after the European Empires' invasion. However, the British and Iberian Empires embraced different values and developed various systems of racial relations, which in turn triggered different types of colourism (Bonilla-Silva, 2004, 2009; Sue, 2009). For instance, in the former English colonies, the one-drop rule created a clear linguistic distinction between

race and colour (Banton, 2012; Monk, 2016). Thus, ethnoracial categories were –and to some extents still are– the canonical concept to understand the socioeconomic differences between individuals and the colour distinctions. In the best case, they were used to analyse differences within ethnoracial groups. In contrast, in Latin America, the intense process of miscegenation blurred racial lines, making race and colour hardly distinguishable words (Telles and Paschel, 2014). Indeed, nowadays, people prefer to talk about colour instead of race.

Thus, to better understand how both ideas coexist, we offer a standard definition of all of the concepts involved in this research. First, race refers to an externally imposed classification based on physical features, such as skin tone or hair type. All those features took place within the context of the European colonisation process (Golash-Boza, 2018). In opposition, ethnicity refers to a self-assigned identity based on cultural traits and shared history. However, as another miscegenation process consequence, both concepts are amalgamated in the Latin American understanding of these issues. For this reason, like Telles and the PERLA team (Telles, 2014), we prefer to talk about ethnoracial categories to refer to White, Black or Mestizo identities. In this context, skin colour summons cultural and genetic inheritance ideas, turning into the essential concept for understanding racial hierarchies in Latin America. This goes far beyond the relevance of colourism in the Anglo-Saxon sphere and highlights the necessity of coining a concept able to account for this Latin American particularity. To meet this need, Lipschutz's concept of *pigmentocracy* (1967) is the best alternative since it describes this region as a social hierarchy based on ethnoracial categories and a skin colour continuum where the whitest and light skins are at the top.

6.1.1 Pigmentocracy, colonialism and slavery

According to social science scholars, the history behind the appearance of colourism in the Americas and the pigmentocratic regime in Latin America is the history of slavery. In the context of colonial enterprise and to get the most benefit from predominantly agrarian economies, European empires started to enslave people, first and mainly in Africa, but also – to a lesser extent– in other latitudes. One of the most frequent justifications for enslaving non-European people relied on their skin colour. An ad hoc interpretation of the Bible, trying to link the darker skin of non-European people to sins and curses, was a recurrent justification for treating darker-skinned people like non-humans that could be treated with pure brute force

(Jablonski, 2012). In the Americas, the first consequence of this cultural shift was the establishment of a privilege ladder based on how White, culturally, or phenotypically, people looked (Mörner, 1967; 1970). The institutional manifestation of the previously described change was the establishment of a caste society (*Sociedad de castas*) in the Portuguese and Spanish colonies. This social structure put White settlers at the top, followed by Mestizos (mixed-race people, half White half Amerindians), Amerindians and Blacks at the bottom. Nevertheless, and in contrast to racial hierarchies in the English-speaking colonies, the Latin American colonies lacked laws prohibiting unions between individuals of different races. As a result, racial lines blurred, the "pure" White population remained a small group, and a hierarchy based on colour differences more than on ancestry (as in the English-Speaking colonies) emerged.

6.1.2 New republics: from the whitening ideology to racially blinded societies

In the nineteenth century, scientific ideas regarding racial differences stated that Latin American republics were behind the United States and Europe in terms of industrialisation and economic development because of their racial admixture and lack of White populations. In concordance with that idea, soon after the Latin American republics gained their independence from the colonial powers, they sought to whiten their people by incentivising European migration (Pérez-Rosales, 1886). This State-driven operation reached its most ambitious version in the Southern Cone, where elites embraced a whitening ideology without nuance (Wade, 2010). Some other countries failed in this campaign and incorporated a mixing-race doctrine; however, it always subtly emphasised the White pole of that admixture. Thus, concepts like "racial democracy" in Brazil or "cosmic race" in Mexico were frequently used by national elites to say that the racial lines had vanished, and that everyone had become mixed-race because of *mestizaje* (Martínez Casas et al., 2014). A relevant consequence of this cultural change was that, slowly but decidedly, Latin American countries stopped asking for ethnoracial categories in national censuses or any other applicable State survey (Loveman, 2014). Therefore, as much as the political elites, Latin American social scientists were blind to the racial hierarchies in this region for a long time.

6.1.3 The multiculturalist turn

In the 1980s, a relevant cultural change occurred in Latin America regarding the visibility of several ethnoracial groups whose existence was hidden from the public. Thanks to this change, which is often labelled the multiculturalist turn, ethnoracial differences and hierarchies, as much as racism, started to be publicly discussed in Latin American societies. Due to this new trend, politicians and social scientists from Latin America have begun to acknowledge that their communities are not exceptionally distinct from the United States since they are not non-racist as their leaders believed (Wade et al., 2019; Rahier, 2014; Hernández, 2013). However, this does not mean that Latin American societies are similar to the former English colonies in every aspect. It is still recognised that colonialism, racial relations, and nation-building have some particularities in Latin America. Additionally, and perhaps more relevant than the previous assertion, the multiculturalist turn leads us to recognise that Latin America is not a homogenous region. Thus, asserting that not everyone in Latin America is mixed-race should not obscure the significant differences between the Southern Cone and Andean countries in terms of the ethnoracial composition and hierarchies.

The multiculturalist turn helped Latin American societies to institutionalise ethnoracial differences. Thus, since the 1980s, many countries have legally recognised the existence and rights of the indigenous populations within their borders. As a result, the indigenous communities in different countries, such as Bolivia or Colombia, have gained political rights and guaranteed access to land. However, those Amerindian groups' recognition has come from a cultural perspective, which most of the time has obliterated references to racism or ethnoracial hierarchies (Wade et al., 2019). So, even during these new times, the Amerindian and Black populations have suffered from discrimination and violent actions against them. In the 1990s, the constitutions of several Latin American countries declared their identity to be multiethnic or plurinational, first by recognising indigenous populations and then Black ones (Van Cott, 2000; Loveman, 2014). Nevertheless, with the exception of Brazil, questions about ethnoracial discrimination were still seldomly inquired into (Htun, 2004). There were two main consequences of this oblivion: first, (1) ethnoracial problems were commonly treated as a relevant issue exclusively for ethnoracial minorities; and second, (2) social differences among the rest of the population were rarely attributed to ethnoracial features. Thus, studies about social stratification in this region preferred to talk about classism instead of racism (Franco et al., 2007).

In recent decades, approximately since the 2000s, academic research and political actions regarding ethnoracial hierarchies in Latin American societies have become a trendy topic. Moreover, racial discrimination has stopped being treated as solely a problem for indigenous and Black populations living in rural areas. Hence, canonical issues of social stratification have become relevant for these groups and researchers interested in such issues. Ethnoracial differences in education and income, primarily due to discrimination in labour markets or educational systems, have become as notorious as land rights or constitutional recognition (Wade et al., 2019). Such a shift within the multiculturalist turn has changed the focus of ethnoracial problems and expanded the borders of the population (being) affected (by them). Consequently, social researchers have increasingly asked about the socioeconomic differences amongst Latin Americans due to ethnoracial factors, giving birth to a novel approach: studying skin colour hierarchies in Latin America. This revival of the *pigmentocracy* concept has shed light on the current racial orders, with light-skinned Latin Americans at the top and darker ones at the bottom (Telles, 2014). Within this new approach, this thesis is inscribed.

6.2 What is known and what still needs to be known

Before writing this thesis, we did know that colour hierarchies existed in Latin America. Even after decades of public neglect by political and intellectual elites, evidence of light-skin privilege was widespread across the region. Unlike the US, Latin America lacks well-defined ethnoracial categories and hierarchies based mainly on ancestry; however, it has its own kind of ethnoracial hierarchies, whose tipping point is phenotype instead of descentance. Following this assumption, a group of scholars have found that darker-skinned Latin Americans are systematically in the worst position in terms of perceived discrimination, health conditions and crucial socioeconomic outcomes, such as income and education (Caneche et al., 2014; Perreira and Telles, 2014; Gravlee et al., 2005; Telles et al., 2015; Bailey et al. 2014; 2016). More critical to the understanding of ethnoracial inequalities in Latin America, most of the studies mentioned above have shown that colour scales, especially the one designed by the Project for Race and Ethnicity in Latin America (PERLA) based at Princeton University, are better than self-ascribed identification (e.g., White, Black, Mestizo, Mulato, Amerindian) to assess the significant differences in socioeconomic outcomes (Telles, 2014; Monk, 2016). The relevance of this finding is related to not only preferring one variable over another but

recognising that the way people are perceived by others –as skin colour is measured using the PERLA scale– is more important than how they perceive themselves –as ethnoracial identities are commonly assessed– to understand ethnoracial hierarchies in Latin America. Furthermore, the PERLA colour scale has proven to be a pivotal factor in understanding why some people ascribe to a White identity while others assume a Black, Mestizo or Amerindian one (Telles and Pashel, 2014; Telles and Flores, 2013). Thus, although every scholar interested in these issues should control for both in tandem, they should also note that they are not deciding between factors with the same relevance position, since consistently and systematically, skin colour has proven to be the variable around which other ethnoracially related problems organise.

Finally, from a methodological standpoint and because interviewers use the PERLA scale as a visual aid to assess the skin colour of respondents (it is not a "truly" objective measure), some scholars have raised concerns regarding three vital aspects. The first is the validity and reliability of this scale. The second is the existence of the effects of the interviewer and how they can vary across Latin America. Finally, there are also concerns regarding the systematic bias that interviewers can introduce in measuring skin colour. Overall, overestimating the importance of these problems implies the risk of leading researchers to affect their conclusion severely in two complementary ways. First, they can make erroneous statements about cross-national comparisons regarding the effect of skin colour on socioeconomic outcomes. Second, they can underestimate the effect of skin colour on the presence of systematic biases introduced by interviewers.

A few studies have addressed these problems by using the PERLA. For example, Gordon et al. (2022) found that skin colour measures using the PERLA scale are highly correlated with skin colour measures obtained by using other scales that are used by interviewers (the Massey-Martin) and electronic devices (Labby spectrophotometer and Nix colourimeter). In addition, skin colour measures using the PERLA scale show an expected variation within ethnoracial groups, like other instruments. The PERLA scale shows enough comparability, meaningfulness, and consistency for use in skin colour measurements in face-to-face surveys. However, the essential finding of Gordon et al. (2022) is that the PERLA scale seems to be better than other scales to capture the lightest range of colours, while electronic devices are preferred to scales used by interviewers in terms of obtaining more objective ratings.

The last statement can be relevant to discarding the PERLA scale, favouring more objective measures like the Nix colourimeter. However, this kind of instrument is still extensive enough to be used in cross-national surveys across Latin America. Moreover, as previously said, the ethnoracial discrimination behind the influence of skin colour on Latin American social hierarchies is not the mere product of an "objective measure" of shades but of how others perceive people. Regarding the effects of interviewers and their impact in substantive research involving skin colour, as far as we know, the only finding addressing these issues is that of Cernat et al. (2019). According to this study, interviewers explain a moderate but relevant share of skin colour variance. In addition, such a variation changes dramatically from one country to another. Finally, there is a systematic bias in the way that interviewers rate the skin colour of respondents—dark-skinned interviewers rate respondents' skin colour as darker than their light-skinned colleagues. This is all that we knew before doing this research. However, there were relevant research gaps regarding the factors that can potentially moderate the effect of skin colour on socioeconomic outcomes, as much as the influence of interviewers' skin tone on respondents' skin tone as rated by them. More precisely, when we considered potential moderators, we considered gender, social origin, ethnoracial identity and the ethnoracial composition at the country level. Based on our understanding, all these variables are theoretically and historically related to skin colour as the central stage of the Latin American social pyramid. In the next section, we explain the links among all of them.

6.3 Skin colour inequality in Latin America: an intersectional and multilevel approach

This section explains the theory behind our central assumption that skin colour is the primary factor in understanding ethnoracial inequalities in Latin America, whose effect –we suppose– is moderated by gender, ethnoracial identity and social origin. Moreover, to understand why such an effect varies by country, as prior research has shown, we assess the relevance of ethnoracial configuration as a country-level moderation factor.

6.3.1 Gender and skin colour

The worldwide use of bleaching products primarily by women suggests that both variables are tightly related. For instance, if we strictly follow Hunter's theory (2005), we can assume that beautifulness is an ideology that is profoundly racialised. As an example of this relationship, in non-formal Spanish, the word *guero* may mean light-skinned or beautiful. Because of this association, women can be ranked in terms of their beauty from the lightest to the darkest. Interestingly, in some contexts, there is a reverse association for men. Thus, for example, in the US, white but darker-skinned males are perceived as more attractive than their male counterparts (Hersh, 2011). Other studies have shown that this association also works for Black American men. For instance, Hill (2002) offers evidence about darkest-skinned males being perceived as more masculine and more sexually potent than the lightest-skinned Black males. However, abundant evidence suggests that the correlation between skin colour and attractiveness is more robust for women than men (Wade, 2008; Hill, 2002). Neither the association between those two variables nor the potential interaction effect between skin colour and gender regarding their impact on socioeconomic outcomes has ever been tested in Latin America. (Neither has the potential interaction effect between skin colour and gender regarding their impact on socioeconomic outcomes.) Despite that, as displayed in the theory section of this thesis, there is a link between attractiveness and labour market opportunities and education. Thus, we expected a more decisive skin colour effect for Latin American women than men.

6.3.2 Skin colour and social origin

Since the colonial period, having pale skin has implied having a higher status position and more social privileges. This association did not disappear after the end of the colonial period. Indeed, the recently born Latin American republics encouraged European immigration, reinforcing the rights and status traditionally associated with having light skin (Graham, 1990). The strength of this whitening tendency led State officials to encourage people to identify as White in national censuses (Loveman, 2009). The practical effects of such a trend were so significant that many Latin Americans developed several tricks to mimic a White identity. Nevertheless, not everyone was equally effective in such an operation. Individuals from higher class families, or those who had climbed the social ladder, disregarding their skin colour, were more effective in getting better treatment to mimic a White identity. Much like social scientists,

this is what laypeople call "money whitening" (Telles and Flores, 2013). Various pieces of research have found that more than ethnoracial reclassification, the effect of being a non-White or non-light-skinned individual in a high-class position is getting better treatment (Wagley, 1952). However, assertions about the status-whitening impact are based on biographies or historical studies focused on old periods. The only evidence of status-whitening in current times is Telles and Flores' study (2013). Still, it is based on White self-identification instead of receiving better treatment for being a wealthy dark-skinned Latin American.

To test the current presence of status-whitening in Latin America, we expected to find a significant interaction effect between skin colour and social origin. More precisely, we hoped to obtain evidence of the increasing irrelevance of skin colour for individuals who came from higher-status families or had higher-status positions. In contrast to the previous assumptions, evidence from cases as different as Puerto Rico and Chile that we discussed in the introduction suggested that it was likely that a reverse interaction effect would be found. These results indicate that the influence of skin colour on discrimination and, consequently, socioeconomic outcomes increase in high-status Latin Americans compared to low-status ones (Torres et al., 2019; Gravlee, 2005). This opposite-to-our-initial-belief evidence highlights the importance of assessing how social origin can moderate the effect of skin colour. Thus, we were still expecting a significant interaction between these two variables, but we were open to a reversed relationship.

6.3.3 Skin colour and ethnoracial identity

Initially, we were not interested in assessing an interaction effect between ethnoracial identities and skin colour. However, as many studies on ethnoracial relations and ethnoracial hierarchies in Latin America suggest, scholars should consider several variables since race and ethnicity are multidimensional phenomena (Telles, 2014). We included both skin colour and ethnoracial identification in our analyses. Although the former has proved to be a better explanatory factor of socioeconomic inequalities than the latter, the two factors capture different aspects of ethnoracial dynamics and work in tandem. We did not have a hypothesis to test regarding a potential moderation effect of ethnoracial identities on the influence of skin colour. Nonetheless, as the historical and empirical evidence suggests, skin colour seems more relevant for mixed-race people, especially Mestizos, as they have a more comprehensive skin

tone range (Dixon and Telles, 2017). Therefore, even though we did not explicitly assess it, scholars should expect that ethnoracial identities moderate the effect of skin colour on socioeconomic outcomes. To be precise, skin colour relevance should increase for Mestizo populations, leading to dark-skinned individuals identified with the Mestizo label to the worst scenario.

6.3.4 Skin colour and ethnoracial composition

So far, only one study has evaluated the moderation effect of ethnoracial composition on ethnoracial differences in Latin America (Caneche et al., 2014). This study showed that perceived discrimination, which is a proxy variable of the mechanism behind skin colour gaps in education or income, is highest when ethnoracial diversity rises to its peak. Although they only use country-level variables, other studies indirectly support the previous assumption (Alessina et al., 2003). Ethnoracial diversity has a significant and negative impact on ethnoracial hierarchies in Latin America. When assessing ethnoracial composition, these studies only consider traditional ethnoracial identities, ignoring skin colour or historical aspects. However, these dimensions are as relevant as ethnoracial identities since other scholars have shown that the degree of ethnoracial and cultural mixing also affects social hierarchies in Latin America (de la Cadena, 2000). Moreover, a historical path of institutionalised and systemic racial discrimination is essential in explaining contemporary ethnoracial scales (Taylor, 1998).

To avoid this problem, we created a concept of ethnoracial composition that was more complex than previous concepts by including skin colour variation, diversity in terms of ethnoracial identities proportions, and the history of ethnoracial diversity as conceptualised by Lizcano (2005). We planned to capture the relationship between the effects of skin colour and contextual factors, as Sue and Golash-Boza (2013) argue about the increasing relevance of skin colour for attractiveness in contexts characterised by high levels of ethnoracial admixture. In this context, we expected to find a more significant effect of skin colour in countries characterised by wide skin colour ranges, heterogeneity in terms of ethnoracial identities, mixing race ideologies, blurred racial lines, critical histories of slavery, and legally established ethnoracial discrimination.

6.3.5 Skin colour and interviewer effects

The preceding hypotheses state various specifications for the relationship between skin colour and socioeconomic outcomes. Nonetheless, they say nothing about how the skin colour of the interviewer associates with the skin colour of the respondent they assess. At this point of our research, our hypotheses were not so different from previous ones. We expected to find systematic biases in the way raters assess the skin colour of others. Specifically, and in line with the status-whitening phenomenon, we expected that darker raters would systematically perceive others' skin tone as darker to reinforce their social distance from the latter. As a direct consequence of this assumption, we looked forward to finding that the previous effect would be the highest for Black respondents. Finally, we expected to find interviewer effects that varied by country depending on its ethnoracial composition—the lighter-skinned and more homogenous the country, the larger the interviewers' effects on skin colour. However, we also expected not to find significant changes in our substantive research after considering the interviewers' influence, which is the most relevant supposition for the purposes of our study.

6.4 Main findings, new understanding

Ethnoracially related problems are not only multidimensional in their operationalisation but also in their implications. Therefore, scholars inquiring about these issues must be open to complex and, to some extent, contradictory results (Saideman, 2017). Regarding the interaction between gender and skin colour, we did find a significant effect on income, suggesting that Latin American females suffer from more discrimination in the labour market than males. However, we did not find similar results when analysing skin colour gaps in education or interviewers' effect on skin colour ratings. We found complex evidence concerning whether social origin modifies the effect of skin colour. This variable succeeds in moderating the influence of skin colour on income and education but does so in the opposite direction in each case. For example, as Latin Americans come from higher-status families, the relevance of their skin colour to their educational achievement decreases.

In contrast, such an interaction effect vanishes when we look at the influence of skin colour on income. However, if most of the power of social origin on income is channelled

through education,¹⁹ an interaction effect between this variable and skin colour shows completely different results. As education increases, so does the effect of skin colour on income. Thus, while there is evidence supporting the status-whitening thesis regarding education, there is also evidence in the opposite direction when assessing the influence of skin colour on income. According to these contradictory results, we must adjust our initial assumptions regarding social origin by saying that while inherited advantages can ameliorate the unfair treatment of dark-skinned individuals in the educational system, they can amplify the benefits of being light-skinned in the labour market.

One alternative explanation for the results commented on above is that the Latin American educational systems have more institutionalised admission processes and are more exposed to affirmative action policies (Wade et al., 2019) than the labour markets. In contrast, jobs requiring highly educated individuals –where the skin colour gap enlarges– are more exposed to decisions based on personal biases. This evidence aligns with what Torres et al. (2019) found in Chile, suggesting that skin colour is a heuristic mechanism primarily for high-status individuals. Interestingly, despite the fact we did not have a formal hypothesis for it, ethnoracial identities have a more systematic moderation effect on the association of skin colour with income and education. Thus, we found that the effect of skin colour reaches its peak in Mestizo populations, although its difference from other identities is not always statistically significant. Interestingly, the lowest effect of skin colour in terms of both income and education is for Blacks. These results are consistent in two ways. First, they align with what was previously known regarding skin colour being more relevant for Mestizos than any other ethnoracial group. Second, they suggest that the decades of anti-racist Black movements, primarily in Brazil and Colombia, where they are entitled to affirmative action policies and anti-discrimination laws (Wade et al., 2019), are starting to pay off.

In terms of ethnoracial composition, our findings do not always show consistent evidence. Even though there is not always a statistically significant difference, the Mulato countries (Brazil and the Dominican Republic) are those where the influence of skin colour on income and education is the highest. Such a result is consistent with our previous assumptions, given that Mulato countries have the most comprehensive skin colour range as well as a long and nationally relevant Black slavery history, as much as appropriate proportions of non-White

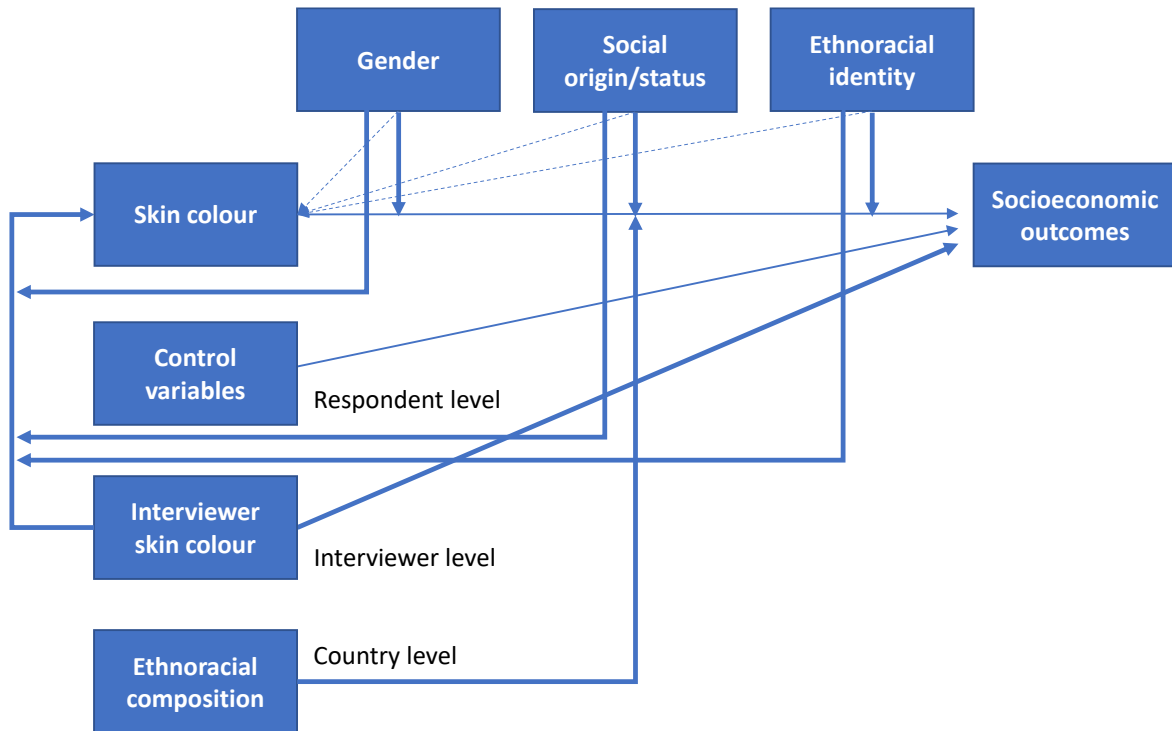
¹⁹ It is systematically one of the best predictors of years of schooling in Latin America.

and non-Mestizo groups. A separate mention should be made of the interviewer effects. Regarding this, every result was in line with our assumptions. First, the darker the rater, the darker their assessment of the skin colour of others. However, such an influence is not the same across ethnoracial identities and ethnoracial compositions. While it increases to its peak in Black populations the same trend occurs in White countries. On the other hand, while systematic biases introduced by interviewers minimise their effect on White respondents, they maximise them in Afromestizo countries.

Moreover, our results suggest that interviewers explain a modest but relevant share of the respondent's skin colour variation, but this influence is not uniformly distributed across the region. The proportion of variance explained by the interviewer goes from the Dominican Republic, where it is at its minimum level, to White countries, where it is at its maximum level. These differences are significant enough to affect a cross-national comparison if they are not considered. Finally, and probably the most crucial evidence from the previous paper, the effect of skin colour on income and education reported in previous articles is not significantly affected after the inclusion of every factor mentioned above, as much as their cross-level nesting structure within clusters and interviewers. This conclusion illustrates two complementary directions. First, we do not have evidence to reject the role of skin colour in Latin American social hierarchies due to interviewer errors. Second, this evidence does not allow us to leave out the precautions about these controls as things can vary substantively in the presence of new data or differently coded variables.

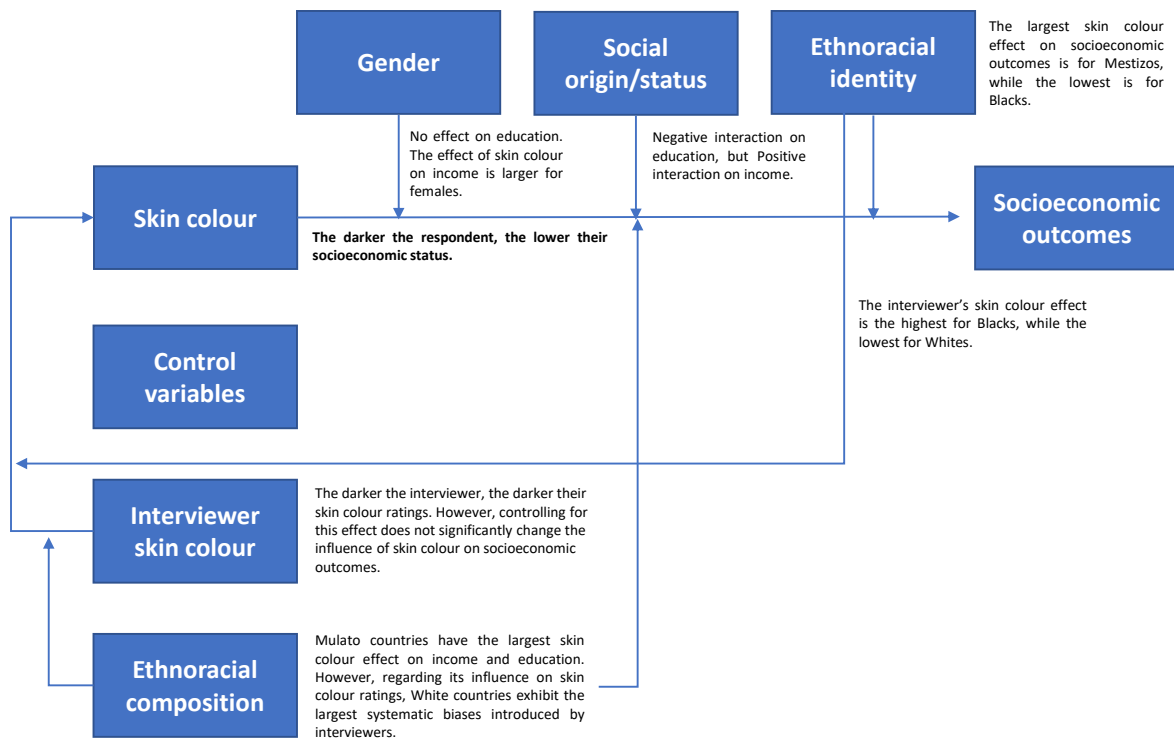
We can summarise our research, its main results, and the following steps by looking at Figures 28 and 29. Loosely based on Andersson et al.'s (2014) suggestions to visually display interaction effects, both figures show what we knew before conducting this research, what we know thanks to it, and, finally, what hypotheses we should test in future studies. According to these diagrams, the main contribution of our research is that it clarifies how the effect of skin colour on various socioeconomic outcomes varies depending on gender, social origin (status), and the ethnoracial context in which the respondent lives. Thus, females, people from Mulato countries (Brazil and the Dominican Republic), students who come from low SES families, those who embrace a Mestizo identity, as much as highly educated workers are among those who pay the highest penalties because of their skin shades.

Figure 28: Conceptual diagram of our theoretical model



- (1): The thicker lines are the relationships of focus.
- (2): The regular lines are effects previously tested.
- (3): The dashed lines indicate alternative relationships to consider.

Figure 29: Conceptual diagram of our empirical evidence



- (1): Lines represent statistically significant relationship of interest
- (2): Text boxes describe the nature of these relationships

This picture sheds light on the complexities of Latin American racial hierarchies, where self-identifying as non-White (which in some countries implies affirmative action policies) is sometimes the consequence of being raised during the multiculturalist turn in favour of ethnoracial minorities, having more education, coming from high SES contexts, and having light or dark-brown skin. Meanwhile, those with similar skin tones face more significant difficulties when they come from low SES families, achieve higher academic success, embrace Mestizo identities, or have the "bad luck" of being a Latin American woman. In parallel, our research also contributes to the study of ethnoracial stratification in Latin America by stating the necessity of considering interviewer effects, whose biases seem exceptionally high in front of Black respondents or when conducting research in White countries (Chile, Argentina, Uruguay, and Costa Rica). The relevance of these results relies on the severe impact that ignoring these interviewer effects may have on substantive research, with the potential of blurring cross-national comparisons.

Finally, the dashed lines in Figure 28 relate to some of the research problems that remain unsolved after this research. As skin colour is a social construct that is affected by the

differential perception of individuals in front of different stimuli, we still need more sophisticated (hopefully experimental designs) to disentangle the possible confounding effects between gender, ethnoracial identity or social origin (status) and skin colour as perceived by others. This is the next step towards making our understanding of ethnoracial inequalities more precise (but also more complex) in Latin America. Only after taking this step will we be able to state that the pigmentocratic regime that describes this region is strong enough to maintain its explanatory power even after considering the complexity of human perception.

6.5 Limitations and future research

Skin colour has been measured in Latin American censuses for a long time. This is the case in Cuba and Brazil, where questions on the colour of respondents appeared for the very first time in the 19th century (Loveman, 2014). More recently, Garcia and Abascal (2016) have listed several surveys that have collected multiple ethnoracial measures, including skin colour, throughout the region. However, most of these sources consider a narrowed skin colour range, whose intermediate category is often confused with assuming a mixing-race identity (Telles, 2014). Even though similar instruments are increasingly used in some national surveys, since the PERLA scale was used for the very first time (2010), it is the only scale that is used across the whole region as far as we know. As we have analysed previously, the PERLA scale is a consistent, comparable, and meaningful instrument. However, it is not perfect as the only option available to Latin American scholars. Researchers working on this topic recommend using multiple approaches to assess skin colour and other ethnoracial variables. These include electronic devices and other techniques such as photo-elicitation, whose use is still scarce in Latin America (Gravlee, 2005; Bailey et al., 2013) and are not available in the LAPOP survey that includes the PERLA scale. The relevance of considering various approaches to measuring skin colour is that, in doing so, we can change our initial understating of the persistent association between dark tones and discrimination and low social status (Dixon and Telles, 2017).

Similar recommendations can be given regarding the section of the body where skin colour is measured. However, the LAPOP survey we worked with only considers facial skin tone. It is necessary to say that deciding which section of the body we will analyse always has a trade-off. Parts of the body that are not constantly exposed to the sun have a more time-stable

colour, but their sociological meaning is less relevant. In contrast, facial tones may be darkened due to sun exposure, which in some cases may relate to low-status occupations, confounding class and phenotype influence. Therefore, it is again recommended to consider skin colour measures from different parts of the body. Potential biases in skin colour measures represent another research gap that we could improve in future research. Interviewer ratings, like those used by the LAPOP survey, are exposed to contextual factors that may lead to biased perceptions. For example, following Hill's (2002) findings, interviewers should not be matched with respondents who are not of the same racial or skin tone group since this mismatching may increase biases in perception.

Moreover, including skin colour as rated by the respondent may give us a different approach to addressing ethnoracial discrimination and hierarchies in Latin America. For instance, as Monk reasons (2016), the way people perceive themselves considers much more than a single-time photo, as interviewer ratings do. In contrast, self-measures capture a lifetime narrative, offering a more comprehensive understating of how people believe others perceive them. Nevertheless, the trade-off here is to pick up a reverse causality between skin colour and ethnoracial discrimination or inequality. So far, a comparison of respondents' vs interviewers' biases regarding skin colour measures is still lacking (Dixon and Telles, 2017). As Dixon and Telles state (2017), minimising biases in skin colour measures would benefit from multiple approaches. The general reasoning supporting this assertion is that skin colour appears in the public sphere in a way that is neither stable nor contextually fixed. From a statistical standpoint, this research rigorously assessed the association between skin colour and socioeconomic outcomes. However, as this thesis use a traditional regression approach, we are not entirely sure what the cause is. Theoretically speaking, our findings are consistent with previous studies claiming that ethnoracial differences in Latin America are primarily the cause of discrimination against dark-skinned individuals (Ñopo et al., 2009). The problem we faced here is that cross-sectional data –such as the LAPOP survey– imposes several restrictions regarding causal inference.

When one wants to estimate the unbiased effect of skin colour on socioeconomic outcomes, and do not have access to longitudinal data, a discontinuity on a score, proper instruments or an experimental design, significant endogeneity problems may arise from omitted factor bias. To overcome this problem and put the research on skin colour inequalities in Latin America at the frontier of the social sciences, benefiting from the credibility revolution,

Woo-Mora (2022) used the spatial first difference approach to analyse skin colour inequalities in Latin America using the LAPOP survey. This new research design allowed him to deal with unobserved heterogeneity using cross-sectional data to identify unbiased effects of skin colour on socioeconomic outcomes.

Last but not least, it is necessary to add a final limitation. Following Telles and PERLA (2014), this thesis is part of a theoretical approach that sees racism as a matter of boundaries, prejudice and direct discrimination based on colour variations. Nevertheless, as a *mea culpa*, it is essential to recognise that this is not the only approach and, more importantly, it does not represent the whole truth behind skin colour inequality in Latin America. Therefore, I would like to dedicate my final lines to the structural racism approach to counterbalance my initial theoretical assumptions. In the introductory section of this thesis, more precisely in those paragraphs where we described the causal mechanisms that explain skin colour inequality, I embraced a direct racism explanation. Under this theoretical umbrella, dark-skinned people's social position is due to two different sources: 1) acts of stigmatisation (insults, threats and negative stereotyping, among others) that neglect the value of others; 2) and acts of discrimination by which people deny others access to the labour market or the educational system (Moreno-Figueroa and Wade, 2021). On the contrary, structuralist racism is more complex. It refers to various processes and forces that aim to disadvantage some ethnoracial groups that operate through organizations and social structures. These processes and forces may maintain inequality patterns even in the absence of explicitly racist policies and practices, aiding us in explaining why skin colour inequality persists in societies without openly racist people and under the influence of ideologies that neglect the relevance of race (Moreno-Figueroa and Wade, 2021). For instance, according to this approach, Black and Indigenous Latin Americans have poorer health because of poor living conditions and limited access to health care that are the remains of overtly racist processes –such as violent displacement, enslavement and segregation– that occurred during the colonial times. In other words, material and symbolic inequalities from the past centuries may explain the current social position of dark-skinned Latin Americans without needing to resurrect the most brutal acts of racism.

From a global perspective, we described Latin America as a pigmentocratic regime. However, this label may obscure two essential things: first, the necessity to expand our initial theoretical framework; and second, the connections between pigmentocracy and ethnoracial stratification at the societal level. In relation to the first problem, some scholars have stated that

it is urgent to go beyond one-single factor explanations, focusing on how skin colour, race and ethnicity interact, involving links between colourism and other perspectives like the critical race theory (Burton et al., 2010). Concerning the second problem, we should start by stating that the pigmentocratic regime is just one dimension of ethnoracial stratification in Latin American societies. First of all, we have to mention that colourism by itself is a non-sense measure. For example, on a colour scale, some individuals get a three while others get a seven, but these numbers do not explain why the former has higher social positions than the latter. So, what does it turn skin colour into a relevant marker to analyse social inequalities? The answer is that those numbers make sense when we analyse them through whiteness, which is the crucial aspect of ethnoracial stratification in societies structured by white supremacy –such as Latin American ones– (Hordge-Freeman, 2015). More clearly, skin colour is a relevant racial marker because ethnoracial categories in Latin America are constructed around the idea of whiteness (Bonilla-Silva, 2009). However, it is necessary to say that whiteness is not just about skin colour. It also involves non-physical traits such as culture, education and language (Omie and Winant, 1994). Also, other scholars state that skin colour is neither the only nor the best phenotypical factor regarding ethnoracial classifications in Latin America (Bonilla-Silva, 2009; Hordge-Freeman, 2015). For this reason, Hordge-Freeman (2015) proposes a new concept, a more comprehensive one, instead of pigmentocracy to describe Latin American ethnoracial hierarchies. Thus, she prefers to talk about *traitocracy*, including other physical characteristics such as hair texture and eye colour, alongside sociocultural traits such as those mentioned above, in order to explore how both kinds of traits flexibly relate to each other in different contexts to build up a situationally defined ideal of whiteness.

Rather than seeing all of these theoretical approaches as opposed to each other –direct vs structural racism or pigmentocracy vs traitocracy–Moreno-Figueroa and Wade (2021) suggest treating them as different continuous dimensions that extend from openly racist actions to structural mechanisms in which racial facets are deeply buried in historical processes; or, from skin colour hierarchies to multivariate complex dimensions in which socioeconomic, cultural and phenotypical traits combine in different ways to give shape to various ideals of whiteness. With new datasets and research designs, future research should consider all of these aspects to overcome this thesis's limitations and advance the frontier of knowledge.

Future research in this field would benefit from expanding the set of variables, instruments, and statistical analyses used in this research as indicated in the previous

paragraphs. Furthermore, further research should also incorporate three-way interactions regarding the variables analysed in this thesis to develop a more comprehensive understating of how each variable relates to the others in explaining skin colour inequalities among Latin Americans. For a long time, skin colour inequalities were a neglected problem in Latin American societies. This thesis, alongside the studies that opened this novel approach to inquiring about social hierarchies in this region, has helped to unveil how profound and complex this problem is. However, there is still a long road to fully understanding the causal mechanism behind the influence of skin colour on several socioeconomic outcomes.

7. REFERENCES

- Aguilar, J.L. (1979). Class and ethnicity as ideology: Stratification in a Mexican town. *Ethn. Groups*, 2(2), 109-31.
- Alam, M., & Dover, J. S. (2001). On beauty: evolution, psychosocial considerations, and surgical enhancement. *Archives of Dermatology*, 137(6), 795-807.
- Alesina A, Devleeschauwer A, Easterly W, et al. (2003) Fractionalization. *Journal of Economic Growth*, *Journal of Economic Growth* 8(2): 155-194.
- Altimir, O. (1997). Desigualdad, empleo y pobreza en América latina: Efectos del ajuste y del cambio en el estilo de desarrollo. *Desarrollo Econ.* 31(145), 3-30.
- Alvarez, SE. (1998). Feminismos latinoamericanos. *Estud. Fem.* 6(2):265-84.
- Andrews GR. (1992). Racial inequality in Brazil and the United States: A statistical comparison. *J. Soc. Hist.* 26(2), 229-63.
- Andrews, GR. (2004). *Afro-Latin America, 1800-2000*. New York: Oxford University Press.
- Arrow, K. J. (1973), "The Theory of Discrimination", in O. Ashenfelter and A. Rees (eds.), *Discrimination in Labor Markets*, Princeton, NJ: Princeton University Press.
- Atria, R. (2004). *Estructura ocupacional, estructura social y clases sociales*. CEPAL Serie 96.
- Awaworyi, S. & Appau, S. (2020) Microfinance in Latin America and the Caribbean: the curse and blessing of ethnic diversity, *Applied Economics*, 52:16, 1816-1830.
- Bailey, S. R. (2002). The race construct and public opinion: Understanding Brazilian beliefs about racial inequality and their determinants. *American Journal of Sociology*, 108(2), 406-439.
- Bailey, S., Loveman, M., Muniz, J. (2013) Measures of "Race" and the analysis of racial inequality in Brazil. *Social Science Research*, 42, 106-119.
- Bailey, S. R., Fialho, F. M. and Penner, A. M. (2016) 'Interrogating Race: Color, Racial Categories, and Class Across the Americas', *American Behavioral Scientist*, 60(4), pp. 538-555.

- Bailey S, Saperstein A and Penner A (2014) Race, color, and income inequality across the Americas. *Demographic Research*, Demographic Research 31: 735-756.
- Banton, M. (2012). The colour line and the colour scale in the twentieth century. *Ethnic and Racial studies*, 35(7), 1109-1131.
- Barbary, O., & Urrea, F. (2003). *Gente Negra en Colombia. Dinámicas sociopolíticas en Cali y el Pacífico*. Cali, Colombia: Centro de Investigaciones y Documentación Socioeconómica, Universidad del Valle.
- Bates, D., Mächler, M., Bolker, B., & Walker, S. (2015). Fitting linear mixed-effects models using lme4. *Journal of Statistical Software*, 67(1), 1-51.
- Battistón, D; García-Domench, C.; & Gasparini, L. (2014). Could an increase in education raise income inequality?: evidence for Latin America. *Latin American Journal of Economics*, 51(1), 1-39.
- Bello, A., & Rangel, M. (2000). *Etnicidad, "raza" y equidad en América Latina y el Caribe*. Comisión Económica para América Latina y el Caribe.
- Belote, LS. & Belote, J. (1984). Drain from the bottom: Individual ethnic identity change in Southern Ecuador. *Soc. Forces* 63(1), 24-50
- Birdsall, N., Graham, C. L., & Sabot, R. H. (1998). *Beyond Tradeoffs: Market Reform and Equitable Growth in Latin America*. Brookings Institution Press.
- Blau, P. M., & Duncan, O. D. (1967). *The American occupational structure*. New York: Free Press
- Brewer, M.B. & Brown, R. (1998) Intergroup relations. In D.Gilbert, S. Friske & D. Lindzkey (Eds.), *The Handbook of social psychology. Fourth Edition* (Vol. 1, pp.99-142). Boston: McGraw-Hill.
- Bonhomme, M. (in press). 'We're a bit browner but we still belong to the white race': Making whiteness in the context of South-South migration in Chile, *Latin American and Caribbean Ethnic Studies*, 0(0).

- Bonilla-Silva, E. (2002) 'We Are All Americans!: The Latin Americanization of Racial Stratification in the USA', *Race and Society*, 5(1), 3-16.
- Bonilla-Silva, E. (2004). From bi-racial to tri-racial: Towards a new system of racial stratification in the USA. *Ethnic and racial studies*, 27(6), 931-950.
- Bonilla-Silva, E. (2009). Are the Americas 'sick with racism or is it a problem at the poles? A reply to Christina A. Sue. *Ethnic and Racial Studies*, 32(6), 1071-1082.
- Bonilla-Silva, E. (2012). The invisible weight of whiteness: the racial grammar of everyday life in contemporary America. *Ethnic and Racial Studies*, 1-22, pp. 173-194.
- Bonilla-Silva, E. (2020). ¿Aquí no hay racismo?: apuntes preliminares sobre lo racial en las Américas. *Revista de Humanidades*, (42), 425-443.
- Bonilla-Silva, E. (2021). What makes systemic racism systemic? *Sociological Inquiry*, 91(3), 513-533.
- Burton, L. M., Bonilla-Silva, E., Ray, V., Buckelew, R., & Hordge Freeman, E. (2010). Critical race theories, colorism, and the decade's research on families of color. *Journal of Marriage and Family*, 72(3), 440-459.
- Campos-Vazquez, R.M., Medina-Cortina, E.M. (2019) 'Skin Color and Social Mobility: Evidence from Mexico'. *Demography* 56, 321-343.
- Castellanos-Guerrero, A., Gómez-Izquierdo, J., Pineda, F. (2009). Racist discourse in Mexico. In Van Dijk, T. A. (Ed.), *Racism and discourse in Latin America* (pp. 217-258). Lanham, MD: Lexington Books.
- Castillo, J., Li, Y., Heath, A. (2018a) *Educational Pigmentocracy in Latin America: A Study of Skin Colour Effects on Educational Attainment from an Intersectional perspective* [Unpublished manuscript] Cathie Marsh Institute, The University of Manchester.
- Castillo, J., Li, Y., Heath, A. (2018b) *Income and Skin Colour Inequality in Latin America: An Intersectional Approach* [Unpublished manuscript] Cathie Marsh Institute, The University of Manchester.

- Campbell, M. E. (2009). Multiracial Groups and Educational Inequality: A Rainbow or a Divide? *Social Problems*, 56(3), 425-446.
- Campbell ME, Keith VM, Gonlin V, et al. (2020) Is a Picture Worth A Thousand Words? An Experiment Comparing Observer-Based Skin Tone Measures. *Race and Social Problems*, *Race and Social Problems* 12(3): 266-278.
- Canache, D., Hayes, M., Mondak, J. J., & Seligson, M. A. (2014). Determinants of Perceived Skin-Color Discrimination in Latin America. *The Journal of Politics*, 76(2), 506-520.
- Catelli, M.L., Álvarez-Iglesias, V., Gómez-Carballa, A. et al. (2011). The impact of modern migrations on present-day multi-ethnic Argentina as recorded on the mitochondrial DNA genome. *BMC Genet* 12, 77
- Cernat, A., Sakshaug, J.W. and Castillo, J. (2019a), Measurement error Skin colour and the role of the interviewer. *Significance*, 16: 10-11. <https://doi-org.manchester.idm.oclc.org/10.1111/j.1740-9713.2019.01293.x>
- Cernat, A., Sakshaug, J.W. and Castillo, J. (2019b), The Impact of Interviewer Effects on Skin Color Assessment in a Cross-National Context, *International Journal of Public Opinion Research*, Volume 31, Issue 4, Winter 2019, Pages 779–793, DOI: <https://doi-org.manchester.idm.oclc.org/10.1093/ijpor/edy030>
- Chambers, S. (1999) *From Subjects to Citizens. Honour, Gender, and Politics in Arequipa, Peru, 1780-1854*. University Park: The Pennsylvania State University Press.
- Chavez-Dueñas, N. Y., Adames, H. Y., & Organista, K. C. (2014). Skin-colour prejudice and within-group racial discrimination: Historical and current impact on Latino/a populations. *Hispanic Journal of Behavioral Sciences*, 36(1), 3-26.
- Chen JM and Francis-Tan A (2021) Setting the Tone: An Investigation of Skin Color Bias in Asia. *Race and Social Problems*, *Race and Social Problems*.
- Córdova, A. (2009). Methodological note: Measuring relative wealth using household asset indicators. *AmericasBarometer Insights*, 6(9).

- Costas R, Garcia-Palmieri MR, Sorlie P, Hertzmark E. (1981). Coronary heart disease risk factors in men with light and dark skin in Puerto Rico. *Am. J. Public Health* 71(6), 614-19.
- De Ferranti, DM. (Ed.). (2004). *Inequality in Latin America: breaking with history?* World Bank Publications.
- De La Cadena, Marisol. (2000). *Indigenous Mestizos: The Politics of Race and Culture in Cuzco, Peru, 1919-1991*, Durham, NC: Duke University Press.
- De La Cadena, M. D. (2001). Reconstructing race: Racism, culture and mestizaje in Latin America. *NACLA Report on the Americas*, 34(6), 16-23.
- De la Fuente, A. (1995) Race and Inequality in Cuba, 1899 - 1981. *Journal of Contemporary History*, vol 30. 131 - 186.
- De la Torre, C. (1999). Everyday forms of racism in contemporary Ecuador: The experiences of Middle-Class Indians. *Ethn. Racial Stud.* 22(1), 92-112
- DeFina, R., & Hannon, L. (2016). Social status attainment and racial category selection in the contemporary United States. *Research in Social Stratification and Mobility*, 44, 91-97.
- Dias, F. A. (2020). How skin color, class status, and gender intersect in the labor market: Evidence from a field experiment. *Research in Social Stratification and Mobility*, 65, 1-15.
- Dillon Soares, GA. & Reyna JL. (1967). Raza y clases sociales en México. *Ciencias Polít. Soc.* 13(48), 201-20
- Dixon, A. R., & Telles, E. E. (2017). Skin color and colorism: Global research, concepts, and measurement. *Annual Review of Sociology*, 43, 405-424.
- Dixon, A. (2019). Colorism and classism confounded: Perceptions of discrimination in Latin America, *Social Science Research*, Volume 79, 32-55.
- Ennis S. R., Ríos-Vargas M., Albert N. G. (2011), "The Hispanic Population," *2010 Census Briefs*, C2010BR-04

- Espino, R., & Franz, M. M. (2002). Latino phenotypic discrimination revisited: The impact of skin color on occupational status. *Social Science Quarterly*, 83(2), 612-623.
- Flores, R., & Telles, E. (2012). Social stratification in Mexico: Disentangling color, ethnicity, and class. *American sociological review*, 77(3), 486-494.
- Franco, R., Atria, R., León, B., & CEPAL, N. (2007). *Estratificación y movilidad social en América Latina: Transformaciones estructurales de un cuarto de siglo*. CEPAL.
- Freyre, G. (1933). *Casa-Grande e Senzala*. Rio de Janeiro: Lisbon Editora Livros do Brasil.
- Friedlander, J. (1975). *Being Indian in Hueyapan: A Study of Forced Identity in Contemporary Mexico*. New York: Saint Martin's Press.
- Frost, M. B. (2007). Texas Students' College Expectations: Does high school racial composition matter? *Sociology of Education*, 80(1), 43-65.
- Fuentes, M. et. al.. (2014). Geografía génica de Chile: Distribución regional de los aportes genéticos americanos, europeos y africanos. *Revista médica de Chile*, 142(3), 281-289.
- Gallur, S. S., & Arias, J. A. (2022). Afrodescendencia, educación y comunicación: Percepción de conductas racistas y machistas en escuelas de República Dominicana. *Atenas*, 1(57), 18-32.
- Garcia, D., & Abascal, M. (2016). Colored perceptions: Racially distinctive names and assessments of skin color. *American Behavioral Scientist*, 60(4), 420-441.
- Gittleman, M., & Wolff, E. N. (2004). 'Racial Differences in Patterns of Wealth Accumulation', *The Journal of Human Resources*, 39(1), 193-227.
- Graham, R. (2010). *The Idea of Race in Latin America, 1870-1940*. University of Texas Press.
- Gravlee, C. C. (2005). Ethnic classification in southeastern Puerto Rico: The cultural model of "color". *Social Forces*, 83(3), 949-970.
- Gravlee CC., & Dressler WW. (2005). Skin pigmentation, self-perceived color, and arterial blood pressure in Puerto Rico. *Am. J. Hum. Biol.* 17(2), 195-206

- Gravlee CC., Dressler WW., & Bernard, HR. (2005). Skin color, social classification, and blood pressure in south-eastern Puerto Rico. *Am. J. Public Health*, 95(12), 2191-97
- Glenn, EN. (2009). *Shades of Difference: Why Skin Color Matters*. Stanford, CA: Stanford Univ. Press.
- Golash-Boza, T.M. (2018) *Race and Racisms: A Critical Approach*. Oxford University Press, Oxford.
- Golash-Boza, T., & Bonilla-Silva, E. (2013). Rethinking race, racism, identity and ideology in Latin America. *Ethnic and racial studies*, 36(10), 1485-1489.
- Goldsmith, A. H., Hamilton, D., & Darity, W. (2007). From dark to light: Skin color and wages among African-Americans. *Journal of Human Resources*, 42(4), 701-738.
- Gordon, R. A., Branigan, A. R., Khan, M. A., & Nunez, J. G. (2022). Measuring Skin Color: Consistency, Comparability, and Meaningfulness of Rating Scale Scores and Handheld Device Readings. *Journal of Survey Statistics and Methodology*.
- González-Casanova, P. (1965). *La democracia en México*. Ciudad de México: Ediciones Era.
- Goldberg, D. T. (2009). *The threat of race: Reflections on racial neoliberalism*. John Wiley & Sons.
- Gullickson, A. (2005). The significance of color declines: A re-analysis of skin tone differentials in post-civil rights America. *Social Forces*, 84(1), 157-180.
- Guillebeau C. 1999. Affirmative action in a global perspective: The cases of South Africa and Brazil. *Sociol. Spectr.* 19(4), 443-65.
- Hall, RE. (2005). The Euro-Americanization of race: Alien perspective of African Americans vis-à-vis trivialization of skin color. *Journal of Black Studies*, 36(1), 116-128.
- Hall, RE., ed. (2013). *The Melanin Millennium*. Dordrecht, Neth.: Springe
- Hall, J. C., & Leeson, P. T. (2010). Racial fractionalization and school performance. *American Journal of Economics and Sociology*, 69(2), 736-758.

- Hannon, L., & DeFina, R. (2014). Just skin deep? The impact of interviewer race on the assessment of African American respondent skin tone. *Race and Social Problems*, 6(4), 356-364.
- Hannon, L.; & DeFina, R. (2016). Reliability Concerns in Measuring Respondent Skin Tone by Interviewer Observation, *Public Opinion Quarterly*, 80(2), 534-541.
- Harding, J. F., Morris, P. A., & Hughes, D. (2015). The relationship between maternal education and children's academic outcomes: A theoretical framework. *Journal of Marriage and Family*, 77(1), 60-76.
- Harris, M. (1963). Racial Identity in Brazil. *Luso-Brazilian Review*. 1:21-28.
- Hasenbalg, C. (1994). Perspectivas sobre raza y clase en Brasil. *Estud. Sociol.* 12(34), 75-99
- Hernández, T.K. (2013). *Racial Subordination in Latin America: The Role of the State, Customary Law, and the New Civil Rights Response*. Cambridge: Cambridge University Press.
- Hersch, J. (2008). Profiling the New Immigrant Worker: The Effects of Skin Color and Height. *Journal of Labor Economics* 26 (2), 345-86
- Hersh, J. (2011). Skin Color, Physical Appearance, and Perceived Discriminatory Treatment. *Journal of Socio-Economics*, 40(5), 671-78
- Hill, M.E. (2002) Race of the Interviewer and Perception of Skin Color: Evidence from the Multi-City Study of Urban Inequality Author(s) *American Sociological Review*, 67(1), 99-108.
- Hirsh, C. E., & Kornrich, S. (2008). The context of discrimination: Workplace conditions, institutional environments, and sex and race discrimination charges. *American journal of sociology*, 113(5), 1394-1432.
- Hitlin, S., Brown, J. S., & Elder Jr, G. H. (2007). Measuring Latinos: Racial vs. ethnic classification and self-understandings. *Social forces*, 86(2), 587-611.
- Hoffman, K., & Centeno, M. A. (2003). The Lopsided Continent: Inequality in Latin America. *Annual Review of Sociology*, 29(1), 363-390.

- Hooker, J. (2005). Indigenous Inclusion/Black Exclusion: Race, Ethnicity and Multicultural Citizenship in Latin America. *Journal of Latin American Studies* 37: 285-310.
- Hooker, J. (2017). *Theorizing Race in the Americas: Douglass, Sarmiento, Du Bois, and Vasconcelos*. Oxford University Press.
- Hordge-Freeman, E. (2015). *The color of love: Racial features, stigma, and socialization in black Brazilian families*. University of Texas Press.
- Hopenhayn, M., & Bello, A. (2001). *Discriminación étnico-racial y xenofobia en América Latina y el Caribe (1era ed.)*. Santiago, Chile: Naciones Unidas, CEPAL, División de Desarrollo Social.
- Hunter ML. (2005). *Race, Gender, and the Politics of Skin Tone*. New York: Routledge.
- Hunter, ML. (2007). The persistent problem of colorism: Skin tone, status, and inequality. *Sociology compass*, 1(1), 237-254.
- Hutchinson-Miller, C. (2012). The Province and Port of Limón: Metaphors for Afro-Costa Rican Black Identity. *Journal of Arts and Humanities*. 1(2).
- Htun, M. (2004). From "racial democracy" to affirmative action: changing state policy on race in Brazil. *Latin American Research Review*, 39(1), 60-89.
- Jablonski N. G. (2012). *Living Color: The Biological and Social Meaning of Skin Color*. Berkeley: Univ. Calif. Press
- Jablonski, N. G. (Ed.). (2020). *Persistence of race* (Vol. 15). African Sun Media.
- Jablonski, N. G., & Chaplin, G. (2000). The evolution of human skin coloration. *Journal of human evolution*, 39(1), 57-106.
- Jha S, Adelman M. 2009. Looking for love in all the white places: a study of skin color preferences on Indian matrimonial and mate-seeking websites. *Stud. South Asian Film Media* 1(1), 65-83.
- Jimeno, M. (1989). Conflicts and Strategies of Latin American Ethnic Minorities. *Current Anthropology*, 30(2), 264-265.

- Johnson, M. (2020). Electoral discrimination: The relationship between skin color and vote buying in Latin America. *World Politics*, 72(1), 80-120.
- Kaya, F., Juntune, J., & Stough, L. (2015) Intelligence and Its Relationship to Achievement. *Elementary Education Online*, 14 (3), 1060-1078.
- Keith, V. M., & Herring, C. (1991). Skin tone and stratification in the Black community. *American journal of sociology*, 97(3), 760-778.
- Lam, D., & Levison, D. (1992). Age, experience, and schooling: Decomposing earnings inequality in the United States and Brazil. *Sociol. Inq.* 62(2):220-45
- Lewis KM, Harris S, Camp C, Kalala W, Jones W, et al. (2013). The historical and cultural influences of skin bleaching in Tanzania. See Hall (2013), pp. 19-38
- Lipschütz, A. (1967). *El problema racial en la conquista de América y el mestiaje*. Santiago: Editora Andrés Bello.
- Lizcano, F. (2005) Composición Étnica de las Tres Áreas Culturales del Continente Americano al Comienzo del Siglo XXI. *Convergencia*, núm. 38, mayo-agosto 2005, ISSN 1405-1435, UAEM, México
- Loveman, M. (2009). Whiteness in Latin America: measurement and meaning in national censuses (1850-1950). *Journal de la Société des Américanistes*, 95(95-2), 207-234.
- Loveman, M. (2013). Census taking and nation making in nineteenth-century Latin America. In *State and nation making in Latin America and Spain: republics of the possible* (pp. 329-355). Cambridge University Press.
- Loveman, M. (2014). *National colours: racial classification and the state in Latin America*. Nueva York: Oxford University Press.
- Lovell, P., & Wood, C. (1998). 'Skin Color, Racial Identity, and Life Chances in Brazil'. *Latin American Perspectives*, 25(3), pp. 90-109.
- Lucas, S. R., & Berends, M. (2007). Race and track location in U.S. public schools. *Research in Social Stratification and Mobility*, 25(3), 169-187.

- Lynn, R. (2006). *Race differences in intelligence: an evolutionary analysis*. Washington Summit Publishers.
- Lynn, R., Meisenberg, G., Mikk, J., & Williams, A. (2007). National IQs predict differences in scholastic achievement in 67 countries. *Journal of biosocial science*, 39(6), 861-874.
- Maddox, K. (2004). Perspectives on Racial Phenotypicality Bias. *Personality and Social Psychology Review*, 8(4), 383-401.
- Martínez Casas R, Saldívar E, Flores RD, Sue CA. 2014. The different faces of mestizaje: ethnicity and race in Mexico. In E. Telles and PERLA (Eds.), *Pigmentocracies: Ethnicity, Race, and Color in Latin America*, (pp. 36-80). Chapel Hill: Univ. N.C. Press
- Masi De Casanova, E. (2018). Beauty Ideology in Latin America. *dObra [s]: revista da Associação Brasileira de Estudos de Pesquisas em Moda*, 11(23), 10-21.
- Meisenberg, G. (2008). How does racial diversity raise income inequality?. *Journal of Social Political and Economic Studies*, 33(1), 3.
- Mesa-Lago, C. (1978). *Social Security in Latin America: Pressure Groups, Stratification, and Inequality*. University of Pittsburgh Press.
- Mira Caballos, E. (1997). *El Indio antillano: Repartimiento, encomienda y esclavitud (1492-1542)*. Seville: Publicaciones de la Universidad.
- Moreno Figueroa, M. G. (2010). Distributed intensities: Whiteness, mestizaje and the logics of Mexican racism. *Ethnicities*, 10(3), 387-401
- Moreno- Figueroa, M., & Wade, P. (Eds.). (2022). *Against Racism: Organizing for Social Change in Latin America*. University of Pittsburgh Press.
- Mobius, M. M., & Rosenblat, T. S. (2006). Why beauty matters. *American Economic Review*, 96(1), 222-235.
- Mörner, M. (1967). *Race Mixture in the History of Latin America*. Boston, MA: Little, Brown.
- Mörner, M. (1970). *Race and Class in Latin America*. New York: Columbia University Press.

- Mörner, M. (1999). La inmigración Europea y la Formación de las Sociedades Ibéricas. In A. Castellero-Calvo, A.J. Kuethe (Eds.), *Historia General de América Latina* (pp. 415-428). Trotta.
- Moreno-Figueroa, M. (2013) ‘Displaced looks: The lived experience of beauty and racism’, *Feminist Theory*, 14(2), pp. 137-151.
- Moreno-Figueroa, M. & Moore, M. R. (2013). Beauty, race and feminist theory in Latin America and the Caribbean. *Feminist Theory*, 14(2), 131-136.
- Monk, E.P.Jr. (2015) The Cost of Color: Skin Color, Discrimination, and Health among African-Americans *American Journal of Sociology* 2015 121:2, 396-444.
- Monk EP. (2016). The consequences of “race and color” in Brazil. *Soc. Probl.* 63(3): 413-30.
- Monk, E.P. (2021) The Unceasing Significance of Colorism: Skin Tone Stratification in the United States. Published under a Creative Commons AttributionNonCommercial 4.0 International (CC BY-NC 4.0) license https://doi.org/10.1162/DAED_a_01847
- Monroy-Gómez-Franco, L.& Vélez-Grajales, R. (2020) Skin Tone Differences in Social Mobility in Mexico: Are We Forgetting Regional Variance?. Stone Center Working Paper Series. no. 14
- Murguía, E., & Telles, E. (1996). Phenotype and Schooling among Mexican Americans. *Sociology of Education*, 69(4), 276-289.
- Navarro García, L. (ed.) (1989) América en el siglo XVIII/ Serie XI: Historia general de España y América. Vol. 1: Los primeros Borbones. Madrid: Ediciones Rialp
- Nichols, EG. (2013). “Decent girls with good hair”: Beauty, morality, and race in Venezuela. *Feminist Theory*, 14(2), 171-185.
- Nutini, HG. (1997). Class and ethnicity in Mexico: somatic and racial considerations. *Ethnology* 36(3), 227-38.
- Ñopo, H., Atal, J. P. & Winder, N. (2010). New century, old disparities: Gender and ethnic wage gaps in Latin America. *IZA Discussion Paper 5085*.

- Oliver, J. E., & Mendelberg, T. (2000). Reconsidering the environmental determinants of white racial attitudes. *American journal of political science*, 44(3), 574-589.
- Omie, M., & Winant, H. (1994). *Racial Formations*, New York: Routledge.
- Ortiz Hernández L, Pérez-Salgado D and Ayala-Guzmán CI (2018) Posición socioeconómica, discriminación y color de piel en México. *Perfiles Latinoamericanos*, *Perfiles Latinoamericanos* 26(51): 215-239.
- Painter, M. A., Holmes, M. D., & Bateman, J. (2016). Skin tone, race/ethnicity, and wealth inequality among new immigrants. *Social Forces*, 94(3), 1153-1185.
- Painter II, M; Noy, S. & Holmes, M. (2020) Skin tone and asset inequality in Latin America, *Journal of Ethnic and Migration Studies*, 46(18), 3892-3919.
- Palacios, N. (1904). *Raza chilena: Libro escrito por un chileno y para los chilenos*. Valparaíso, Chile: Imprenta y Litografía Alemana.
- Paredes, C. L. (2018). Multidimensional Ethno-racial Status in Contexts of Mestizaje: Ethno-racial Stratification in Contemporary Peru. *Socius: Sociological Research for a Dynamic World*, 4, 1-18.
- Pastor, M. &, Dymski, GA. (1991). Debt crisis and class conflict in Latin America. *Capital Class* 43:203-3
- Pérez, A. (2013). “Yo no soy racista, yo defiando mi patria”: Síntomas y efectos nacionalistas en República Dominicana. *Caribbean Studies* 41(2), 245-255.
- Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of personality and social psychology*, 90(5), 751.
- Porqueres, G.E. (2007). Kinship language and the dynamics of race: the Basque case. *WADE, P.(2007): Race, Ethnicity and nation: perspectives from kinship and genetics. Oxford: Berghahn Books.*
- Psacharopoulos, G. & Patrinos H. (1994). *Indigenous People and Poverty in Latin America: An Empirical Analysis*. Washington, DC: World Bank.

- Perreira, K. M., & Telles, E. E. (2014). The colour of health: Skin color, ethnoracial classification, and discrimination in the health of Latin Americans. *Social Science & Medicine*, 116, 241-250.
- Pershing, L. K., Tirumala, V. P., Nelson, J. L., Corlett, J. L., Lin, A. G., Meyer, L. J., & Leachman, S. A. (2008). Reflectance spectrophotometer: the dermatologists' sphygmomanometer for skin phototyping?. *Journal of investigative Dermatology*, 128(7), 1633-1640.
- Picower, B. (2009). 'The unexamined Whiteness of teaching: how White teachers maintain and enact dominant racial ideologies'. *Race Ethnicity and Education*, 12(2), pp. 197-215.
- Portes, A. & Hoffman, K. (2003). Latin American class structures: Their composition and change during the Neoliberal Era. *Latin Am. Res. Rev.* 38(1):41-82
- Plomin, R., & Deary, I. J. (2015). Genetics and intelligence differences: five special findings. *Molecular psychiatry*, 20(1), 98-108.
- Primov, G. (1980). Class, amerindian ethnicity and economic development. *Ethn. Racial Stud.*, 3(3), 342-54
- PNUD (2013). *Seminario Internacional Ciudadanía Indígena: Retos y nuevos desafíos para la Institucionalidad Pública*. Santiago de Chile: PNUD.
- Quattrone, G. A., & Jones, E. E. (1980). The perception of variability within in-groups and out-groups: Implications for the law of small numbers. *Journal of personality and social psychology*, 38(1), 141.
- Quijada M. (1998). La question indienne. *Cah. Int. Sociol.* 105, 305-23
- Quijano, A. (2000). ¡Qué tal raza!. *Revista del CESLA. International Latin American Studies Review*, (1), 192-200.
- Quillian, L. (1995). Prejudice as a response to perceived group threat: Population composition and anti-immigrant and racial prejudice in Europe. *American sociological review*, 60(4), 586-611.

- Rahier, J.M. (2014). *Blackness in the Andes: Ethnographic Vignettes of Cultural Politics in the Time of Multiculturalism*. New York: Palgrave Macmillan
- Reichmann, R. L. (1999). *Race in contemporary Brazil: From indifference to inequality*. University Park, Pa: Pennsylvania State University Press.
- Reygadas, L. (2010). The construction of Latin American inequalities. In L. Reygadas & P. Gootenberg (Eds.), *Indelible inequalities in Latin America. Insights from history, politics and culture* (1era ed., pp. 23-49). Durham, NC: Duke University Press.
- Rhemtulla, M., Brosseau-Liard, P. É., & Savalei, V. (2012). When can categorical variables be treated as continuous? A comparison of robust continuous and categorical SEM estimation methods under suboptimal conditions. *Psychological methods*, 17(3), 354-373.
- Rivadeneira, R. (2011) Gender and Race Portrayals on Spanish-Language Television. *Sex Roles* 65, 208-222.
- Rosales, V. P. (1886). *Recuerdos del pasado, 1814-1860*. Santiago de Chile: Zig-zag.
- Roth, W. D. (2010). Racial mismatch: The divergence between form and function in data for monitoring racial discrimination of Hispanics. *Social Science Quarterly*, 91(5), 1288-1311.
- Rushton, J.P. (1989). Genetic similarity, human altruism, and group selection. *Behavioral and Brain Sciences*, 12, 503-559
- Rushton, J. P., & Bons, T. A. (2005). Mate choice and friendship in twins: evidence for genetic similarity. *Psychological Science*, 16(7), 555-559.
- Safa HI. 1998. Introduction. *Latin Am. Perspect.* 25(3), 3-20
- Saideman, S. M. (2017). Elf must die: Institutions, concentration, the international relations of ethnic conflict and the quest for better data. *Ethnopolitics*, 16(1), 66-73.
- Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighbourhoods and violent crime: a multilevel study of collective efficacy. *Science*, 277(5328), 918-924.

- Sánchez-Alonso, B. (2018). *The age of mass migration in Latin America. The Economic History Review*. Volume 72, Issue 1, pp.3-31.
- Sanchez PM, Doherty D and Dobbs KL (2021) Skin Color and System Support in Latin America. *The Journal of Race, Ethnicity, and Politics, The Journal of Race, Ethnicity, and Politics* 6(2): 352-372.
- Sansone, L. (1998). Racism without Ethnicity: Public Policies and Racial Inequality in Brazil in Comparative Perspective. *Dados*, 41, 751-783.
- Saperstein, A. (2012). Capturing complexity in the United States: which aspects of race matter and when?. *Ethnic and Racial Studies*, 35(8), 1484-1502.
- Shackman,G. (2001) ‘Sample size and design effect’. NYS DOH, *Albany Chapter of American Statistical Association*, March 24, pp. 1-7.
- Stepan N. (1991). *The Hour of Eugenics: Race, Gender, and Nation in Latin America*. Ithaca: Cornell Univ. Pres.
- Stephen M. Saideman (2017) ELF Must Die: Institutions, Concentration, the International Relations of Ethnic Conflict and the Quest for Better Data, *Ethnopolitics*, 16:1, 66-73.
- Simmons, K. E. (2009). *Reconstructing racial identity and the African past in the Dominican Republic*. University Press of Florida.
- Sidanius, J., Peña, Y., & Sawyer, M. (2001). Inclusionary discrimination: Pigmentocracy and patriotism in the Dominican Republic. *Political Psychology*, 22(4), 827-851.
- Skidmore, TE. (1995). Fact and myth: Discovering a racial problem in Brazil. In C. Goldscheider *Population, Ethnicity, and Nation-Building*, ed. C, (pp. 91-117). Boulder, CO: Westview.
- Soler-Castillo, S. & Pardo-Abril, NG. (2009). Discourse and racism in Colombia: Five centuries of invisibility and exclusion. In T. van Dijk (Ed.) *Racism and Discourse in Latin America*. (pp. 131-170). New York: Lexington Books.

- Soto-Quiros, R. (2012) Desarrollo, etnia y marginalización: imágenes del puerto caribeño de Limón Costa Rica (1838-1967) », *Études caribéennes* [Online], 21 | Avril 2012, Publicado el 15 abril 2012, DOI : <https://doi.org/10.4000/etudescaribeennes.5715>
- Snijders, TAB., and Bosker, RJ. (2011). *Multilevel analysis: An introduction to basic and advanced multilevel modelling* (2nd ed.). Sage Publications Ltd.
- Sue, C. (2009). An assessment of the Latin Americanization thesis. *Ethnic and Racial Studies*, 32(6), 1058-1070.
- Sue, C. A., & Golash-Boza, T. (2013). More than 'a hidden race': The complexities of Blackness in Mexico and Peru. *Latin American and Caribbean Ethnic Studies*, 8(1), 76-82.
- Sussman, R. W. (2014). *The Myth of Race*. Harvard University Press.
- Taş, E. O., Reimão, M. E., & Orlando, M. B. (2014). Gender, Ethnicity, and Cumulative Disadvantage in Education Outcomes. *World Development*, 64, 538-553.
- Taylor, M. C. (1998). How White Attitudes Vary with the Racial Composition of Local Populations: Numbers Count. *American Sociological Review*, 63(4), 512-535.
- Taifel, H. & Turner, J.C. (1986) The social identity theory of intergroup behavior. In S. Worchel & W.g. Austin (Eds.) *Psychology of Intergroup Relations*. (pp.7-24). Chicago: Nelson-Hall.
- Telles, E. (2004). *Race in another America: The significance of skin color in Brazil*. Princeton, NJ, US: Princeton University Press.
- Telles, E. (2012). The overlapping concepts of race and colour in Latin America. *Ethnic and Racial Studies*, 35(7), 1163-1168.
- Telles, E. & Flores, R. (2013) Not Just Color: Whiteness, Nation, and Status in Latin America. *Hispanic American Historical Review* 1 August 2013; 93 (3): 411-449. doi: <https://doi-org.manchester.idm.oclc.org/10.1215/00182168-2210858>

- Telles, E. & Paschel, T. (2014) Who Is Black, White, or Mixed Race? How Skin Color, Status, and Nation Shape Racial Classification in Latin America. *American Journal of Sociology* 120(3), 864-907.
- Telles, E. & PERLA. 2014. *Pigmentocracies: Ethnicity, Race, and Color in Latin America*. Chapel Hill: Univ. N.C. Press
- Telles, E. (2014). The Project on Ethnicity and Race in Latin America (PERLA): Hard Data and What Is at Stake? In E. Telles (Ed.), *Pigmentocracies* (1era ed., pp. 1-35). Chapel Hill, NC: The University of North Carolina Press.
- Telles, E. (1995). Structural sources of socioeconomic segregation in Brazilian metropolitan areas. *American Journal of Sociology*, 100(5), 1199-1223.
- Telles, E. (2018). Latinos, race, and the US Census. *The ANNALS of the American Academy of Political and Social Science*, 677(1), 153-164.
- Telles, E. & Steele, L. (2012). Pigmentocracy in the Americas: How is Educational Attainment Related to Skin Color, *Americas Barometer Insight Series*, 73:1-8
- Telles, E., & Esteve, A. (2019). Racial intermarriage in the Americas. *Sociological Science*, 6, 293-320.
- Telles, E., & Bailey, S. (2013). Understanding Latin American beliefs about racial inequality. *American Journal of Sociology*, 118(6), 1559-1595.
- Telles, E., Flores, R. D., & Urrea-Giraldo, F. (2015). Pigmentocracies: Educational inequality, skin color and census ethnoracial identification in eight Latin American countries. *Research in Social Stratification and Mobility*, 40, 39-58.
- Telles, E., & Garcia, D. (2013). " Mestizaje" And Public Opinion in Latin America. *Latin American Research Review*, 130-152.
- Telles, E., & Lim, N. (1998). Does it Matter Who Answers the Race Question? Racial Classification and Income Inequality in Brazil. *Demography*, 35(4), 465-474.

- Tipa, J. (2020). Las prácticas corporales y el racismo colorista en el contexto mediático en México. *Inter disciplina*, 8(22), 113-135. Epub 15 de enero de 2021. <https://doi.org/10.22201/ceich.24485705e.2020.22.76421>
- Torche, F. (2011). Is a college degree still the great equalizer? Intergenerational mobility across levels of schooling in the United States. *American journal of sociology*, 117(3), 763-807.
- Torche, F. (2014) Intergenerational Mobility and Inequality: The Latin American Case. *Annual Review of Sociology* 2014 40:1, 619-642.
- Torche, F. (2005). Educational Stratification in Latin America: A Comparative Analysis. RC28 *Research Committee on Stratification and Mobility, ISA*. Oslo.
- Torche, F., & Spilerman, S. (2009). Intergenerational influences of wealth in Mexico. *Latin American Research Review*, 44(3), 75-101.
- Torres F, Salgado M, Mackenna B, et al. (2019) Who Differentiates by Skin Color? Status Attributions and Skin Pigmentation in Chile. *Frontiers in Psychology*, *Frontiers in Psychology* 10. Available from: <https://dx.doi.org/10.3389/fpsyg.2019.01516>.
- Travassos C, Laguardia J, Marques PM, Mota JC, Szwarcwald CL. (2011). Comparison between two race/skin color classifications in relation to health-related outcomes in Brazil. *Int. J. Equity Health* 10(1):35
- Trejo, G., & Altamirano, M. (2016). The Mexican color hierarchy. In J. Hooker and AB. Tillery, Jr. (Eds), *The Double Bind: The Politics of Racial & Class Inequalities in the Americas* (pp. 3-17). Washington, DC: APSA.
- Twine, FW (1998) *Racism in a Racial Democracy: The Maintenance of White Supremacy in Brazil*. New Brunswick, NJ: Rutgers University Press.
- Udry, J. R., Bauman, K. E., & Chase, C. (1971). Skin color, status, and mate selection. *American Journal of Sociology*, 76(4), 722-733.
- Uhlmann, Eric & Dasgupta, Nilanjana & Elgueta, Angelica & Greenwald, Anthony & Swanson, Jane. (2002). Subgroup Prejudice Based on Skin Color Among Hispanics in

- the United States and Latin America. *Social Cognition - SOC COGNITION*. 20. 198-226. 10.1521/soco.20.3.198.21104.
- Valdez, Z. & Golash-Boza, T (2017) Towards an intersectionality of race and ethnicity, *Ethnic and Racial Studies*, 40:13, 2256-2261, DOI: 10.1080/01419870.2017.1344277
- Vasconcelos, J. (1925). *La raza cósmica*. Mexico City: Espasa Calpe.
- Van Buuren, S. (2018). *Flexible imputation of missing data*. CRC press
- Van Cott, D.L. (2000). *The Friendly Liquidation of the Past: The Politics of Diversity in Latin America*. Pittsburgh, PA: University of Pittsburgh
- (Press). Van den Berghe, P. L. (2012). Colour vs. race: a distinction or a difference? *Ethnic and Racial Studies*, 35(7), 1174-1176.
- Villarreal, A. (2010) 'Stratification by Skin Color in Contemporary Mexico', *American Sociological Review*, 75(5), pp. 652-678. doi: 10.1177/0003122410378232.
- Wade, P. (1993). El movimiento negro en Colombia. *América negra*, 5, 173-191.
- Wade, P. (1997). *Race And Ethnicity In Latin America*. Pluto Press.
- Wade, P. (2000). *Raza y etnicidad en Latinoamérica*. Editorial Abya Yala.
- Wade, P. (2006). Etnicidad, multiculturalismo y políticas sociales en Latinoamérica: Poblaciones afrolatinas (e indígenas). *Tabula rasa*, (4), 59-82.
- Wade, P. (2008). *Race in Latin America. A companion to Latina American Anthropology*. Edited by Deborah Pole. Blackwell Publishing Ltd
- Wade, P. (2010). *Race and ethnicity in Latin America*. 2nd ed. London: Pluto Press.
- Wade, P. (2012). Skin colour and race as analytic concepts. *Ethnic and racial studies*, 35(7), 1169-1173.
- Wade, P. (2013). Articulations of eroticism and race: Domestic service in Latin America. *Feminist Theory*, 14(2), 187-202.

- Wade, P., (2017) . Racism and Race Mixture in Latin America. *Latin American Research Review*, 52(3), pp.477-485. DOI: <http://doi.org/10.25222/larr.124>
- Wade, P.; Scorer, J.; Aguil, I. (2019) *Cultures of Anti-Racism in Latin America and the Caribbean*. University London Press. DOI: 10.14296/919.9781908857729
- Wade, P. (2020) Latin American racism in global perspective. In *The Routledge International Handbook of Contemporary Racisms*, edited by John Solomos, 78-88.
- Wagley, C., Ed. (1952). *Race and Class in Rural Brazil*. New York: Russell and Russell.
- Wallace, V. P., Crawford, D. C., Mortimer, P. S., Ott, R. J., & Bamber, J. C. (2000). Spectrophotometric assessment of pigmented skin lesions: methods and feature selection for evaluation of diagnostic performance. *Physics in Medicine & Biology*, 45(3), 735.
- Welch, S., Sigelman, L., Bledsoe, T., & Combs, M. (2001). *Race and place: Race relations in an American city*. Cambridge University Press.
- West, B.T and A.G. Blom (2017). Explaining Interviewer Effects: A Research Synthesis. *Journal of Survey Statistics and Methodology*, 5(2), 175-211.
- Winant H. (1992). Rethinking race in Brazil. *J. Latin Am. Stud.* 24(1), 173-92
- Winkler, D. R. (2004). Investigaciones sobre etnicidad, raza, género y educación en las américas. In S. Cueto & D. R. Winkler (Eds.), *Etnicidad, Raza, Género y Educación en América Latina* (1era ed., pp. 1-33). Lima, Perú: PREAL.
- Woo-Mora, L. (2021) Unveiling the Cosmic Race: Racial Inequalities in Latin America. PSE Master Thesis [online] Available at: https://dumas.ccsd.cnrs.fr/dumas-03461224/file/Master_202105_.pdf
- Zechmeister, E.J., and Lupu, N. (Eds.). (2019). *Pulse of Democracy*. Nashville, TN: LAPOP.

