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RACE, ETHNICITY, IMMIGRATION, AND LIVING CONDITIONS IN COSTA RICA

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Using information from the 2011 census, we analyze the differential in living standards by race, ethnicity, and country of birth in Costa Rica. We identify the main factors explaining such inequalities along the distribution of a composite index of wellbeing, with counterfactual analysis based on the Blinder–Oaxaca type of decomposition. Our results show that mulattoes, indigenous people, and immigrants from Nicaragua and Panama are generally worse off than the majority of the population, although the reasons differ. While lower education levels and lower paying occupations explain much of the differential in all cases, location is particularly important for indigenous people and immigrants from Panama who live in the least developed areas of the country. We also investigate the distributive pattern of these inequalities and the remarkably distinctive situation of Costa Rican blacks.

JEL Codes: D63, I32, J15

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1. Introduction

Costa Rica is a small, middle-income country, traditionally outstanding for having economic and political stability and social cohesion well above the usual levels in the Central American and Caribbean region (e.g., Medina and Galván, 2008; ECLAC, 2012; Gindling and Trejos, 2013). For example, Medina and Galván (2008) ranked Costa Rica as having the second-lowest Gini inequality among 17 Latin American and Caribbean countries circa 2005 (only above Uruguay), with three Central American and Caribbean countries at the top (Honduras, Nicaragua, and the Dominican Republic). Gindling and Trejos (2013), using various inequality indices, noted that around 1990, Costa Rica had inequality well below that of Guatemala, Honduras, Nicaragua, and El Salvador. However, the opposite trends followed by these countries ever since, with inequality increasing in Costa Rica and Honduras and decreasing in the other countries, but especially in El Salvador, have substantially reduced the gap, and around 2010 the latter was the country with the lowest inequality in this group (followed by Costa Rica). Long-term trends in poverty and inequality in Costa Rica are described by Trejos (2012).

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Due to its particular history, the national identity of this country was constructed based on the myth of an egalitarian, pacific, and white nation (e.g., Putnam, 1999) in a predominantly non-white area dominated by high inequality, violence, and instability. The population in Costa Rica is, however, diverse as the result of colonialism and the historical need for foreign workers, and presents important inequalities along racial and ethnic lines. This was highlighted by the recent release of the 2011 Census, which gave greater visibility to ethnic/racial minorities in the country.

Complying with the requests from local ethnic organizations and following most recent international recommendations, the national statistical office has included for the first time a question addressed to all Costa Ricans about their ethnic and racial self-identification. As a result, more than 11 percent of the population of 4.3 million ascribed themselves to any of the racial/ethnic reported minorities (mulattoes, blacks, and indigenous people). Another dimension of the ethnic diversity is nationality, because there was a significant flow of immigration into the country by disadvantaged groups of people born in Nicaragua (6.7 percent) and Panama (0.3 percent). This immigration flow involved people of any race or ethnicity but with significant numbers of mulattoes, blacks, and indigenous people.

The historical social disadvantages of indigenous and African descendants across Latin America and the Caribbean have been widely documented recently using the limited statistical information available on ethnicity in the region (e.g., Hall and Patrinos, 2006; Bello and Paixão, 2009; IACHR, 2011; Ñopo, 2012). These two groups are generally over-represented at low income and wellbeing levels, and present poorer socioeconomic endowments (lower achieved education, higher unemployment, precarious low-paid jobs, and so on). Not surprisingly, both indigenous people and blacks are perceived amongst the most discriminated population groups in the region (Chong and Ñopo, 2007). Mulattoes and indigenous people in Costa Rica have traits that do not differ much from the disadvantages of these minorities in other Latin American and Caribbean countries, and this disadvantage is shared by immigrants from Nicaragua and Panama. However, the black minority of Costa Rica is an outstanding case with some distinctive traits. The particular history of West Indians (mostly Jamaicans) who settled on the Caribbean coast of Costa Rica between the end of the nineteenth and the beginning of the twentieth century makes them an interesting case for study. They made up a differentiated racial (black), ethnic (British Antillean) group that had to struggle with serious discrimination in a predominantly Catholic, white/mestizo, and Hispanic country, and despite that, were able to achieve better education and more qualified jobs than other population groups.

In the Latin American and Caribbean region, many studies have analyzed the nature of the ethnic and racial inequalities in labor market outcomes like earnings and the distribution of workers across occupations using Blinder–Oaxaca-type decomposition techniques (see the revisions and comparative studies in Chong and Ñopo, 2008; Atal *et al*., 2009; Gradín, 2012). These outcomes are associated to a great extent with the poorer pre-market endowments of indigenous and black workers, especially education. The main case studied in Central America was the lower earnings of indigenous workers in Guatemala. The only studies of this type

in Costa Rica analyzed the earnings gap between Nicaraguan immigrant and native workers (Gindling, 2009), and the occupational segregation of blacks (Gradín, 2012).

A smaller number of studies have focused on how racial and ethnic inequality has shaped the distribution of overall wellbeing among households (e.g., income, wealth, expenditure, living conditions). Examples of these are the studies of the higher poverty of Afro-descendants in Brazil and indigenous people in Chile, and of the gap by skin color along the entire distribution of income in Brazil (Antón and Carrera, 2007; Gradín, 2009, 2014).

This paper contributes to filling this gap in the research on ethnicity and the distribution of wellbeing in Costa Rica. Apart from the scarcity of these studies in Central American countries, a number of reasons make Costa Rica a case that deserves special attention: its high diversity with the presence of indigenous people, African descendants, and immigrants from neighbor countries; the contrast of the relatively higher levels of equality and democracy, with the persistence of race and ethnicity as a determinant of wellbeing; and the presence of a black population with relatively better than average socioeconomic background but in a discriminatory environment.

The aim of this paper is thus to investigate in detail the extent and the nature of inequalities in wellbeing (proxied here by a synthetic index of living conditions) across racial and ethnic lines in Costa Rica, using the 2011 Census, the database with the richest information for ethnicity. To identify the main factors explaining such racial and ethnic inequalities, we use regression-based counterfactual analysis. By comparing the actual difference with what remains when the minority is given the characteristics of the majority, we estimate the characteristics and coefficients effects of the gap in wellbeing between population groups. The characteristics effect provides an idea of how much of the differential in wellbeing is explained by one group having better attributes (education, labor attachment, location, and so on) than the other. The coefficients effect quantifies the extent to which these factors associate with a differential impact on wellbeing in each group (one group takes more advantage of or is less harmed by some attributes). A detailed decomposition provides a quantification of the contribution of specific attributes to each of these effects. We undertake this analysis at the mean of wellbeing (Blinder, 1973; Oaxaca, 1973) and then extend it to at different quantiles along its distribution using a recent technique (Firpo *et al*., 2007, 2009).

The remainder of the paper is as follows. The next section provides a glimpse of the different population groups in Costa Rica. Section 3 briefly summarizes the literature investigating the racial and ethnic gap of economic outcomes in Latin America and the Caribbean. We present the methodology in Section 4, data and main variables in Section 5, and discuss the empirical results in Section 6. The final section closes by summarizing the main conclusions.

2. Race and Ethnicity in Costa Rica

In this section, we describe the main Costa Rican racial/ethnic groups to clarify the context of the results presented below. The three main groups are Europeans, Afro-descendants, and indigenous peoples, but as in the rest of Latin

America, miscegenation created a large population of mixed races, such as mestizos and mulattoes, of which the census only singles out the latter.

The oldest settlers in Costa Rica are eight indigenous populations (*pueblos*): Bribri, Brunca/Boruca, Cabécar, Chorotega, Huetar, Maleku/Guatuso, Ngöbe/Guaymí, and Teribe/Térraba. Their traditional territories or reservations are protected under the 1977 Indigenous Act and are under the supervision of a public organization, the National Commission of Indian Affairs (Comisión Nacional de Asuntos Indígenas, CONAI). Costa Rica has also ratified the 1992 ILO Convention No. 169 on indigenous rights, but still "continues to be one of the countries with the lowest level of constitutional recognition of indigenous rights in the region" (IWGIA, 2011, p. 107). These legal instruments have not been effective in protecting their cultural, political, and socioeconomic rights, and people of indigenous ancestry are left behind all the other groups.

The largest concentration of indigenous people is found near the Panamanian border, with the highest numbers in the cantons of Talamanca (14 percent) and Buenos Aires (13 percent). About one-third (34 percent) of the indigenous population lives across the 24 officially recognized indigenous territories, although another significant group lives in nearby areas. For example, about 25 percent of them live in the same cantons but outside the reservations. Indigenous people in or near reservations are more likely to preserve their native language and cultural traits and live in harsher conditions. Not all indigenous people were born in Costa Rica. One out of six indigenous people was born abroad, mainly in Nicaragua (especially Miskito, not identified as such in the Census) and Panama (mainly from the binational group of Ngöbe).[1] There is also an increasing non-indigenous population settling in traditional indigenous territories (26 percent of their population in 2011), a source of great conflict (e.g., IWGIA, 2013).

There is an increasing degree of alienation among the indigenous population. About one-quarter of the population claiming indigenous ethnicity does not identify with any *pueblo*. This proportion is insignificant in the reservations; it is about 18 percent in the areas near reservations, but rises to 50 percent in the rest of the country. It is possible that this growing alienation results in an underestimation of the actual indigenous population, if some people of this ancestry decline to claim this ethnicity and are included as mestizos or even mulattoes, for example.

Costa Rica was a Spanish colony between the early 1500s until its independence in the early 1800s (as part of the Central American federation of nations). Therefore, the first European settlers were Spanish. However, it was a poor, peripheral colony and was scarcely populated by Europeans when the republic was born.

Later immigration of Europeans and mestizos from neighboring countries helped to make up the main ethnic group of the country. The country promoted European immigration after independence in the context of whitening policies that also became popular in other countries in the region. At the same time, immigration of Chinese and Africans, among other non-white groups, was banned in 1862.

[1]A detailed description of the socioeconomic characteristics of the indigenous population in Costa Rica can be found in Solano (2004) and UNDP (2012), based on the 2000 Census; and Fuentes (2013), based on the 2011 Census.

In the context of the convulsive 1980s, immigrants and refugees from other Central American countries and Colombia started to arrive in the country, with Nicaraguans making up the largest group. The immigration flows and the characteristics of Nicaraguans in Costa Rica have been described in Marquette (2006) based on the 2000 Census; she highlighted their higher economic activity, and their segregation into low status, low paying occupations, and higher poverty levels, while negative perceptions about this community predominate in the public debate. Furthermore, Smith-Castro (2009) reported that Nicaraguan immigrants claimed to have experienced abuse and disdain because of their nationality. Gindling (2009) documented the large gap in earnings between Nicaraguan immigrants and the native-born population.

Most Afro-Costa Ricans arrived in two different waves.[2] A first group of people of African descent came as slaves during the Spanish colony, settling especially in different plantations in Matina (Caribbean coast), Nicoya (Pacific coast), as well as in the central valley villages (such as in Cartago). Due to the lack of large plantations, Costa Rica was never an outstanding slave economy like Cuba or Brazil, and the number of slaves was relatively small. Slavery was abolished in 1824. There was an intense miscegenation and this population was eventually assimilated into the predominant culture (e.g., Murillo, 1999). As a consequence, their descendants often do not accept their African ancestry, and it is reasonable to expect these people are mostly included as mulatto in the current racial/ethnic classification. It is possible, however, that this category could have been interpreted by some people as darker skin color, rather than mixed white–black race.

A second wave of Afro-descendants came from the Caribbean region due to an exception to the bans imposed on non-white immigration. The most important inflow started to arrive in Costa Rica in 1872 for the construction of the railway connecting San José, in the central valley, with Limón harbor on the Caribbean coast, to open a new route for coffee exports. People came from several Caribbean countries until the 1920s, especially from Jamaica, to work not only in the railway company but also in the harbor and in banana and cocoa plantations. The whole economic activity of the region was ruled by the U.S.-based United Fruit Corporation (UFCO).

This immigration created a solid, distinct, Antillean ethnic group—Protestant and Anglophone in a predominantly Hispanic and Catholic country. They came with higher literacy due to the fact that basic general education started earlier in the British West Indies. For decades, they also benefited from a specific private educational system (English schools) supported by their fraternity associations, protestant church denominations, and UFCO. As a consequence, their educational level was above that for most Costa Ricans at the time, they developed a sense of education as a way out of poverty, and they filled better jobs than Hispanics in the area (around the activities of the English-speaking UFCO). At the time, most Costa Ricans showed strong racial and xenophobic prejudices toward

[2]See Meléndez and Duncan (2012) for a detailed history of Afro-Costa Ricans. A description of this group based on 2000 and 2011 censuses can be found in Putnam (2004) and Campbell (2012), respectively.

Afro-Caribbeans, whom they saw as foreigners who often took the best jobs in the area. As a consequence, blacks had limited geographical mobility (e.g., they could not leave Limón for long; they were banned in 1934 from working on the South Pacific banana plantations when UFCO moved its activities there due to Panama disease). Immigrants during the first decades did not make much effort to integrate in the host society, expecting to return soon to their countries of origin. They did not obtain Costa Rican citizenship until the 1950s, right after the short civil war.

The economy in Limón stagnated after the collapse of banana plantations on the Caribbean coast, and once the limitations of mobility were removed, many Afro-Caribbeans moved to the more prosperous central valley around San José, looking for better job opportunities. There was also an intense migration to the U.S. or other countries in the area that significantly decimated the population, while a growing Hispanic population settled in Limón and became the majority of the population there.

Despite the existence of anti-discriminatory legislation (e.g., Minott, 2005), this culturally differentiated Afro-Caribbean community lacks any official recognition from the state (e.g., Rangel, 2009). It also still faces negative prejudices from a significant part of the population. For example, 27 percent of interviewed Costa Ricans agreed in a survey that Afro-descendants are more aggressive and dangerous than the rest of the nation; 38 percent of these claimed this was determined biologically (Sandoval *et al.*, 2010).

3. Previous Research on the Nature of Race and Ethnicity Inequality in Costa Rica and Latin America

The existence of large wage differentials by race and ethnicity has been well documented and investigated in several Latin American and Caribbean countries. Using the common Blinder–Oaxaca approach or its extensions, a number of studies have shown that a large part of these wage gaps was related to existing differentials in pre-market characteristics by group, especially in attained education (e.g., Chong and Ñopo, 2008; Atal *et al.*, 2009). They also found evidence that a substantial part of the wage gaps remained unexplained after controlling for workers' characteristics due to either differences in the quality of relevant endowments, such as education, or prevailing discrimination in the labor market. In Central America, the nature of ethnic wage differentials has been widely studied only for indigenous people in Guatemala (Patrinos, 2000; de Ferranti *et al.*, 2004; Chong and Ñopo, 2008; Cunningham and Jacobsen, 2008; Atal *et al.*, 2009; Vásquez, 2011; Ñopo, 2012).

Gindling (2009) also showed that Nicaraguans in Costa Rica have earnings lower than those of native-born workers. In analyzing the causes, he concluded that this could be the result of a large gap in attained education, as well as of the large differential in returns to years of schooling. The gap that could be explained by education might be partially offset by the impact of the better unobserved characteristics of immigrants (captured by a large and negative intercept effect). Furthermore, a few studies have also documented occupational segregation of Afro-descendants in Brazil (e.g., King, 2009; Salardi, 2014). Gradín (2012) compared the occupational segregation of blacks in Costa Rica and other various

countries (Brazil, Cuba, Ecuador, and Puerto Rico) using census data circa 2000, analyzing to what extent it was the result of differences in education and other workers characteristics, or of labor markets being more segregative. Blacks in Costa Rica showed relatively low levels of segregation across the major occupational categories (1 digit) but significantly higher levels if a more detailed classification was used instead. Black Costa-Rican women tended to work in relatively more-skilled occupations compared with the rest of the population. A particular result for Costa Rica was that, unlike other countries, the interethnic difference in the observed workers' characteristics (i.e., education and province of residence) did not explain the levels of segregation. In fact, segregation was higher, not smaller, after controlling for workers' characteristics.

Regarding how racial and ethnic inequality affected the distribution of well-being among households, Gradín (2009) has shown that observed characteristics accounted for almost 88 percent of the higher poverty levels of Afro-descendants compared with whites in Brazil, mostly driven by their lower years of schooling, but also by the larger number of dependants in their households, and by blacks being overrepresented in the poorest areas of the country. Gradín (2014) has also shown, in a comparative study with the U.S. and South Africa, that the white–black gap in Brazil was smaller for higher income quantiles, with an increasing role of education and decreasing importance of location in driving those differentials. Along the same lines, the lower level of education attained by household heads and the lower attachment of adults to the labor market explained more than a half of the higher poverty rates of the indigenous populations in Chile (Antón and Carrera, 2007). There is no evidence of this for Central American countries.

4. Methodology

4.1. *Composite Index of Wellbeing*

Let $c_1, \ldots, c_Q$ be a set of categorical variables describing the wellbeing of a population of size N, where c_q is coded with consecutive integers $1, \ldots, n_q$. Let Z^q be the $N \cdot n_q$ binary indicator matrix associated with c_q, with $Z^q_{ij} = 1$ if and only if the q-th categorical variable for the i-th individual $c_{iq} = j$. Let $Z = (Z_1, \ldots, Z^Q)$ be the $N \cdot J$ indicator matrix of the set of variables, where $J = n_1 + \ldots + n_Q$ is the total number of categories.

For each variable c_q we estimate coordinates $s^q_1, \ldots, s^q_{n_q}$ using the first extracted dimension with Multiple Correspondence Analysis (MCA). Let $\overline{s} = \overline{s}^1, \ldots, \overline{s}^Q$ and $\underline{s} = \underline{s}^1, \ldots, \underline{s}^Q$ be, respectively, the vectors with the highest and lowest scores associated with the Q categorical variables. Given that higher scores are associated here with lower wellbeing, $\overline{s}$ and $\underline{s}$ represent the worst and best possible profiles in terms of wellbeing.

We define y_i to be a wellbeing composite index that summarizes the living conditions or wealth profile for the i-th person as a weighted sum of the categories for this individual, where the weights are based on coordinates and represent the relative marginal contribution to the individual wellbeing of being in each category, compared with being in the worst category, normalized by the maximum possible contribution. Thus, this index is just a linear transformation of the

predicted value, and is normalized here to increase in wellbeing and to range between 0, the value corresponding to the worst possible profile, and 1, that for the best possible profile:

$$(1) \qquad y_i = \sum_{q=1}^{Q} \sum_{j=1}^{n_q} Z_{ij}^q w_j^q, i = 1, .., N; \text{ with } w_j^q = \frac{\overline{s}^q - s_j^q}{\sum_{q=1}^{Q} \left(\overline{s}^q - \underline{s}^q\right)}.$$

4.2. *Decomposing the Gap in Wellbeing: The Mean*

To obtain a decomposition of the gap in wellbeing between whites/mestizos and racial/ethnic minorities in Costa Rica (and between native-born and immigrants), we use the well-known regression-based Blinder (1973) and Oaxaca (1973) approach. The original approach was applied to decompose intergroup differences in the average values of wages into the part that was explained by characteristics and the part that remained unexplained. Later researchers extended the approach to deal with gaps at different quantiles of the distribution of the variable of interest. Among the various extensions, we here follow the one proposed by Firpo *et al*. (2007, 2009) based on unconditional quantile regressions.

We split the population into two groups. Let y^g be the vector indicating the level of wellbeing index for members of group g, where $g = 0$ indicates the reference group (white/mestizo in the case of race/ethnicity; people born in Costa Rica in the case of country of birth), and $g = 1$ the target group (minority). We first estimate separately for each group the level of wellbeing as a function of a vector $X^g = \left(x_1^g, \ldots, x_K^g\right)$ of a household's characteristics that might affect wellbeing: $\hat{y}^g = X^g \hat{\beta}^g$, where $\hat{\beta}^g$ is the associated OLS vector of estimated coefficients.

Given that wellbeing is defined by the characteristics of the dwelling and all explanatory variables are collected at the household level, we estimated robust standard errors, taking into account any correlation between observations within the same sample cluster (here the dwelling), while assuming independence across clusters (see Cappellari and Jenkins, 2004). A well-known property of the unconditional mean is that it equals the expectation (over X) of the conditional mean, which can be estimated by OLS. Thus, the average wellbeing in group g, $\overline{y}^g$, is equal to the average predicted wellbeing for this group (with population N^g):

$$(2) \qquad \overline{y}^g = \frac{1}{N^g} \sum_{i=1}^{N^g} \hat{y}_i^g = \overline{X}^g \hat{\beta}^g.$$

As a result, it is easy to produce an aggregate and a detailed decomposition of the inter-ethnic gap in wellbeing. In the counterfactual average wellbeing distribution $\overline{X}^0 \hat{\beta}^1$, we gave minorities the characteristics (on average) of the reference group while keeping their own estimated coefficients (the impact of characteristics on wellbeing). By adding and subtracting the counterfactual and rearranging terms, we can rewrite the differential in average wellbeing between the majority and the minority as the sum of the *aggregate characteristics effect* (gap explained by shifting characteristics valued at the coefficients of the target group) and the

aggregate coefficients effect (unexplained gap due to characteristics having a different impact for each group):

$$\bar{y}^0 - \bar{y}^1 = \bar{X}^0\hat{\beta}^0 - \bar{X}^1\hat{\beta}^1 = \left(\bar{X}^0 - \bar{X}^1\right)\hat{\beta}^1 + \bar{X}^0\left(\hat{\beta}^0 - \hat{\beta}^1\right). \tag{3}$$

Given the linearity of the regressions, we can estimate the detailed decomposition (the evaluation of the individual contribution of each variable x_k ($k = 1, \ldots, K$) to the characteristics and coefficients effects) respectively as $W_k^{\Delta X}\left(\bar{y}^0 - \bar{y}^1\right) = \left(\bar{x}_k^0 - \bar{x}_k^1\right)\hat{\beta}_k^1$ and $W_k^{\Delta\beta}\left(\bar{y}^0 - \bar{y}^1\right) = \bar{x}_k^0\left(\hat{\beta}_k^0 - \hat{\beta}_k^1\right)$. Thus, the individual effects sum up the corresponding aggregate effects.

A well-known problem that needs to be addressed is that the detailed decomposition of the coefficients effect suffers from identification difficulties (Oaxaca and Ransom, 1999). This is because the contribution of a dummy variable to this effect will vary with the choice of the reference group, while the contribution of continuous variables will vary with affine transformations that involve a location parameter. As pointed out by Fortin *et al.* (2011), there is no general solution to this problem and all solutions proposed in the literature are ad-hoc. We here follow Yun (2005, 2008) and use normalized coefficients for categorical variables, such that the sum of the coefficients of each set of dummies is 1 (the only solution for continuous variables is to rely on specifications that are widely accepted in the literature). However, for the above reasons, the estimates for the detailed decomposition of the coefficients effect should be taken with caution.

4.3. *Decomposing the Gap in Wellbeing: Quantiles*

The Blinder–Oaxaca approach implies the decomposition of the mean differential. However, it is important to ask how much the pattern of differences in wellbeing between two given groups varies along its whole distribution. One way to achieve that is to produce a similar decomposition at different quantiles of the wellbeing distribution. However, the decomposition of the gap in quantiles is technically more complicated than the decomposition at the mean. The law of iterated expectations that holds for the mean, does not generally hold for quantiles q_τ. Then they cannot be estimated using quantile regressions (with parameters β_τ): $q_\tau(y) \neq E(q_\tau(y|X)) = E(X)\beta_\tau$ (e.g., Fortin *et al.*, 2011).

In order to evaluate the impact of changes in the distribution of household attributes on different quantiles of the unconditional (marginal) distribution of wellbeing, we used an extension of the Blinder–Oaxaca approach (Firpo *et al.*, 2007, 2009). This method produces the decomposition for the gap between the unconditional τ-th quantiles of the reference and target groups, $q_\tau^0 - q_\tau^1$, using a linear approximation for the non-linear quantile function based on the concept of "influence function" of a distributional statistic (the quantile in our case). The influence function for the τ-th quantile of the wellbeing distribution y, $IF(y; q_\tau)$, is a statistical tool used for robustness analysis, measuring the influence of each individual observation of y on the quantile function q_τ:

$$IF(y; q_\tau) = [\tau - \mathbf{1}(y \leq q_\tau)]/f(q_\tau), \tag{4}$$

where **1**() is an indicator function that takes the value 1 if the specified condition is satisfied and 0 otherwise. Its expectation is zero. The corresponding recentered influence function, $RIF(y; q_\tau)$, is just obtained by adding the quantile to $IF(y; q_\tau)$, so that its expectation is q_τ:

$$RIF(y; q_\tau) = q_\tau + IF(y; q_\tau). \tag{5}$$

The simplest version of this approach assumes that the conditional expectation of the $RIF(y; q_\tau)$ can be modeled as a linear function of the explanatory variables, X, such that its coefficients can be estimated by OLS (where γ indicates the corresponding vector of coefficients):

$$q_\tau = E(RIF(y; q_\tau)|X) = X\gamma. \tag{6}$$

Note that the $RIF(y; q_\tau)$ is just a linear transformation of an indicator variable that takes a value of 1 or 0 depending on whether the observation falls below or above q_τ. The intuition of this approach is that we first estimate a model for the proportion of people below a given quantile of wellbeing using a linear probability model. Then, we estimate the counterfactual proportion in which we replace the observed distribution by its counterfactual. Finally, we estimate the counterfactual quantile under the assumption that the relationship between counterfactual proportions and counterfactual quantiles is locally linear (which implies dividing by the corresponding probability density function). The implication of this is that we can obtain the decomposition for the gap in quantiles just using a Blinder–Oaxaca decomposition in which the dependent variable y is replaced by $RIF(y; q_\tau)$ in the OLS regressions:

$$\overline{RIF(y; q_\tau)}^0 - \overline{RIF(y; q_\tau)}^1 = \bar{X}^0\hat{\gamma}_\tau^0 - \bar{X}^1\hat{\gamma}_\tau^1 = (\bar{X}^0 - \bar{X}^1)\hat{\gamma}_\tau^1 + \bar{X}^0(\hat{\gamma}_\tau^0 - \hat{\gamma}_\tau^1). \tag{7}$$

Given that $E[RIF(y; q_\tau)] = \overline{RIF(y; q_\tau)} = q_\tau$, then we get:

$$q_\tau^0 - q_\tau^1 = (\bar{X}^0 - \bar{X}^1)\hat{\gamma}_\tau^1 + \bar{X}^0(\hat{\gamma}_\tau^0 - \hat{\gamma}_\tau^1). \tag{8}$$

The corresponding aggregate explained and unexplained effects are $W^{\Delta X}(q_\tau^0 - q_\tau^1) = (\bar{X}^0 - \bar{X}^1)\hat{\gamma}_\tau^1$ and $W^{\Delta\gamma}(q_\tau^0 - q_\tau^1) = \bar{X}^0(\hat{\gamma}_\tau^1 - \hat{\gamma}_\tau^0)$.

Similarly to the previous case, we estimate the detailed effects using subsets of characteristics and their corresponding coefficients: $W_k^{\Delta X}(q_\tau^0 - q_\tau^1) = (\bar{x}_k^0 - \bar{x}_k^1)\hat{\gamma}_{\tau k}^1$ and $W_k^{\Delta\gamma}(q_\tau^0 - q_\tau^1) = \bar{x}_k^0(\hat{\gamma}_{\tau k}^1 - \hat{\gamma}_{\tau k}^0)$.[3] Repeating the procedure for different quantiles (i.e., 10th, 25th, 50th, 75th, and 90th), we are able to explain the ethnic gap along the entire distribution of wellbeing.

[3]For the computations we used the *RIFREG* (Firpo *et al.*, 2009) and the *OAXACA* (B. Jann) Stata modules.

4.4. *Decomposing the Gap in Wellbeing: Interpretation*

Most regression-based decomposition techniques have been initially formulated and widely used in the context of the analysis of wage differentials. In this literature, the explained effect is interpreted as a wage differential due to (pre-market) inter-ethnic differences in productivity, and thus it does not imply direct wage discrimination. The center of the analysis is usually the unexplained part. If productivity is properly measured it would reflect the neat effect (discrimination) of ethnicity on wages. Otherwise, it might also result from unobserved productivity. It is important to note some differences when it comes to analyzing wellbeing.

In the context of wellbeing, we are not looking at the existence of a particular form of discrimination. We rather look at the overall social or economic disadvantage of one group with respect to another and try to identify its potential sources. On the one hand, this economic disadvantage can be the result of one group having more prevalence of those characteristics associated with lower wellbeing such as less education, living in inaccessible rural areas, or having more children. These "poorer" endowments are clearly identified by the explained effect which is the main effect of interest here, unlike the case of wage differentials. For this reason, in our case we give the ethnic minority the characteristics of the reference group, instead of its coefficients, which is the most common practice in the analysis of wage differentials. These characteristics we control for, should be all those associated with wellbeing, whether related with productivity or not. In fact, if the available information were sufficiently rich, we would ideally explain the entire gap in wellbeing (with none or a minimum residual). On the other hand, the disadvantage of ethnic minorities could be the result of some attributes having different implications in terms of wellbeing. This is captured by the coefficients or unexplained effect that can still be interpreted as the "treatment effect" of race/ethnicity on wellbeing, after having controlled for the difference in observable attributes.

Discrimination might be present in either effect. In the explained effect, it is present when the poorer characteristics of ethnic minorities are the result not of them sharing different cultural values, but of them receiving less attention in the provision of public goods or social benefits by the government. The same applies if they invest less in human capital after anticipating discrimination in the labor market, or if the other groups reject to hire them, or segregate them into low-paid occupations. Discrimination can also appear in the coefficients effect associated with the coefficients of education and labor market variables, if there is wage discrimination, or systematic differences in the quality of attained education of native-born minorities. The approach used here, however, does not allow us to assess the ultimate reasons for these poorer endowments and differentials in returns, for which one needs to rely on more specific studies (which are scarce for the case of Costa Rica).

5. Data and Variables

5.1. *Data, Wellbeing, and Race/Ethnicity*

The database used in this study is a public-use sample extracted from the 2011 decennial Census (*X Censo Nacional de Población y Vivienda*) undertaken by the

Instituto Nacional de Estadísticas y Censos (INEC), which accounts for about 10 percent of Costa Rica's population living in private households (427,972 observations). The census does not provide any information about income or expenditure. For that reason, we computed a composite index of wealth for measuring wellbeing or economic status, as explained in Section 4.1. The variables we used for computing this index referred to the existence of healthcare insurance, available utilities, and basic dwelling characteristics (type, ownership, predominant materials, conditions, and equipment). The variables used to construct the index and the estimated scores and weights for each category are reported in the online Appendix (Table A1). This first MCA dimension used to construct the index explains 61.5 percent of the total variability (inertia). As expected, the wellbeing index was positively and highly correlated with the log of per capita household net income: about 60 percent using the 2011 Household National Survey (*Encuesta Nacional de Hogares*), with similar variables. Correlation with income is not higher because there are not many attributes that allow us to identify the distance between the most affluent individuals properly. The advantage of the 2011 Census with respect to previous data sources is that it provides the richest information on race and ethnicity. It also provides the largest sample size, allowing a more detailed analysis of ethnic/racial groups.

The decision to include (and how) the racial/ethnic dimension in statistics is a controversial issue in most Latin American countries. Admitting a diversity of ethnicities and cultures still generates strong resistance in societies whose national identities were typically constructed on the basis of being composed by homogenous populations (mestizo in most cases; whites in the case of Costa Rica, as in some South American countries). Even when some diversity is accepted, the idea of racial democracy which denies the racial/ethnic dimension of social inequalities is also quite common in the region, and Costa Rica is a prominent example due to its higher equality levels. This has generally lead to the invisibility of ethnic minorities, mostly Afro-descendants and indigenous people, in modern statistics all over the region (with the outstanding exception of Brazil), although the situation is changing rapidly due to increasing concern about making minorities visible as a first step to recognize the diversity and overcome discrimination. Antón and Del Popolo (2009), Lennox and Minott (2011), or Cruces *et al*. (2012) provide a thorough discussion of the visibility of Afro-descendants in Latin American statistics and the recent debate on the issue.

Along these lines, Costa Rican statistics did not recognize minorities until very recently. As in other countries, the earliest censuses (between 1864 and 1950) in Costa Rica classified the population on the basis of race. After omitting race/ethnicity in the 1963, 1973, and 1984 Censuses, the authorities first reintroduced it in the 2000 Census, which included a question about self-identification with ethnic minorities (culture): black/African descents; Chinese; indigenous people; none. But there was no explicit category either for whites or for people of mixed race (such as mestizos or mulattoes). Some specific questions addressed to indigenous people were restricted to indigenous territories. The authorities' interest was to identify minorities rather than allowing any Costa Rican to self-identify and, as a result, the proportion of ethnic minorities (3.8 percent) was underestimated, compared to

the 2011 Census (11.2 percent) when the question was extended to embrace the race or ethnicity of all Costa Ricans. Additionally, the Household Survey of Multiple Purposes (*Encuesta de Hogares de Propósitos Múltiples*) in 2002 included a racial question asking whether any member of the household was indigenous, black, mulatto, Chinese, or other. About 1.3 percent was indigenous, 1.1 percent black, 4.1 percent mulatto, and 0.2 percent Chinese (the remaining 93 percent was included in the "other" category).

Several international organizations, particularly the Economic Commission for Latin America and the Caribbean (ECLAC), strongly recommended that all Latin American countries undertaking the 2010 round of national censuses should include self-identification of all the population according to their ethnicity, a concept generally preferred over race (e.g., ECLAC, 2009). Costa Rica complied with these recommendations in the 2011 Census. National ethnic organizations have long claimed for this, and INEC agreed with them on the main questions to include (e.g., López, 2013).

The Census first asked each individual about her indigenous condition, and if the answer was positive, about the specific people (*pueblo*) and whether or not the respondent spoke any indigenous language. For non-indigenous people, there was a question about race/ethnicity asking whether the respondents considered themselves in the following categories: (i) black or Afro-descendant, (ii) mulatto, (iii) Chinese, (iv) white or mestizo, (v) other, or (vi) none. This implied a debatable treatment of mixed-race people: blacks and mulattoes are collected in separate categories, while whites and mestizos are included in the same category. It also neglects the linguistic dimension in the case of Caribbean blacks—who might speak (Creole) English.

There were some criticisms from ethnic groups regarding the implementation of the census in the field, especially referring to the lack of sufficient training for interviewers and advertisements to make citizens aware of the ethnic/racial self-identification (see, e.g., Campbell, 2012). There is, however, a great consensus among analysts that this round implied a great improvement over the way the ethnic/racial information was collected previously.

As a result, more than 11 percent of a population of 4.3 million ascribed themselves to any of the racial/ethnic minorities of the country. The largest minority, 334,437 (7.8 percent) Costa Ricans, is the population of (possible) African ancestry, a result of colonization and immigration flows. More specifically, 45,228 (1.1 percent) Costa Ricans considered themselves as blacks or of African descent, and 289,209 (6.7 percent) as mulattoes. The second-largest minority in the country (104,143; 2.4 percent) is made up of the different indigenous peoples that historically inhabited the region (including neighboring countries) before the arrival of Europeans. There is also a small and affluent Chinese minority (9170; 0.2 percent), and 36,334 (0.8 percent) Costa Ricans included themselves in the "other race/ethnicity" category. The majority of the population (84 percent) ascribed themselves to the mixed white/mestizo category, while the remaining 5 percent refused to identify with any of these categories.

There is a common practice, especially in Brazil, of pooling blacks (*preto*) and people of mixed race with presumable African ancestry (*pardo*) in a wider category of Afro-descendants because the lines between both groups are unclear and the

choice might be influenced by the degree of ethnic self-esteem, the environment, and individual characteristics (e.g., Telles, 2002). This is consistent with the claim for higher statistical visibility pursued by the emerging black movement in Latin America. However, Costa Rica is a particular case because blacks and mulattoes strongly differ in their characteristics, as we will discuss below, for reasons for which we will undertake a separate analysis of both groups in most of the empirical analysis. Similarly, it is reasonable to think that the choice between indigenous and white/mestizo might also depend on household characteristics and assimilation. However, in this case no pooling is possible because of the lack of a separate category for mestizo.

The census questionnaire also asked about the country of birth, which allows us to identify first-generation immigrants from different countries, of which we single out two disadvantaged groups of immigrants: people born in Nicaragua (287,766; 6.7 percent) and Panama (11,250; 0.3 percent). This immigration flow involved people of any race or ethnicity but with significant numbers of mulattoes, blacks, and indigenous people. Other, more affluent groups come from the U.S. and Colombia (about 16,000 of each nationality), among other countries. In this aspect, Costa Rica contrasts with other countries in the Central American region that stand out for sending migrants, mostly to the U.S.

5.2. *Explanatory Variables*

The variables explaining the race/ethnicity gap should include all those factors that might affect wellbeing. This set of variables is necessarily richer than those usually considered in (Mincerian) earnings regressions because wellbeing depends on all sources of permanent income and on needs, and is determined at the household level. Thus, it must consider information on location, demographic variables such as the size and composition of households, education, and labor-related variables from all household members. Based on that, we included several explanatory variables that might affect the wellbeing in a household, because they affect either household needs (e.g., the number and age of household members) or the ability of its members to raise income from any source (e.g., human capital and labor related variables which are common in Mincerian earnings equations). Some variables, such as the presence of children or location, could affect both.

We measured location by a dummy variable indicating whether the area is urban or rural and by the region of residence (Great Metropolitan Area, Rest of Central Region, Chorotega, Pacific Central, Brunca, Atlantic Huetar, and Northern Huetar). We also considered the number of children (0–15 years old) in the household, and householder's age (less than 35, 35–50, 51–64, 65 or more), sex, and immigration status. This includes information about householder birthplace (same canton, another canton, Nicaragua, Panama, rest of Central America, U.S. or Canada, another country), place of residence five years ago (same canton, another canton, another country), and whether the household is sending remittances abroad. In addition, we included the achieved level of education of the

household head (none, primary, high school, and college) and the percentage of all adults in the household at each education level. As usual, there is no information that allows us to capture differences in the quality of education. Labor market performance includes the householder's labor status (not in the labor force, unemployed, and occupation and industry at 1 digit disaggregation), the percentages of adults employed and unemployed, and a dummy indicating whether the household receives or does not receive remittances from abroad. Unfortunately, there is no information on the intensity of labor market attachment such as the number of hours or weeks worked. In the case of the analysis by country of birth, all variables are the same, except that the head of the household's immigration status is replaced by individual race (black or mulatto, white or mestizo, indigenous, or other).

6. Results

6.1. *Wellbeing, Race, and Ethnicity in Costa Rica*

The values of the normalized wellbeing index estimated at different points of the distribution and for different partitions of the population are reported in the Appendix. The average value of the index for the population is 0.75; that is, the average Costa Rican has a weighted wellbeing that is about three-quarters of the best possible profile, given the set of categorical variables we used to describe basic living conditions in the country. The values have an important variability: for example, it is 0.60 and 0.89 for the 10th and 90th percentiles, respectively.

The distribution of the index by characteristics follows the pattern we expected. Wellbeing is higher (at any quantile) in urban areas, in the central provinces (i.e., San José, Heredia, or Cartago), and for people at least 25 years old with a college degree or with a white-collar job. On the contrary, it is lower in rural areas, in peripheral provinces (Limón, Puntarenas, and Guanacaste), for people without any formal education, and for those working in blue-collar and agrarian occupations.

There is a significant gap regarding ethnicity and country of birth. Figures 1 and 2 make this clear: they display the adaptive Gaussian kernel densities of the wellbeing index for different population groups in Costa Rica. Figure 1a demonstrates that indigenous people stand out as generally showing the lowest levels of wellbeing (0.62 on average). It is important to note that we constructed the wellbeing index for the country as a whole and based on objective attributes. Thus, we associate living in traditional dwellings (constructed with natural materials, lack of domestic appliances, and so on) with severely poor living conditions. In the case of indigenous populations, this might also reflect the preservation of their cultural values. Using a unique index to judge wellbeing in two population groups with different cultures and social values is always problematic.

As Figure 1b highlights, there is also a large heterogeneity among indigenous people depending on whether they live on reservations (the lowest levels), in the nearby areas (outside the reservation but in cantons with a reservation), or in the rest of the country (with the highest wellbeing). On the opposite end of the

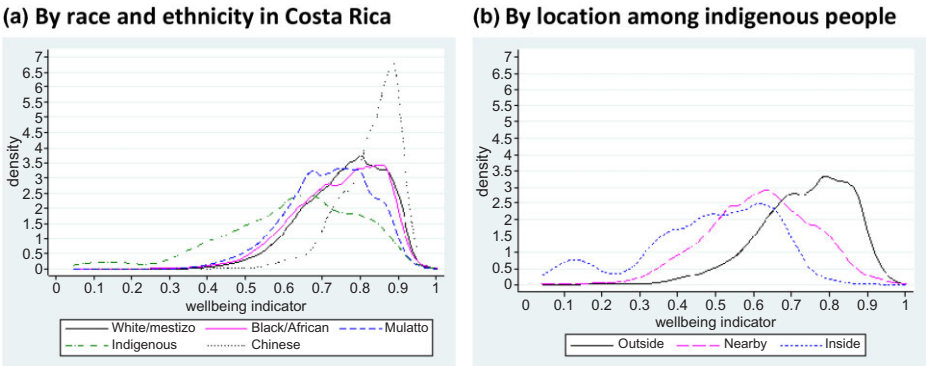

Figure 1. Wellbeing Distribution in Costa Rica

Note: Panel B: outside, inside or nearby (same canton) indigenous territories in Costa Rica.
Source: Own construction based on 2011 Census.

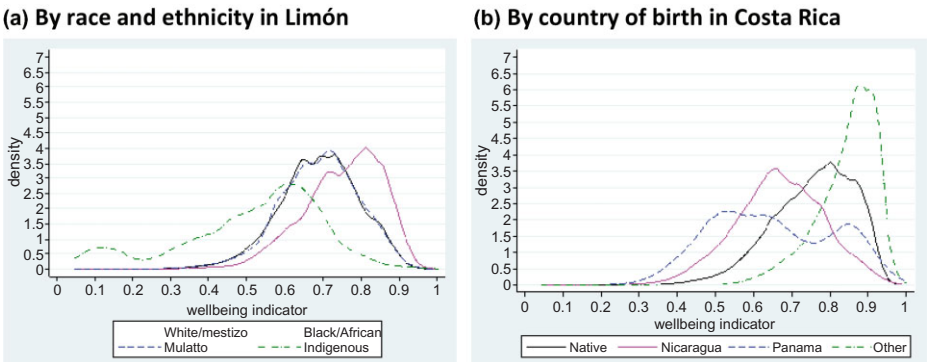

Figure 2. Wellbeing Distribution in Costa Rica

Source: Own construction based on 2011 Census.

spectrum, a small group of affluent Chinese concentrate at the highest levels of wellbeing among all population groups, followed by whites/mestizos, and then closely by blacks/Africans. Mulattoes are somewhere in between both extremes. The wellbeing of Afro-descendants (black and mulatto) is determined by that of the largest group, mulattoes.

Given the particular history of blacks in Costa Rica discussed above, a more detailed look at the distribution of wellbeing in the Limón province is of particular interest. Figure 2a provides a summary of this information. Blacks in this generally poor province stand out as sharing the highest wellbeing, while there is almost no distinction in the distribution of mulattoes and whites/mestizos. Indigenous people, however, show no significant difference with their relative position for the whole country, because this is one of the main indigenous areas.

Similarly, as shown in Figure 2b (and in the Appendix), there is a large gap in wellbeing between immigrants from Panama and Nicaragua compared with those

born in Costa Rica and immigrants from other countries. As mentioned previously, there is a strong relationship between the gaps in Figures 1a and 2b, as many Nicaraguan and Panamanian immigrants are indigenous or Afro-descendants. More specifically, 44 percent of immigrants from Panama are indigenous (but only 2 percent from Nicaragua), while 16 percent of immigrants from Nicaragua are mulatto, and nearly 2 percent are black. Similarly, 7 percent of immigrants from Panama are mulatto and 5 are percent black. The other side of this picture is that nearly 11 percent of blacks and 15 percent of mulattoes in Costa Rica are born in Nicaragua, and 11 percent of indigenous people are either from this nationality or from Panama.

Understanding the nature of these differences based on race/ethnicity and country of birth is the aim of this section, for which we will use the decomposition techniques described above. The main aim is to find the extent to which these differences are explained by the different composition of ethnic groups' characteristics such as education, location, performance in the labor market, and so on. Otherwise, it could be that a given characteristic has different implications across ethnic groups in terms of attained wellbeing.

6.2. *Explaining the Gap in Wellbeing of Mulattoes and Indigenous People*

We display in Table 1 the results of the aggregate and detailed decomposition of the gap in wellbeing between whites/mestizos, and indigenous people and mulattoes, for the mean and for different quantiles of the wellbeing distribution (10th, 25th, 50th, 75th, and 90th).[4] The observed gap with whites/mestizos is sharply decreasing with the level of wellbeing in the case of the indigenous people, while it is stable up to the median and then decreasing in the case of mulattoes. In a comparative exercise for the black–white gap in income, Gradín (2014) showed that Brazil, the U.S., and South Africa all presented increasing gaps in absolute terms along the income distribution, but with different distributional patterns when the gaps were expressed as proportions of whites' income: decreasing, flat, and increasing, respectively. In the case of Costa Rica, the fact that the gaps are larger at the bottom of the distribution might be associated with the index of wellbeing being constructed using information about basic utilities and home equipment, which is expected to compress the distribution (and ethnic differentials) at its top.

Generally speaking, a large proportion of the mean gap in wellbeing between whites/mestizos and these two disadvantaged minorities can be explained by the latter having poorer endowments: about 77 percent (indigenous) and 66 percent (mulattoes). However, a look at the distributive pattern shows that the proportion thus explained is relatively low at the bottom of the distribution (38 and 52 percent at the 10th quantile), and then sharply increases for higher quantiles (161 and 96

[4]The regressions used to obtain all the results are reported in the online Appendix (Tables A3 and A4), jointly with descriptive statistics of the explanatory variables, and a number of figures summarizing the decomposition results.

TABLE 1

DECOMPOSITION OF THE GAP IN WELLBEING (100·INDEX) BY RACE/ETHNICITY

	Indigenous People						Mulatto					
	Mean	p10	p25	p50	p75	p90	Mean	p10	p25	p50	p75	p90
White/mestizo	75.73	60.94	68.66	77.13	84.20	88.89	75.73	60.94	68.66	77.13	84.20	88.89
	(0.09)	(0.13)	(0.12)	(0.11)	(0.08)	(0.05)	(0.09)	(0.13)	(0.12)	(0.11)	(0.08)	(0.05)
Race/ethnic minority	61.73	37.19	51.01	63.87	75.55	83.84	71.61	56.66	64.35	72.47	80.12	85.92
	(0.40)	(0.92)	(0.64)	(0.48)	(0.45)	(0.33)	(0.14)	(0.26)	(0.20)	(0.18)	(0.15)	(0.14)
Gap	14.00	23.75	17.64	13.26	8.65	5.06	4.12	4.28	4.30	4.66	4.08	2.98
	(0.38)	(0.91)	(0.63)	(0.46)	(0.43)	(0.31)	(0.12)	(0.25)	(0.19)	(0.16)	(0.14)	(0.13)
Explained	10.81	8.99	11.91	12.00	12.89	8.16	2.73	2.23	2.41	3.10	3.05	2.85
	(0.35)	(0.84)	(0.52)	(0.39)	(0.38)	(0.33)	(0.10)	(0.17)	(0.12)	(0.13)	(0.11)	(0.11)
Region	1.95	–0.28	0.72	2.51	4.03	3.01	0.21	0.33	0.27	0.24	0.16	0.11
	(0.20)	(0.42)	(0.37)	(0.32)	(0.38)	(0.30)	(0.03)	(0.08)	(0.04)	(0.04)	(0.03)	(0.03)
Area	2.73	2.42	3.76	3.29	3.06	0.86	–0.03	–0.06	–0.04	–0.04	–0.02	–0.01
	(0.17)	(0.46)	(0.33)	(0.30)	(0.28)	(0.23)	(0.01)	(0.03)	(0.02)	(0.02)	(0.01)	(0.00)
Children	0.98	2.35	1.13	0.91	0.25	0.08	0.33	0.54	0.41	0.33	0.20	0.10
	(0.22)	(0.60)	(0.48)	(0.20)	(0.12)	(0.07)	(0.03)	(0.07)	(0.05)	(0.04)	(0.02)	(0.02)
Sex	0.01	0.04	0.04	0.02	–0.04	–0.05	0.03	0.01	0.01	0.04	0.04	0.04
	(0.01)	(0.04)	(0.03)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)
Age	0.00	–0.11	–0.02	0.02	0.04	0.09	0.11	0.03	0.12	0.17	0.13	0.08
	(0.05)	(0.12)	(0.08)	(0.05)	(0.04)	(0.03)	(0.02)	(0.05)	(0.04)	(0.03)	(0.03)	(0.02)
Education	3.32	4.10	4.09	2.78	3.45	2.97	1.05	0.44	0.65	1.18	1.50	1.56
	(0.26)	(0.66)	(0.48)	(0.25)	(0.23)	(0.22)	(0.05)	(0.07)	(0.06)	(0.06)	(0.08)	(0.09)
Immigration	0.05	–0.80	0.36	0.30	0.12	–0.01	0.64	0.79	0.75	0.78	0.49	0.31
	(0.12)	(0.45)	(0.25)	(0.14)	(0.12)	(0.09)	(0.04)	(0.09)	(0.06)	(0.06)	(0.04)	(0.04)
Labor	1.77	1.27	1.84	2.18	1.98	1.19	0.40	0.14	0.23	0.40	0.55	0.65
	(0.20)	(0.55)	(0.40)	(0.19)	(0.26)	(0.22)	(0.04)	(0.07)	(0.05)	(0.05)	(0.05)	(0.06)
Unexplained	3.19	14.76	5.73	1.26	–4.24	–3.11	1.39	2.05	1.89	1.57	1.02	0.12
	(0.19)	(0.45)	(0.31)	(0.31)	(0.39)	(0.46)	(0.09)	(0.20)	(0.15)	(0.12)	(0.13)	(0.16)
Region	0.58	2.91	3.17	0.91	–2.40	–2.72	0.09	0.31	0.64	0.33	–0.20	–0.43
	(0.17)	(0.36)	(0.36)	(0.25)	(0.39)	(0.37)	(0.08)	(0.18)	(0.17)	(0.14)	(0.10)	(0.10)
Area	–1.24	–0.37	–1.62	–1.61	–1.87	–0.55	0.04	0.10	0.12	–0.07	–0.07	–0.06
	(0.12)	(0.33)	(0.24)	(0.21)	(0.20)	(0.17)	(0.06)	(0.16)	(0.12)	(0.09)	(0.06)	(0.05)
Children	0.52	2.15	0.12	0.43	–0.10	–0.03	0.38	0.55	0.12	0.42	0.46	0.33
	(0.35)	(1.02)	(0.86)	(0.33)	(0.21)	(0.13)	(0.09)	(0.25)	(0.18)	(0.13)	(0.11)	(0.09)
Sex	0.36	0.55	0.72	0.67	–0.11	–0.42	–0.01	–0.13	0.08	0.05	–0.01	–0.16
	(0.12)	(0.42)	(0.30)	(0.15)	(0.15)	(0.14)	(0.05)	(0.15)	(0.08)	(0.08)	(0.06)	(0.07)
Age	0.40	0.40	0.71	0.34	0.31	0.00	0.01	–0.19	0.03	0.09	0.05	–0.03
	(0.15)	(0.53)	(0.27)	(0.13)	(0.13)	(0.10)	(0.05)	(0.12)	(0.09)	(0.07)	(0.06)	(0.06)
Education	–3.61	–2.49	–10.05	–3.05	–5.48	–3.29	–0.90	1.37	1.20	–1.67	–3.33	–2.72
	(1.56)	(6.34)	(3.08)	(1.61)	(1.21)	(0.89)	(1.06)	(3.83)	(1.74)	(1.06)	(0.69)	(0.48)
Immigration	0.77	3.34	3.65	0.07	–0.89	0.54	0.09	1.05	1.27	–0.02	–0.92	–0.49
	(1.21)	(3.61)	(1.74)	(1.26)	(1.37)	(1.62)	(0.34)	(0.91)	(0.60)	(0.51)	(0.60)	(0.70)
Labor	1.86	4.86	1.32	–0.22	1.61	–0.18	0.33	–0.83	–1.06	1.03	1.56	1.02
	(0.79)	(2.42)	(1.51)	(1.07)	(1.18)	(1.30)	(0.33)	(0.70)	(0.53)	(0.53)	(0.55)	(0.58)
Intercept	3.54	3.42	7.70	3.72	4.68	3.54	1.35	–0.19	–0.51	1.40	3.50	2.66
	(2.30)	(7.50)	(3.75)	(2.35)	(2.12)	(2.04)	(1.16)	(3.97)	(2.01)	(1.28)	(0.95)	(1.04)

Note: Robust standard errors in parentheses.
Source: Own construction based on 2011 Census.

percent at the 90th). This is the result of the gaps explained by characteristics that are increasing (except at the top) in both cases. That is, the gap by race/ethnicity is not only larger among the poor, but a larger proportion of it remains even when people are compared with similar characteristics. On the contrary, the whole gap among the most affluent people is explained by minorities having a higher prevalence of characteristics associated with lower wellbeing.

Looking at the factors that explain the gap in wellbeing at the mean, both groups share some similarities. The lower education in their households turns out to be the most important single factor, associated with about one-quarter of the mean gap. This does not come as a surprise, as education has already been identified in other Latin American countries as the main factor explaining the ethnic gap in wages (e.g., Chong and Ñopo, 2008; Atal *et al*., 2009), in poverty levels (Antón and Carrera, 2007; Gradín, 2009), or in income (Gradín, 2014). The higher number of children (7–8 percent of the gap) and the worst performance of these groups in the labor market (10–13 percent) also play a significant role. However, these groups also differ in the relevance of other factors. The larger proportion of immigrants plays a substantial role only in the case of mulattoes (16 percent), given the larger share of people of this group born abroad (i.e., Nicaragua). Additionally, other demographic factors (head of household's age or sex) matter only for mulattoes, although this is only marginal (3 percent). For indigenous people, location matters most, explaining about one-third of the gap altogether, due to their overrepresentation in rural areas (20 percent of the gap) and in the poorest regions of the country (14 percent). This is the reason why the proportion of the gap explained for this group is larger than in the case of mulattoes, who have a geographical distribution similar to that of whites/mestizos. The over-representation in the poorest areas has also been previously identified as a relevant factor for the lower income and higher poverty of Afro-descendants in Brazil (Gradín, 2009, 2014).

The magnitude of the characteristics effect is not the only thing that varies across the distribution of wellbeing. The relevant factors also change substantially, with both groups showing different distributive patterns. In the case of mulattoes, the gap explained by education and labor variables increases for higher quantiles, at the same time that location and some demographic factors, such as the number of children and immigration, become less important. Gradín (2014) has previously found an increasing importance of education for explaining the income black–white gap in two other middle income countries (Brazil and South Africa) using a different regression-based procedure (re-weighting). In the case of Brazil there was a decreasing contribution of demographic and geographical factors along the income distribution, while the contribution of these factors was more stable in the case of South Africa.

In the case of indigenous people in Costa Rica, education tends to explain the largest gap in the bottom of the distribution and labor variables in the middle. This might reflect an insertion pattern of this group in the local labor market different from that of mulattoes. The region of residence is more important for explaining the differential in higher quantiles in this group, while the type of area of residence (rural or urban) and the number of children, among other factors, are less important. Thus, in the case of mulattoes, the largest contributions to explain the

wellbeing differential at the bottom of the distribution come from the accumulation of a larger share of immigrants, their larger number of children, their lower achieved education, and their overrepresentation in the poorest regions. In the case of indigenous people, the largest contributions come from their lower level of education, their overrepresentation in rural areas, and their large number of children.

For both minorities, had they shared the same characteristics as the reference group, there would remain an unexplained gap that is higher at the bottom of the distribution of wellbeing. As mentioned above, this might be the result of unobserved differentials by group in relevant attributes or in its quality, or the result of segregation into low-paid occupation or earnings discrimination. The unexplained gap at the top becomes nearly zero for mulattoes and negative for indigenous people, meaning that the observed gap for the latter group should be even larger than it is. Therefore, it is interesting to ask whether we can identify which characteristics have a different effect on wellbeing by population group and that explain higher poverty levels among ethnic minorities.

In the case of mulattoes, the coefficients effects at the mean tend to be small and not significant, consistent with similar evidence about the ethnic wage gap previously found for other countries in Latin America. However, a clear distributional pattern appears again. At the bottom of the distribution, where the unexplained gap is largest, we find positive and significant effects of the number of children (10th quantile) and region (25th), meaning that living in the poorest regions and having children tends to lower the wellbeing of mulattoes more than for whites/mestizos. This might be the result of the large penalty on education faced by Nicaraguan immigrants that we analyze in the next subsection. In the case of indigenous people, the region of residence and the number of children have similar effects for mulattoes, but performance in the labor market and immigration status also tend to have a substantial and significant differential effect on this group at the bottom of the distribution, leading to a larger unexplained gap. On the opposite side, it is worth noting that their wellbeing is generally less affected by education and living in rural areas (coefficient effects are negative and significant). There are also large effects of education and immigration status (10th and 25th quantiles), but these have high standard errors and thus are not significant.

6.3. *Explaining the Gap in Wellbeing of Nicaraguan and Panamanian Immigrants*

We show the results of the decomposition of the gap in wellbeing by country of birth (immigrants from Panama and Nicaragua, compared with native-born people) in Table 2. The proportion of the immigrant average gap explained by their poorer endowments is large for the people from Panama (79 percent), but relatively small for those born in Nicaragua (only 45 percent). This contrasts with Gindling's (2009) result; the entire gap between the log earnings of native-born and Nicaraguan workers in 2004 could be explained by the lower endowments (education) of the latter (no overall unexplained effect). There might be several reasons for the discrepancy in the results for earnings and wellbeing in the case of immigrants. For example, the short time residing in the country or the remittances that

TABLE 2

DECOMPOSITION OF THE GAP IN WELLBEING (100·INDEX) BY COUNTRY OF BIRTH

	Nicaragua						Panama					
	Mean	p10	p25	p50	p75	p90	Mean	p10	p25	p50	p75	p90
Born in Costa Rica	75.37	60.64	68.42	76.88	83.87	88.61	75.37	60.64	68.42	76.88	83.87	88.61
	(0.11)	(0.15)	(0.13)	(0.12)	(0.09)	(0.06)	(0.11)	(0.15)	(0.13)	(0.12)	(0.09)	(0.06)
Foreign minority	66.61	51.16	59.04	66.80	74.86	81.71	64.76	44.01	51.79	63.82	79.10	87.30
	(0.16)	(0.31)	(0.23)	(0.19)	(0.18)	(0.19)	(0.80)	(1.21)	(1.09)	(1.35)	(1.13)	(0.61)
Gap	8.76	9.47	9.38	10.08	9.01	6.90	10.62	16.63	16.63	13.06	4.77	1.31
	(0.12)	(0.28)	(0.19)	(0.15)	(0.15)	(0.17)	(0.78)	(1.21)	(1.07)	(1.33)	(1.11)	(0.60)
Explained	3.94	1.98	2.47	3.42	5.22	7.47	8.33	6.07	7.66	11.91	8.65	3.42
	(0.15)	(0.36)	(0.21)	(0.15)	(0.15)	(0.21)	(0.88)	(1.50)	(1.33)	(1.48)	(1.34)	(0.84)
Region	0.16	0.21	0.14	0.12	0.13	0.08	1.10	0.24	−1.16	0.01	3.82	2.55
	(0.08)	(0.24)	(0.13)	(0.07)	(0.06)	(0.09)	(0.38)	(0.57)	(0.64)	(0.78)	(0.95)	(0.68)
Area	0.08	0.11	0.11	0.09	0.07	0.04	1.40	2.11	2.73	1.89	0.54	0.20
	(0.02)	(0.03)	(0.03)	(0.03)	(0.02)	(0.01)	(0.26)	(0.58)	(0.51)	(0.59)	(0.36)	(0.20)
Children	0.38	0.56	0.47	0.37	0.34	0.21	0.20	−0.51	1.31	0.73	−0.05	−0.15
	(0.03)	(0.07)	(0.05)	(0.04)	(0.03)	(0.03)	(0.23)	(0.47)	(0.52)	(0.45)	(0.31)	(0.09)
Sex	−0.01	0.01	0.00	−0.02	−0.01	−0.03	−0.21	0.12	−0.19	−0.14	−0.50	−0.53
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.13)	(0.29)	(0.18)	(0.15)	(0.24)	(0.22)
Age	0.35	−0.31	0.13	0.40	0.67	0.77	0.36	0.01	0.26	0.46	0.86	0.39
	(0.04)	(0.12)	(0.06)	(0.05)	(0.06)	(0.07)	(0.15)	(0.39)	(0.28)	(0.23)	(0.23)	(0.15)
Education	1.88	1.35	1.12	1.46	2.39	3.89	1.94	1.92	2.44	2.41	1.82	0.69
	(0.07)	(0.13)	(0.08)	(0.09)	(0.12)	(0.18)	(0.40)	(1.00)	(0.78)	(0.64)	(0.55)	(0.22)
Race/ethnicity	0.08	−0.02	0.06	0.14	0.11	0.14	2.53	2.64	1.67	4.25	0.94	0.45
	(0.02)	(0.06)	(0.04)	(0.03)	(0.04)	(0.04)	(0.58)	(1.12)	(1.09)	(1.03)	(0.85)	(0.40)
Labor	1.01	0.08	0.44	0.85	1.52	2.38	1.02	−0.48	0.59	2.29	1.22	−0.18
	(0.08)	(0.16)	(0.11)	(0.10)	(0.10)	(0.16)	(0.39)	(0.91)	(0.72)	(0.65)	(0.62)	(0.41)
Unexplained	4.83	7.49	6.91	6.66	3.79	−0.57	2.29	10.56	8.97	1.16	−3.88	−2.11
	(0.15)	(0.32)	(0.23)	(0.18)	(0.19)	(0.27)	(0.62)	(1.08)	(0.96)	(1.20)	(1.23)	(0.96)
Region	0.55	0.16	0.98	1.15	0.62	−0.13	−0.35	1.80	1.83	0.58	−4.61	−1.57
	(0.10)	(0.26)	(0.16)	(0.12)	(0.13)	(0.15)	(0.50)	(0.51)	(0.72)	(0.88)	(1.27)	(0.81)
Area	−0.07	0.36	−0.03	−0.17	−0.35	−0.34	−0.59	−0.60	−1.56	−1.07	−0.18	−0.11
	(0.07)	(0.15)	(0.12)	(0.10)	(0.09)	(0.07)	(0.21)	(0.53)	(0.43)	(0.54)	(0.35)	(0.19)
Children	−0.09	−0.69	−0.37	0.14	0.77	0.65	−1.43	−3.50	−0.95	−0.65	−0.67	−0.38
	(0.11)	(0.25)	(0.21)	(0.13)	(0.12)	(0.12)	(0.22)	(0.46)	(0.32)	(0.39)	(0.31)	(0.08)
Sex	0.16	0.06	0.17	0.23	0.30	−0.04	−0.23	0.22	−0.22	0.09	−0.74	−0.92
	(0.06)	(0.16)	(0.10)	(0.08)	(0.08)	(0.11)	(0.28)	(0.65)	(0.40)	(0.34)	(0.52)	(0.46)
Age	0.29	−0.35	0.03	0.30	0.72	0.72	−0.10	0.11	−0.39	−0.40	0.82	0.45
	(0.05)	(0.14)	(0.08)	(0.06)	(0.08)	(0.11)	(0.20)	(0.54)	(0.35)	(0.30)	(0.41)	(0.25)
Education	2.39	6.03	4.00	0.83	−2.46	−4.17	3.51	13.52	5.74	−4.04	−2.85	−2.92
	(0.71)	(2.44)	(1.46)	(0.75)	(0.76)	(0.83)	(2.39)	(7.80)	(6.98)	(4.12)	(2.88)	(1.12)
Race/ethnicity	1.47	3.92	1.72	−0.15	−0.58	−0.65	0.21	2.42	−0.25	−2.13	0.16	−0.51
	(0.19)	(0.52)	(0.31)	(0.26)	(0.21)	(0.22)	(0.55)	(0.99)	(0.96)	(1.01)	(1.26)	(0.59)
Labor	1.05	−1.82	0.08	1.11	2.56	4.24	−1.81	−1.16	−0.89	−9.61	3.98	1.02
	(0.38)	(0.77)	(0.53)	(0.53)	(0.62)	(0.76)	(1.52)	(3.21)	(2.64)	(2.57)	(2.49)	(2.65)
Intercept	−0.92	−0.18	0.33	3.22	2.19	−0.85	3.08	−2.26	5.67	18.39	0.20	2.83
	(0.76)	(2.40)	(1.65)	(0.95)	(1.03)	(1.16)	(3.22)	(8.92)	(7.36)	(5.38)	(3.91)	(3.16)

Note: Robust standard errors in parentheses.
Source: Own construction based on 2011 Census.

recent immigrants send to their home country might imply harsher living conditions for them as compared with native-born of similar characteristics and earnings.

Similar to the case of racial/ethnic minorities, the gap in wellbeing explained by characteristics is small at the bottom (37 and 21 percent respectively) but increases for higher quantiles, such that in both cases, more than 100 percent is explained at the top. This is the result of a sharply shrinking gap in the case of Panamanians, with an explained gap that is largest at the middle of the distribution. In the case of Nicaraguans the gap is more stable, declining at the top, but the explained gap is increasing with higher quantiles. In particular, this means the large unexplained gap found on average for Nicaraguans is mainly driven by what happens at the bottom of the distribution (with a higher proportion of recent immigrants).

Regarding the driving factors, these groups have many things in common with racial/ethnic minorities. In the difference at the mean, the lower achieved education again plays the most significant role at around 20 percent for both groups and there is an important contribution from the labor market (around 10 percent). The relevance of education, in the case of Nicaraguans, is consistent with a similar result for individual earnings in Gindling (2009).[5] The other demographic factors are not of much relevance, except that the householder's age explains about 4 percent of the gap for both groups, and the higher number of children explains a similar share in the case of Nicaraguans.[6]

There are two main differences between immigrants from Panama and Nicaragua that explain the mean gap for the former to a large extent, while more than half of the gap for the latter remains unexplained. First, 24 percent of the gap in wellbeing between people born in Panama and those born in Costa Rica comes from differences in ethnicity because 44 percent of Panamanians are indigenous and another 13 percent are Afro-descendants. Second, another quarter of the gap is due to Panamanian immigrants being overrepresented in rural areas (13 percent) and the poorest regions of the country (10 percent). On the other hand, neither race/ethnicity nor location are especially relevant for explaining the gap in wellbeing for Nicaraguans. This suggests that the remaining gap must come from elsewhere, probably associated with how differently their endowments are valued in the labor market, either the result of some sort of discrimination against people of this nationality, or from a lower quality of their endowments (e.g., of their human capital) in the host market.

Similar to what we found for mulattoes, in the case of Nicaraguans, there is an increasing gap for higher quantiles that is mostly explained by education and labor variables, and a decreasing relevance of the number of children and location. However, for Panamanians, education and labor variables tend to explain the

[5]The lower level of education of Nicaraguan immigrants can be explained because Nicaragua is a less-developed country, but also because of sorting. Among Nicaraguans with some migrant experience, the higher their attained education, the higher their odds to migrate to the U.S. instead of to Costa Rica (Vargas and Barquero, 2005).

[6]There is evidence suggesting less effective family planning among women born in Nicaragua due to their larger proportion of unplanned children and of adolescent childbearing (González, 2005; Sintonen *et al*., 2013).

largest gap in the middle of the distribution. The region of residence is more important in explaining the differential in higher quantiles, as with indigenous people, while the area of residence and the number of children, among other factors, decrease in importance.

As a result, when it comes to explaining the wellbeing differential at the bottom of the distribution, the largest contribution in the case of Nicaraguans comes from their lower attained education, and to a lower extent, from their higher number of children, their poorer performance in the labor market, and their overrepresentation in poorer regions. In the case of Panamanians, the main factor is their higher proportion of indigenous people (who are poorer regardless of their characteristics), their lower achieved education, and their higher proportion living in rural areas. In the case of both foreign minorities, had the groups shared the same characteristics as the reference group, there would remain an unexplained gap that is especially higher in the case of Nicaraguans, but significant also for Panamanians. Thus, it is interesting to ask again whether we can identify which characteristics have a different effect on wellbeing by population group.

In the case of Nicaraguans, the group with the largest unexplained effect, there is a positive and significant contribution of most detailed effects, which suggests this group is taking less advantage of their endowments than native-born Costa Ricans. The most outstanding case is the large and significant coefficient effect of education (27 percent of the gap). This means Nicaraguans not only have lower education but also have more difficulties in transforming it into better living conditions. This result is consistent with the lower returns to education for Nicaraguan immigrants found in Gindling (2009). This could result from limited transferability of their human capital due to the lower quality of their education (at least as perceived by the host market) and from any sort of discrimination (e.g., segregation into low-paid jobs, wage discrimination). As Gindling (2009) points out, in line with Chiswick (1978), an overall coefficients effect of nearly zero does not necessarily imply that there is no wage discrimination against Nicaraguan-born workers. The self-selection of immigrants (more able and highly motivated individuals) can result in both a lower coefficient on education and the larger earnings equation intercept (due to their higher unobserved productivity), which is the case in Costa Rica. This is reinforced by the large effects also found for labor market variables (12 percent of the gap) and is also consistent with the large prejudices against immigrants reported in Costa Rica (e.g., Smith-Castro, 2009). Another salient coefficient effect is that of race/ethnicity, that in this context might be interpreted as an interaction effect of ethnicity and immigration: Nicaraguans belonging to an ethnic minority (Afro-descendants or indigenous) tend to be worse off than those who are white or mestizo.

For Panamanians, there are only two significant effects and both are negative. Therefore, the wellbeing of this population is less diminished by their having more children and living in rural areas; it may be the consequence of the specific economic activities in which this people engage. The gap in wellbeing would be about 20 percent higher if the effects were the same as those for native-born.

6.4. *The Special Case of Blacks*

Finally, we undertake the same decomposition exercise for the gap between whites/mestizos and blacks (Table 3). Although the gap is, on average, pretty small, its decomposition will reveal some interesting features of the situation of

TABLE 3

Decomposition of the Gap in Wellbeing (100·index) by Race/Ethnicity (Blacks)

	Mean	p10	p25	p50	p75	p90
White/mestizo	75.73	60.94	68.66	77.13	84.20	88.89
	(0.09)	(0.13)	(0.12)	(0.11)	(0.08)	(0.05)
Black/African	74.30	58.46	66.57	76.12	83.71	88.20
	(0.29)	(0.60)	(0.49)	(0.44)	(0.28)	(0.25)
Gap	1.43	2.49	2.09	1.01	0.49	0.69
	(0.29)	(0.60)	(0.50)	(0.44)	(0.28)	(0.26)
Explained	–0.09	0.25	–1.29	–0.52	0.64	0.26
	(0.29)	(0.58)	(0.48)	(0.39)	(0.30)	(0.28)
Region	0.24	0.14	–0.59	0.31	0.93	0.37
	(0.17)	(0.45)	(0.37)	(0.26)	(0.20)	(0.20)
Area	–0.30	–0.64	–0.50	–0.39	–0.14	–0.07
	(0.07)	(0.17)	(0.11)	(0.09)	(0.04)	(0.03)
Children	0.13	0.29	0.15	0.10	0.03	0.00
	(0.06)	(0.15)	(0.08)	(0.05)	(0.02)	(0.02)
Sex	0.06	–0.13	–0.05	0.26	0.19	0.19
	(0.06)	(0.12)	(0.09)	(0.10)	(0.07)	(0.07)
Age	0.00	0.03	0.01	0.02	–0.02	–0.02
	(0.02)	(0.04)	(0.03)	(0.04)	(0.04)	(0.03)
Education	–0.52	–0.21	–0.81	–0.82	–0.41	–0.23
	(0.11)	(0.20)	(0.18)	(0.16)	(0.13)	(0.08)
Immigration	0.29	0.67	0.48	0.20	0.08	–0.02
	(0.08)	(0.18)	(0.14)	(0.10)	(0.07)	(0.08)
Labor	0.01	0.08	0.02	–0.19	–0.02	0.03
	(0.11)	(0.23)	(0.17)	(0.17)	(0.13)	(0.14)
Unexplained	1.52	2.24	3.38	1.53	–0.15	0.44
	(0.24)	(0.68)	(0.57)	(0.37)	(0.25)	(0.27)
Region	0.12	0.19	0.80	0.20	–0.42	0.06
	(0.19)	(0.65)	(0.37)	(0.30)	(0.28)	(0.22)
Area	–0.30	–0.86	–0.65	–0.59	–0.13	–0.15
	(0.14)	(0.46)	(0.26)	(0.21)	(0.11)	(0.08)
Children	–0.02	0.70	–0.52	–0.25	–0.21	–0.21
	(0.24)	(0.63)	(0.40)	(0.26)	(0.19)	(0.15)
Sex	0.10	0.23	0.32	–0.17	–0.02	–0.17
	(0.12)	(0.26)	(0.19)	(0.20)	(0.15)	(0.16)
Age	0.12	–0.09	0.21	0.09	0.21	0.02
	(0.10)	(0.24)	(0.21)	(0.16)	(0.11)	(0.09)
Education	5.02	4.65	7.23	3.47	2.09	0.80
	(2.02)	(6.54)	(3.85)	(2.68)	(1.29)	(0.94)
Immigration	0.78	0.39	0.69	2.34	–0.56	–0.12
	(0.55)	(1.21)	(1.16)	(0.94)	(0.85)	(1.12)
Labor	0.64	–1.76	–0.17	1.81	0.49	–0.33
	(0.64)	(1.77)	(1.18)	(1.24)	(0.97)	(0.76)
Intercept	–4.94	–1.20	–4.52	–5.37	–1.60	0.54
	(1.98)	(6.97)	(4.07)	(2.95)	(1.67)	(1.55)

Note: Robust standard errors in parentheses.
Source: Own construction based on 2011 Census.

this particular minority. On the one hand, as with the other cases, blacks have a higher prevalence of some characteristics associated with a lower wellbeing that jointly explain about 50 percent of the average gap (a smaller absolute magnitude than other minorities): a larger share of immigrants (20 percent of the gap), more people living in poor regions (i.e., Atlantic Huetar including the Limón province, 17 percent), and more children in their households (9 percent). On the other hand, the distinctive fact of Costa Rican blacks is that, at the same time, they also have a higher prevalence of some characteristics associated with higher wellbeing (negative characteristics effects): higher attained education and higher proportion of population living in urban areas, both related with the specific origins previously discussed. If the distribution of these two characteristics among blacks were the same as among whites and mestizos, the gap in wellbeing should be nearly 60 percent larger (respectively 36 and 21 percent). Along these lines, Gradín (2012) studied the segregation of black women into the best occupations, associated with their relatively higher achieved education.

The negative effects are larger than the positive effects, and the explained portion of the overall gap is negative, although small. This means the whole observed gap remains unexplained (it is even a bit higher) after controlling for characteristics, and its magnitude is similar to that of mulattoes (0.015 versus 0.014). Comparing the results for blacks and mulattoes, blacks have an average higher wellbeing than that of mulattoes because of their higher achieved education, better jobs, and higher urbanization, combined with a lower number of children and lower proportion of (Nicaraguan) immigrants among them. But both blacks and mulattoes experience a similar penalization by their race (after other characteristics have been controlled for).

The gap between whites/mestizo and blacks also shows a particular distributive pattern. The observed gap is largest at the bottom of the distribution and cannot be explained by characteristics, because as with the mean gap, the positive contribution of some characteristics is compensated by the negative effect associated with others. The explained gap is even negative at the 25th and 50th quantiles. It is worth noting that the gap explained by education is negative over the entire distribution (although not significant at the 10th percentile), as is the contribution of the area of residence.

Among the detailed unexplained effects, the large and significant positive effect of education is remarkable (it is significant at 10 percent at the mean and 25th percentile), indicating that some blacks take little advantage of their higher levels of education when it comes to translating that into a higher level of wellbeing. This is a reflection of this group having lower economic opportunities, which is consistent with their high rates of migration and the perception of discrimination in the labor market against them, although we are not aware of any study that has tested wage discrimination against blacks.

7. Conclusions

In this paper we have documented the economic disadvantage of African descents, indigenous people, and immigrants in Costa Rica, analyzing the

gap in wellbeing along its entire distribution. Our results show the existence of a clear divide in the level of wellbeing in Costa Rica along racial, ethnic, and national lines, which is especially evident among the poor. The fact that Costa Rica stands out in the Central American region for showing better living conditions, more equality, and superior political stability, indicates that these are not sufficient conditions for equality across the different demographic groups.

We have also investigated the nature of these inequalities. We have shown that the economic disadvantage of mulattoes, indigenous people, and immigrants in Costa Rica is strongly associated with the higher prevalence among these groups of a number of characteristics that imply lower wellbeing. Their lower education, the higher number of children in their households, or their overrepresentation in the less developed areas of the country, are amongst the main factors, but to a different degree of relevance in each case. The accumulation of immigrant and minority statuses is also associated with a lower wellbeing. A large part of the gap in wellbeing, especially among the poor and Nicaraguan immigrants, still remains unexplained after controlling for these characteristics, however, indicating that the penalization of race/ethnicity/nationality goes beyond observable characteristics.

We have shown that blacks also have a higher rate of immigrants, are over-represented on the poor Caribbean coast, and have more children than whites/mestizos. However, compared with the other minorities, the impact of these factors on wellbeing is smaller. And, unlike whites/mestizos, blacks have a higher prevalence than the majority of some characteristics associated with higher well-being, such as higher achieved education, or a higher proportion living in urban areas. Consequently, the gap should be reversed (blacks having better wellbeing) if they had the same characteristics as whites/mestizos. The lower advantage that some blacks take of their higher education, compared with whites/mestizos, is also an important aspect for this group.

It was not the objective of this study to assess whether the economic disadvantage of minorities is the result of discrimination. It is important to recall that discrimination against these groups might be reflected in both explained and unexplained effects. Their lower wellbeing would be the result of discrimination if the lower education or the higher number of children of minorities is the result of poorer access to schooling and family planning, or if the areas where they live are systematically neglected by the government. Discrimination can also be reflected in the lower returns to some characteristics, especially education and participation in the labor market. A higher visibility of minorities in all type of statistics in the future would be important for investigating in more depth the nature and the channels of these racial/ethnic inequalities. The fact that the recent trends in poverty and inequality show that Costa Rica is catching up with its neighbors in this regard, should raise the concern that the relative disadvantage of minorities might aggravate in the near future.

Appendix

Wellbeing Distribution in Costa Rica

	Population %	Mean	Percentiles 10	25	50	75	90
Total	100	0.749	0.598	0.677	0.765	0.837	0.886
Black/African	1.0	0.743	0.584	0.666	0.761	0.837	0.882
Mulatto	6.7	0.716	0.567	0.644	0.725	0.801	0.859
Afro-descendants (black and mulatto)	7.7	0.720	0.569	0.646	0.728	0.806	0.863
Chinese	0.2	0.826	0.722	0.782	0.842	0.886	0.912
White/Mestizo	83.7	0.757	0.609	0.687	0.771	0.842	0.889
Other race/ethnicity	0.9	0.717	0.555	0.637	0.726	0.803	0.871
None race/ethnicity	2.9	0.730	0.583	0.656	0.743	0.813	0.870
Ignored race/ethnicity	2.2	0.730	0.565	0.649	0.744	0.822	0.878
Indigenous	2.4	0.617	0.372	0.510	0.639	0.755	0.838
Native-born	91.1	0.754	0.606	0.684	0.769	0.839	0.886
Nicaragua	6.6	0.666	0.512	0.590	0.668	0.749	0.817
Panama	0.3	0.648	0.440	0.518	0.638	0.791	0.873
Other Central America	0.9	0.822	0.693	0.770	0.842	0.893	0.925
U.S. and Canada	0.4	0.849	0.752	0.814	0.864	0.899	0.926
Other countries	0.7	0.862	0.770	0.828	0.876	0.911	0.933
Urban	72.7	0.777	0.639	0.713	0.792	0.855	0.896
Rural	27.3	0.676	0.522	0.606	0.687	0.760	0.818
San José	32.7	0.780	0.639	0.712	0.794	0.861	0.901
Alajuela	19.7	0.740	0.587	0.670	0.759	0.824	0.871
Cartago	11.4	0.773	0.643	0.719	0.788	0.846	0.889
Heredia	10.1	0.794	0.644	0.737	0.815	0.874	0.909
Guanacaste	7.6	0.704	0.554	0.635	0.713	0.787	0.843
Puntarenas	9.6	0.692	0.545	0.623	0.699	0.775	0.833
Limón	9.0	0.679	0.535	0.613	0.689	0.761	0.828
Less than Primary	4.5	0.648	0.482	0.580	0.660	0.739	0.794
Primary	44.0	0.717	0.583	0.654	0.729	0.792	0.839
High School	28.9	0.778	0.652	0.722	0.792	0.846	0.883
College	22.7	0.848	0.751	0.815	0.865	0.899	0.922
Legislators, senior officials, and managers	1.5	0.804	0.858	0.894	0.920	0.940	0.940
Professionals	14.3	0.782	0.834	0.877	0.906	0.926	0.927
Technicians and associate professionals	10.0	0.722	0.789	0.842	0.881	0.908	0.909
Clerks	7.9	0.700	0.764	0.820	0.865	0.894	0.895
Service workers, shop and market sales	20.2	0.644	0.710	0.780	0.837	0.878	0.880
Skilled agricultural and fishery workers	4.5	0.520	0.615	0.703	0.776	0.829	0.832
Crafts and related trades workers	11.6	0.621	0.688	0.762	0.822	0.867	0.869
Plant and machine operators/assemblers	8.7	0.650	0.716	0.776	0.825	0.864	0.865
Elementary occupations	21.4	0.547	0.621	0.694	0.764	0.820	0.823

Notes: Education (25 years old or above). Occupation (16 years old or above).
Source: Own construction based on 2011 Census.

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Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher's web-site:

Table A1: Summary variables used to construct the wellbeing composite index
Table A2: Sample composition (%) by race/ethnicity and country of birth
Table A3: OLS (mean) and RIF (non-normalized) regressions of wellbeing index (·100) by race/ethnicity (Robust standard errors in parentheses)
Table A4: OLS (mean) and RIF (non-normalized) regressions of wellbeing index (·100) by country of birth (Robust standard errors in parentheses)
Figure A1: Aggregate decomposition of the gap in wellbeing at different points
Mean and selected quantiles
Figure A2: Detailed decomposition (characteristics effect) of the gap in wellbeing
Mean and selected quantiles
Figure A3: Aggregate decomposition of the gap in wellbeing
Mean and selected quantiles
Figure A4: Detailed decomposition (characteristics effect) of the gap in wellbeing
Mean and selected quantiles
Figure A5: Aggregate decomposition of the gap in wellbeing: Blacks
Mean and selected quantiles
Figure A6: Detailed decomposition (characteristics effect) of the gap in wellbeing: Blacks
Mean and selected quantiles