The Socioeconomic Outcomes of Native Groups in Argentina

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Abstract

This study uses individual-level census data from Argentina to examine the socioeconomic disparities between Native and non-Native people. Native people fare worse across a variety of indicators, including housing, education, employment, and health. On average, the observed disparities amount to 12 percent of the standard deviation and persist even after controlling for factors such as geographic location. Furthermore, there are differences in the intergenerational transmission of education between Natives and non-Natives: for each level of education of the parents, the children of Natives have, on average, fewer years of education than the children of non-Natives. Finally, the study also reveals large differences between Native groups: while some achieve average outcomes that surpass those of the non-Native population, others significantly lag behind. Notably, these differences are correlated with a characteristic of their pre-Columbian economy: the practice of agriculture.

JEL codes: I3, J15, O15.
Keywords: Indigenous people, human development, persistence, Argentina.

1   Introduction

While the population of Argentina descended mainly from the combination of Native, African and European ancestors (see Wang et al., 2008; Corach et al., 2010; Avena et al., 2012; Parolin et al., 2019), it is a common stereotype to see this population as mainly of European origin.[1] This incorrect view of the Argentine population had a correlate on the scarcity of national statistics on the numbers and characteristics of the native population for most of the national history.[2] We use the data from the 2010 National Census (Instituto Nacional de Estadística y Censos, 2010), the first census to ask about native identity or ancestry at the individual level, to study the socioeconomic outcomes of the Native people of Argentina.

We compare Native and non-Native Argentines in terms of outcomes related to housing, education, labor market and health. Consistently with evidence of Native disadvantage in other Latin American countries (see Gandelman et al., 2011; Freire et al., 2015), we find that Natives, on average, fare significantly worse on all of these dimensions in Argentina. The magnitudes of the differences are moderate, corresponding on average to 12 percent of the standard deviation of the outcomes. These differences persist even after controlling for location, showing that differences are not only related to geographical differences.

We also find differences in the transmission of education from parent to children. For each level of education of the parents, the children of Natives have, on average, fewer years of education than the children of non-Natives. This is consistent with what is found for other Latin American countries (see Cruces et al., 2012; Berniell et al., 2021). Given the importance of education for economic outcomes and human development (see, for example, Angrist and Krueger, 1991; Lleras-Muney, 2005), the differences in the transmission of education between Natives and non-Natives may help perpetuate the observed disadvantage of the Native population.

We also study the differences in socioeconomic outcomes across Native groups. We find large differences across groups. While some groups obtain average outcomes above those of the non-Native population, other groups obtain outcomes well below. For example, the group with the highest average years of education, the Charrúa, has educational

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[1] The Mexican poet Octavio Paz wrote "Mexicans descend from the Aztecs, Peruvians from the Incas, and Argentines... from the ships." Argentine president Alberto Fernández echoed this stereotype by saying "Mexicans come from the Indians, Brazilians from the jungle, but us Argentines come from the ships, and these were ships coming from Europe..."

[2] This was also the case in other countries in the region. Until recent censuses, the statistical offices of many Latin American countries did not systematically gather data on ethnicity or race (see Loveman, 2014; Freire et al., 2018).

levels above those of the non-Native population and twice the years of education than those of the group with the lowest educational attainment. Considering all outcomes, the group with the best outcomes has an average standardized outcome almost 9 percent of a standard deviation higher than the general population, while the group with the worst outcomes has an average outcome that is lower than the general population by 60 percent of a standard deviation. These large differences in outcomes across native groups stress the importance of not considering the native population of Argentina as homogeneous.

While there may be many possible determinants of the differences across groups, we show that there is one historical characteristic of these groups that correlates with their outcomes: groups that practiced agriculture before the arrival of the Spanish tend to have better outcomes today than those that were hunter gatherers. This is consistent with what was found for Sub-Saharan Africa by Michalopoulos et al. (2018).

2   Size and Distribution of Native Groups

The main data used in this study come from the 2010 National Census collected by the National Institute of Statistics (Instituto Nacional de Estadística y Censos, 2010). In particular, we use data collected with the "long-form" version of the census based on a probabilistic sample of households. In addition to the questions on the short form (regarding gender, age, level of education, dwellings' characteristics, employment status, etc.), the long-form questionnaire includes questions on fertility, contributions to retirement plans, health insurance and whether the respondent is Afro-descendant or belongs to or is descendant from an indigenous or Native group (Instituto Nacional de Estadística y Censos, 2010). The 2010 National Census is the first decennial census in Argentina to ask about racial or ethnic identification at the individual level which allowed for a description of the native population (Instituto Nacional de Estadística y Censos, 2015a,b,c,d,e,f).[3] [4]

Table 1 shows the population of each of the 32 native groups described in the 2010 census. The largest group is the Mapuche with more than 200,000 people, and the smallest one is the Tapiete with 407 people. Almost a million people self-identify as Native

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[3] In 1869, the first national census estimated the indigenous population based on reports from local chiefs and they were not considered Argentines. In the national censuses of 1895 and 1914, the population was also estimated. The 2001 census asked if one of the members of the household self-identified or belonged to a native group but did not identify this member individually. In total 281,959 households were identified with at least one indigenous person. A sample of individuals in these households was surveyed by the National Institute of Statistics in 2004 and 2005. We study the data from the 2010 census as it allows for a cleaner comparison as all individuals were surveyed on the same day.

[4] In Appendix A, we have included a screenshot of the questionnaire form from the 2010 National Census, showing the section in which the questions to identify Native and Afro-Argentine groups were included (Figure A1).

or descendant of Natives, which corresponds to 2.4 percent of the total population of Argentina.[5]

Table 1: Native Groups

|	(1) Number of natives	(2) % of Total Population	(3) Economy before conquest	(4) Approximate year of conquest
Atacama	13,936	0.035	Advanced agriculture	1,593
Ava Guaraní	17,899	0.045	Incipient Agriculture	1,801
Aymara	20,822	0.052	Advanced agriculture	1,533
Chané	3,034	0.008	Incipient Agriculture	1,879
Charrúa	14,649	0.037	Hunter-gatherers	1,752
Chorote	2,270	0.006	Hunter-gatherers	1,861
Chulupí	1,100	0.003	Hunter-gatherers	1,881
Comechingón	34,546	0.087	Advanced agriculture	1,632
Diaguita-Calchaquí	67,410	0.170	Advanced agriculture	1,630
Guaraní	105,907	0.267	Incipient Agriculture	1,843
Huarpe	34,279	0.086	Incipient Agriculture	1,623
Kolla	65,066	0.164	Advanced agriculture	1,660
Lule	3,721	0.009	Hunter-gatherers	1,889
Maimará	1,899	0.005	Advanced agriculture	1,596
Mapuche	205,009	0.517	?	1,881
Mbyá Guaraní	7,379	0.019	Incipient Agriculture	1,710
Mocoví	22,439	0.057	Hunter-gatherers	1,913
Omaguaca	6,873	0.017	Advanced agriculture	1,594
Ona	2,761	0.007	Hunter-gatherers	1,893
Pampa	22,020	0.056	Hunter-gatherers	1,787
Pilagá	5,137	0.013	Hunter-gatherers	1,883
Quechua	55,493	0.140	Advanced agriculture	1,554
Querandí	3,658	0.009	Hunter-gatherers	1,795
Rankulche	14,860	0.037	Hunter-gatherers	1,849
Sanavirón	2,871	0.007	Incipient Agriculture	1,647
Tapiete	407	0.001	Hunter-gatherers	1,876
Tehuelche	27,813	0.070	Hunter-gatherers	1,890
Toba-Qom	126,967	0.320	Hunter-gatherers	1,909
Tonocoté	4,853	0.012	Incipient Agriculture	1,894
Tupí Guaraní	3,715	0.009	Incipient Agriculture	1,831
Vilela	519	0.001	Hunter-gatherers	1,891
Wichí	50,419	0.127	Hunter-gatherers	1,881
Other	5,301	0.013	-	.
Total Natives	955,032	2.407	-	.

Source: REDATAM INDEC Census Argentina 2010 for columns (1) and (2), see text for columns (3) and (4).

There is geographical variation in the distribution of Natives across provinces as shown by Figure 1. The province with the greatest prevalence of Natives is Chubut, with 8.7 per-

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[5] It is important to note that 149,000 respondents self-identified as Afro-Argentine ("afrodescendientes"), which corresponds to 0.4 percent of the population. While the main focus of this paper is on the native population, we will also provide an analysis of their outcomes as a point of comparison.

cent of the population, and the province with the smallest is Corrientes (0.5 percent).

Figure 1: Percentage of Natives by Province
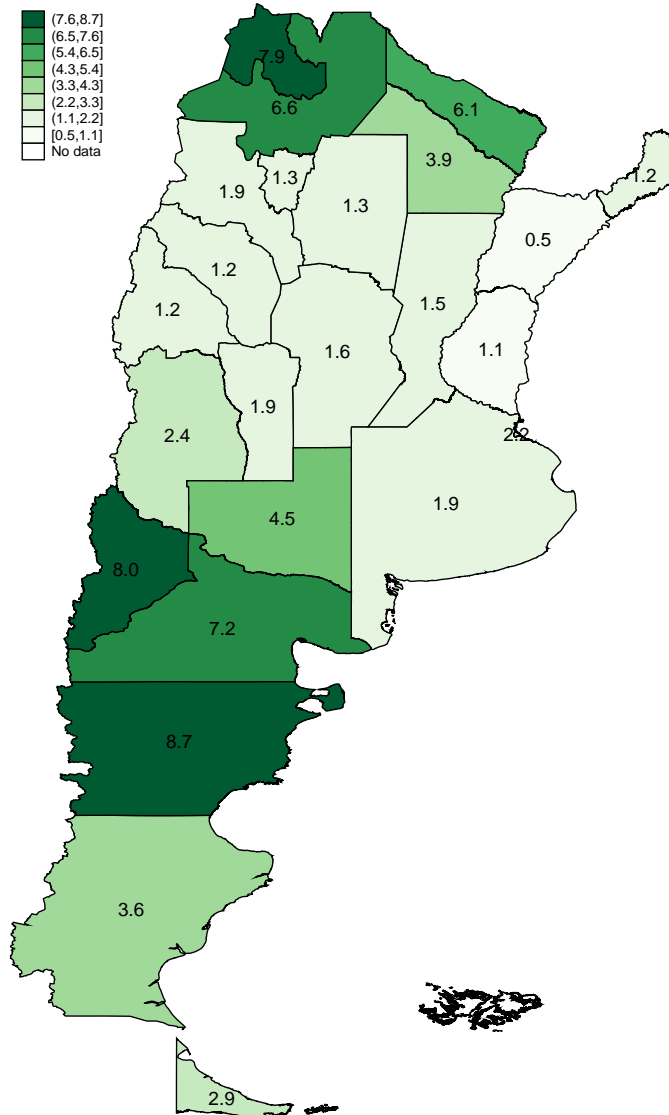
Source: REDATAM INDEC Census Argentina (Instituto Nacional de Estadística y Censos, 2010).
Disclaimer: Falkland Islands - Islas Malvinas: A dispute concerning sovereignty over the islands exists between Argentina who claims this sovereignty and the U.K. which administers the islands.

How does our measure of Native self-identification relate to native ancestry? To answer this, we study the correlation of our self-identified measure of Native prevalence with a measure of prevalence based on genetic studies (Wang et al., 2008; Corach et al., 2010; Avena et al., 2012; Parolin et al., 2019) across regions of the country. As Figure 2

shows, the areas with higher self-reported Native identity tend to also have higher measures of Native genetic ancestry. This shows that Native self-reported identity correlates with Native ancestry. Note, however, that Native genetic ancestry is several times larger than the self-identified measure we use in this paper. As such, the results discussed in this paper do not correspond directly to people with genetic Native ancestry but to those who self-identify as Natives or descendant of Natives.

Figure 2: Genetic and Self-Reported Native Prevalence
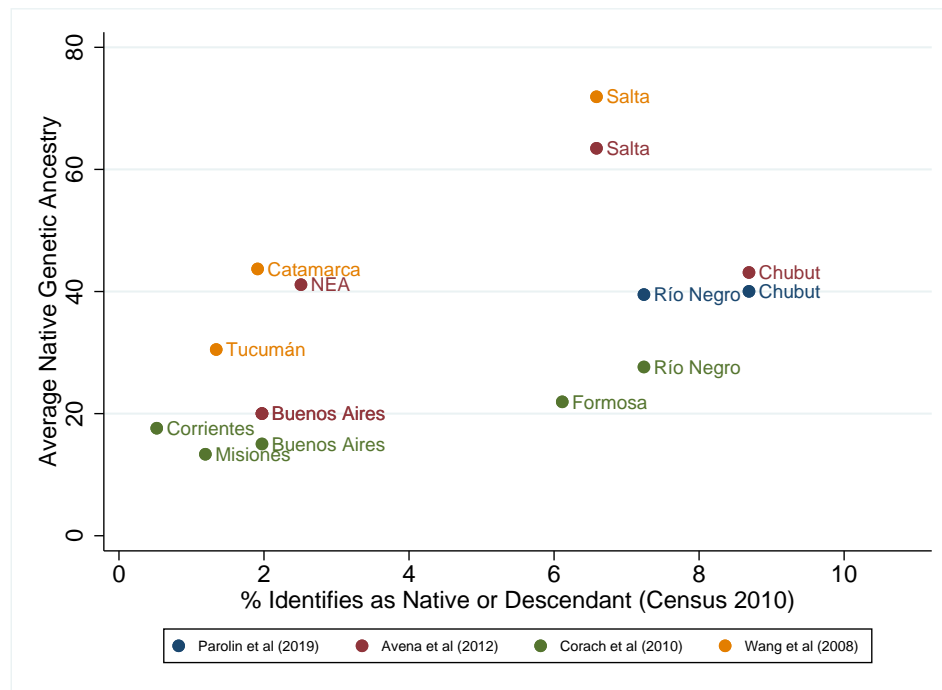
Sources: REDATAM INDEC Census Argentina (Instituto Nacional de Estadística y Censos, 2010), Parolin et al. (2019), Avena et al. (2012), Corach et al. (2010) and Wang et al. (2008). *Notes:* NEA (Northeast of Argentina) includes the provinces of Formosa, Chaco, Corrientes, and Misiones.

3 The Socioeconomic Outcomes of Natives

In this section, we study the socioeconomic outcomes of the Native population of Argentina and compare them with those of non-Native individuals. The outcomes we consider are whether the person lives in a precarious house, whether the family owns the house and land, years of education (for people 24 years and older), whether they use a computer (for people 14 years and older), whether they are legally married conditional of having a partner (for people 18 years and older), whether they are economically active (employed or looking for employment, for ages 18 to 65), whether they are employed in the formal sector conditional on employment (for ages 18 to 65), whether they are unemployed, whether they have health insurance, the number of disabilities (intellectual or physical), and teen pregnancy (measured as having a child below age 20). While the relevance of most of these outcomes is clear, the marriage outcome may require an explanation. This measure may capture the stability of family relationships and access to legal protections provided by the state.

3.1 Measures of Native disadvantage

Columns (1) and (2) in Table 2 show the average of these outcomes for Natives and non-Natives while column (3) shows the difference between the two groups and the standard errors. We find that the native population is, on average, disadvantaged in all the measures of economic and human development. The differences are statistically significant. Column (4) shows the estimated differences between Natives and non-Natives after adding age and gender fixed effects. The differences remain significant after adding these controls, showing that the native disadvantage is not related to the age and gender composition of the groups.

Table 3, column (1), shows that, on average across the variables, the difference between Natives and non-Natives corresponds to 12.3 percent of the standard deviation of the variables. Table 3, column (2), shows that, on average across the variables, the difference between Natives and non-Natives corresponds to 23 percent of the difference between the top and bottom decile by department (a government geographic unit similar to county in the US). In other words, the difference between Natives and non-Natives is small relative to the geographical variation we observe.

The magnitude of the differences between Natives and non-Natives can also be compared with the differences between Afro and non-Afro-Argentines, which are shown in Table A1 in the Appendix. The differences between Natives and non-Natives in Argentina

Table 2: Differences between Natives and Non-Natives

	(1) Average Natives	(2) Average Non-Natives	(3) Difference (SE)	(4) with age and gender Fixed effects	(5) + department and urban-rural Fixed effects
Precarious housing	0.152	0.067	0.086*** (0.015)	0.083*** (0.015)	0.049*** (0.008)
Ownership land & house	0.652	0.692	-0.040*** (0.006)	-0.032*** (0.006)	-0.021*** (0.006)
Years of education [24+]	9.111	9.856	-0.745*** (0.134)	-0.984*** (0.140)	-0.589*** (0.085)
Use computer [14+]	0.489	0.517	-0.028** (0.012)	-0.063*** (0.014)	-0.031*** (0.007)
Legally married [18+]	0.520	0.598	-0.078*** (0.010)	-0.064*** (0.007)	-0.038*** (0.004)
Economically active [18-65]	0.735	0.750	-0.014* (0.008)	-0.022*** (0.008)	-0.009** (0.004)
Formal employment [18-65]	0.704	0.744	-0.039*** (0.006)	-0.038*** (0.005)	-0.039*** (0.004)
Unemployment [18-65]	0.073	0.061	0.012*** (0.002)	0.012*** (0.002)	0.012*** (0.002)
Health insurance	0.526	0.642	-0.116*** (0.014)	-0.097*** (0.013)	-0.065*** (0.006)
Number of disabilities	0.243	0.197	0.046*** (0.005)	0.082*** (0.005)	0.057*** (0.003)
Teen pregnancy [14-19]	0.128	0.111	0.016** (0.007)	0.021*** (0.007)	0.008* (0.005)

Source: REDATAM INDEC Census Argentina 2010. *Notes*: SE clustered at department level in parenthesis. Column 4 includes gender and age fixed effects and column 5 also includes department and urban fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

are greater than the differences between Afro-Argentines and the rest of the population on average. While Afro-Argentines obtain, on average, statistically significant worse outcomes with respect to home ownership, being legally married and number of disabilities, they obtain statistically significant better outcomes regarding years of education, use of computer and being economically active.

Another benchmark for comparison is the differences between Natives and non-Natives in the US, see Tables A2 and A3 in the Appendix. These tables are constructed using the five-year sample (2010-2014) of the American Community Survey (see Ruggles et al., 2021). We chose outcomes that are somewhat comparable with the outcomes in Argentina, including home ownership, years of education, being economically active, unemployment, precarious housing, health insurance, number of disabilities and teen motherhood. Natives face a disadvantage in both countries for all outcomes except health insurance. For health insurance, Natives have a small advantage in the US thanks to the Indian Health Services, while Natives experience a disadvantage in Argentina. For the other seven outcomes in which Natives face a disadvantage in both countries, the disadvantage is larger in Argentina than in the US for three outcomes, and smaller for the other

Table 3: Magnitude of the Difference between Natives and Non-Natives (percentages)

	(1) Difference / SD Total	(2) Difference / [Decil 9 - Decil 1]
Precarious housing	34.28	45.00
Ownership land & house	8.77	22.22
Years of education [24+)	16.89	19.89
Use computer [14+)	5.56	8.11
Legally married [18+)	15.95	36.36
Economically active [18-65]	3.36	4.76
Formal employment [18-65]	8.97	14.29
Unemployment [18-65]	4.99	20.00
Health insurance	24.15	33.33
Number of disabilities	7.53	29.41
Teen pregnancy [14-19]	5.29	25.00
Average	12.34	23.49

Source: REDATAM INDEC Censo Argentina 2010. *Notes*: Difference corresponds to the columns without FE in Table 2. In Column (1), the difference is divided by the standard deviation of each outcome. In Column (2), the difference is divided by the difference between the top and bottom decile of each outcome (calculated at the department level).

four outcomes.

Table A3 in the Appendix allows us to compare the magnitudes of these disadvantages in terms of standard deviations and relative to the difference between counties in the first and ninth deciles. In terms of standard deviations, the disadvantage faced by Natives is greater in the US than in Argentina in all outcomes but precarious housing. And relative to the difference across counties, the magnitude of the disadvantage of Natives is greater in the US than in Argentina for all outcomes in which Natives face a disadvantage.

While a comparison of the disadvantages faced by Natives across Latin American countries falls beyond the scope of this paper, we can compare the disadvantages we document in Argentina with the disadvantages regarding labor force participation, unemployment and use of computers documented for other countries by Freire et al. (2015). Freire et al. (2015) document small unemployment gaps between Natives and non-Natives based on census data from urban areas in seven Latin American countries. In some of these countries, Natives have a lower unemployment rate, while in others they have a higher unemployment rate (the differences are 2 percentage points or less). As shown in Table 3, Natives experience 1.2 percentage points higher unemployment in Argentina (without distinguishing between rural and urban areas). For urban areas this gap is 1.3

percentage points in Argentina. Regarding labor force participation, Freire et al. (2015) again find gaps that favor Natives in some countries and non-Natives in others for urban areas. These differences go from 8 percentage points in favor of natives in Ecuador to 9 percentage points in favor of non-natives in Colombia. The Native disadvantage of 1.4 percentage points that we find in Argentina regardless of location falls in the middle of this range. For urban areas in Argentina, Natives have an advantage of 0.4 percentage points in labor force participation. Freire et al. (2015) find a disadvantage for Natives in access to computers that goes from 3 percentage points for El Salvador to 27 percentage points for Brazil and Panama. These gaps are greater than the 2.8 percentage points disadvantage that we document for Argentina for the use of computers.[6]

3.2 The role of location in explaining differences in outcomes

To assess whether the differences in outcomes are due to differences in the geographical distribution of the Native and non-Native population, we control for location. Column (5) in Table 2 shows the estimated difference after adding location controls (department and rural/urban fixed effects). Adding location controls reduces the differences between Natives and non-Natives for most outcomes (on average by 35%), but it does not eliminate the differences. Thus, the differences in outcomes between Natives and non-Natives are not all due to Natives and non-Natives living in different parts of the country or in rural versus urban areas. Even within small geographical units, we find that, on average, Natives tend to have worse economic outcomes than non-Natives.[7]

Of course, the fact that the documented disadvantage of Natives survives adding location fixed effects does not mean that the disadvantage is constant across locations. Table 4 shows the differences in outcomes between Natives and non-Natives in rural and urban areas. While for a majority of outcomes the disadvantage is significantly greater in rural areas, this is not the case for all outcomes. The difference in disadvantage between rural and urban areas is not statistically significant for formal employment and unemployment. In addition, Natives in rural areas are more likely to own the house and land in which they live than non-Natives, contrary to what is observed in urban areas.

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[6] This comparison is limited by the differences across censuses of different countries on the questions on the use of or access to computers.

[7] Table A2 in the Appendix shows that this is also the case for the US.

Table 4: Differences between Natives and Non-Natives in Rural and Urban Areas

	(1) Difference Rural (SE)	(2) Difference Urban (SE)	(3) $(2)-(1)$ (SE)
Precarious housing	0.225***	0.041***	-0.184***
	(0.028)	(0.009)	(0.025)
Ownership land & house	0.050***	-0.048***	-0.098***
	(0.016)	(0.006)	(0.017)
Years of education [24+]	-1.224***	-0.375***	0.849***
	(0.145)	(0.101)	(0.140)
Use computer [14+]	-0.060***	0.006	0.065***
	(0.012)	(0.009)	(0.012)
Legally married [18+]	-0.166***	-0.058***	0.108***
	(0.019)	(0.007)	(0.017)
Economically active [18-65]	-0.062***	0.004	0.066***
	(0.016)	(0.005)	(0.015)
Formal employment [18-65]	-0.024*	-0.035***	-0.011
	(0.014)	(0.006)	(0.014)
Unemployment [18-65]	0.014***	0.013***	-0.001
	(0.003)	(0.002)	(0.003)
Health insurance	-0.178***	-0.085***	0.092***
	(0.020)	(0.010)	(0.017)
Number of disabilities	0.088***	0.033***	-0.055***
	(0.012)	(0.004)	(0.012)
Teen pregnancy [14-19]	0.058***	0.002	-0.056***
	(0.015)	(0.005)	(0.014)

Source: REDATAM INDEC Census Argentina 2010. *Notes*: SE clustered at department level in parenthesis. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

3.3 The role of education in explaining differences in outcomes

Given that the level of education is an important determinant of socioeconomic outcomes (see, for example, Angrist and Krueger, 1991; Lleras-Muney, 2005), we study whether the differences in these outcomes disappear once we control for the level of education (we consider the education of the parents in the case of minors). Table 5 shows that that is not the case for most outcomes. The only two differences that disappear, or turn around, are in using computers and being economically active. The differences for all the other variables are reduced by controlling for education but they remain statistically significant. On average, the difference in outcomes between Natives and non-Natives is reduced by 43% after we control for the years of education. This suggests that the differences in outcomes between Natives and non-Natives are not only due to differences in years of

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education.

Table 5: Differences between Natives and Non-natives after Controlling for Education

	Precarious housing (1)	Ownership land & house (2)	Use computer [14+) (3)	Legally married [18+) (4)	Economically active [18-65] (5)
Natives	0.078***	-0.040***	0.019***	-0.073***	-0.000
	(0.013)	(0.006)	(0.005)	(0.009)	(0.006)
Years of Educ.	-0.010***	0.001**	0.064***	0.005***	0.016***
	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)
Observations	16,641,852	16,640,667	12,277,326	7,032,487	9,565,399
R-squared	0.029	0.000	0.294	0.003	0.023

	Formal employm. [18-65] (6)	Unemploy-ment [18-65] (7)	Health insurance (8)	Number of Disabilities (9)	Teen Pregnancy (10)
Natives	-0.022***	0.011***	-0.093***	0.025***	0.011*
	(0.005)	(0.002)	(0.010)	(0.004)	(0.006)
Years of Educ.	0.027***	-0.002***	0.030***	-0.026***	-0.007***
	(0.001)	(0.000)	(0.001)	(0.000)	(0.000)
Observations	5,493,000	6,884,064	16,641,852	16,641,852	944,534
R-squared	0.062	0.001	0.069	0.034	0.008

Source: REDATAM INDEC Census Argentina 2010. *Notes*: Standard errors clustered at the department level in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

There are several reasons why differences in outcomes may survive controlling for years of education. Firstly, there may be other personal characteristics or attributes that may affect outcomes which we do not observe and may differ between Natives and non-Natives. For example, there may be differences in wealth and social capital. Secondly, there may be differences on the quality of education available to the two groups, which may make "years of education" an imperfect measure of human capital. Unfortunately, we lack a method to assess the quality of the education available to Natives and non-Natives. And thirdly, labor market discrimination may result in different returns to education for the two groups, but further research is needed to confirm this potential channel in this setting.[8]

## 3.4 The transmission of education

We study the transmission of education across generations and whether this differs between Natives and non-Natives. To do so, we focus on the more than 700,000 households

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[8] On discrimination by race in Latin America, see Chong and Ñopo (2008), Ñopo et al. (2010), Arceo-Gomez and Campos-Vazquez (2014), and Gerard et al. (2021).

in the 2010 Census consisting of parents and children between 19 and 24 years old, where all members of the household are Native or non-Native. This excludes families whose children do not reside with them. This selection is smaller than in other countries, as children in Argentina tend to remain in the household of their parents for years after reaching adulthood: in 2010, 60 percent of all people between 19 and 24 years old still resided with their parents.[9] We focus on households in which all members are Native or non-Native for simplicity.[10] For each household, we calculate the average years of education of the parents, in case more than one is present, and the average years of education of the children.

Figure 3 shows the distribution of years of education of the parents disaggregated by ancestry (Natives and non-Natives). While there is great overlap in the distribution, non-native parents have on average 1.20 more years of education than native parents. For the next generation, the difference in education between Natives and non-Natives is smaller (0.85 years) but still large.

Figure 3: Education by Generation and Ancestry
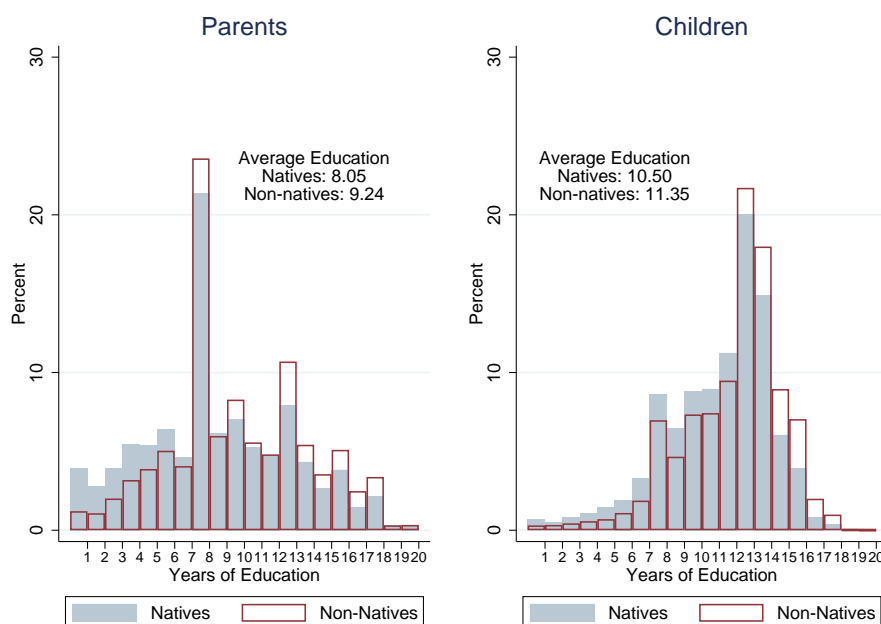
Notes: Households with children between 19 and 24 years old and all of same ancestry.

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[9] This number is higher for native families; with more educated native youth living with their parents than for non-natives. This "positive selection" in education for natives living at home relative to non-natives suggests that the differences in education transmission that we describe in this section may underestimate the actual differences.

[10] This consists of 98.8% of the households. We have also studied households with a combination of natives and non-natives; they exhibit a transmission of education similar to non-natives.

Does the fact that the average years of education increased more across generations for Natives than non-Natives imply that the difference in years of education will disappear with time? The answer is no. The reason is that there are different patterns in the transmission of education between Natives and non-Natives. As shown in Figure 4, for each level of education of the parents, the children of Natives tend to have, on average, fewer years of education than the children of non-Natives. Table 6 shows that this difference is statistically significant and robust to adding rural/urban and department fixed effects. We find that the interaction of years of education of the parents with Native is not statistically significant. On average, native children have one-third of a year less of education even after controlling for the education of the parents. This difference is somewhat larger than the difference in education of the children due to an extra year of education of the parents.

Figure 4: Education of the Parents and the Average Education of Children
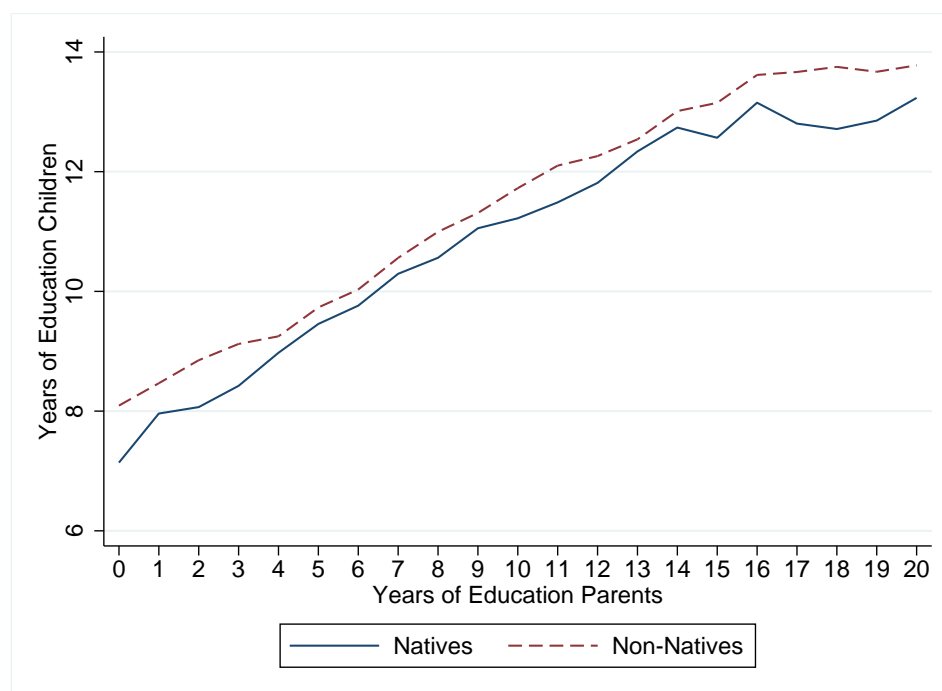
Notes: Households with children between 19 and 24 years old and all of same ancestry.

Assuming that the transmission of education is a Markov process that depends only on the education of the parents and whether they are native or not, we can calculate the limit distribution of years of education for both groups. These limit distributions are shown in Figure 5. While there is a large overlap in the distribution for the two groups, the distribution of education for Natives is to the left of that for non-Natives. In the limit, Natives have on average 0.57 fewer years of education than non-Natives. That implies

Table 6: Ancestry and the Transmission of Education

	Years of Education Children			
	(1)	(2)	(3)	(4)
Years of Education Parents	0.338***	0.328***	0.309***	0.310***
	(0.005)	(0.004)	(0.005)	(0.005)
Edu. Parents x Native				-0.008
				(0.014)
Native	-0.441***	-0.390***	-0.346***	-0.276*
	(0.072)	(0.067)	(0.062)	(0.165)
Urban		0.717***	0.593***	0.593***
		(0.051)	(0.039)	(0.039)
Constant	8.221***	7.646***	8.162***	8.160***
	(0.055)	(0.064)	(0.061)	(0.060)
Observations	733,020	733,020	733,020	733,020
R-squared	0.221	0.225	0.237	0.237
Department FE	N	N	Y	Y

Source: REDATAM INDEC Census Argentina 2010. *Notes*: Standard errors clustered at the department level in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

that if the transmission of education by ancestry would continue as observed in the two generations we study, the distribution of education of Natives and non-Natives would not converge to be the same — a large difference would persist.

Figure 5: Stationary Distribution of Education by Ancestry
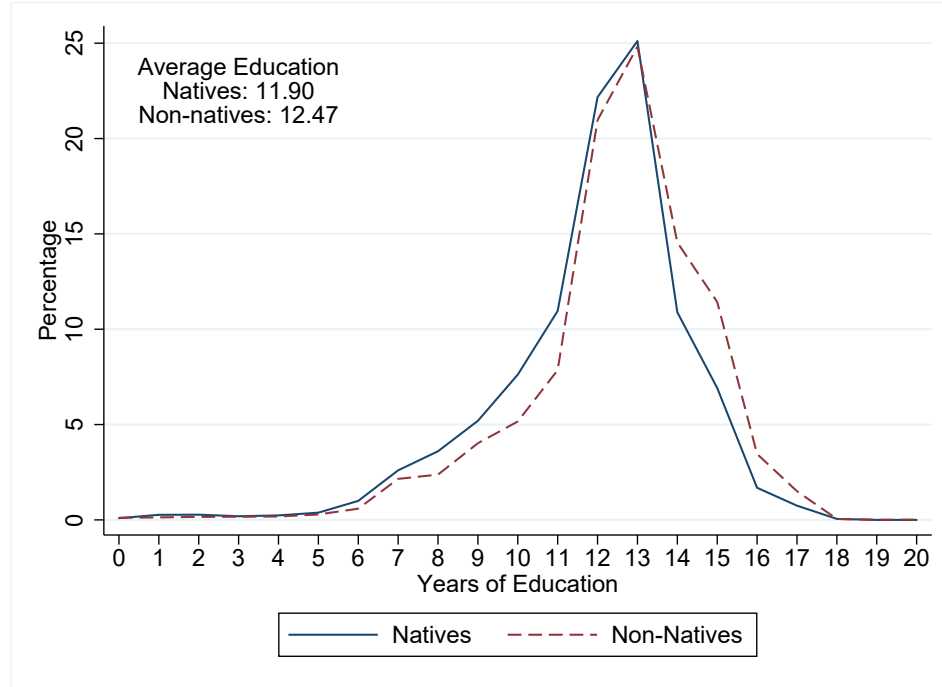
4   Differences in Socioeconomic Outcomes across Groups

While in previous the sections we focused on the differences between Natives and non-Natives, in this section we focus on differences across the different native groups.

The panels in Figures 6, 7, and 8 show the average outcome by group for each of the outcomes we study.[11] The last panel in Figure 8 shows the average standardized outcome by group (with higher numbers denoting better outcomes). These figures also show the average outcome for Natives and non-Natives, and the outcome at the first and ninth deciles by department as benchmarks for comparison.

There is large variation across groups in all outcomes. In fact, one-third of the groups have average years of education above the national average.

The magnitude of the differences in outcomes across groups can be appreciated in several ways. First, it is always the case that the difference in the average outcome between the first and last group is greater than the average difference between Natives and non-Natives. Consider for example the case of years of education. While non-Natives have 9.86 years of education on average, the Charrúa have 11 years of education on average and the Vilela have 5.4 years of education on average. Second, it is always the case that the difference between the first and last groups is greater than the difference between a

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[11] Table A4 in the Appendix provides these numbers.

department in the first and ninth deciles. Third, while some groups obtain average outcomes well below the average for Natives and non-Natives, some groups obtain outcomes above the average for non-Natives. That is, some native groups obtain higher outcomes than non-Natives. For example, in the case of years of education, one-third of the groups (consisting of 20 percent of the Native population) obtain averages above the average for non-Natives. Fourth, while the group with the best outcomes has an average standardized outcome 10 percent of a standard deviation higher than the general population, the group with the worst outcomes has an average outcome that is lower than the general population by 63 percent of a standard deviation.

These large differences across groups cannot be fully attributed to differences in location. Large differences remain after controlling for the locations of the different groups as shown in Figures A4, A5, and A6. For example, after controlling for location the difference between the groups with the best and worst average standardized outcomes is 42 percent of a standard deviation which is more than half the difference of 73 percent of a standard deviation without location controls.

In conclusion, the differences across native groups are greater than the differences between Natives and non-Natives and differences across locations.

Figure 6: Average Outcomes by Group
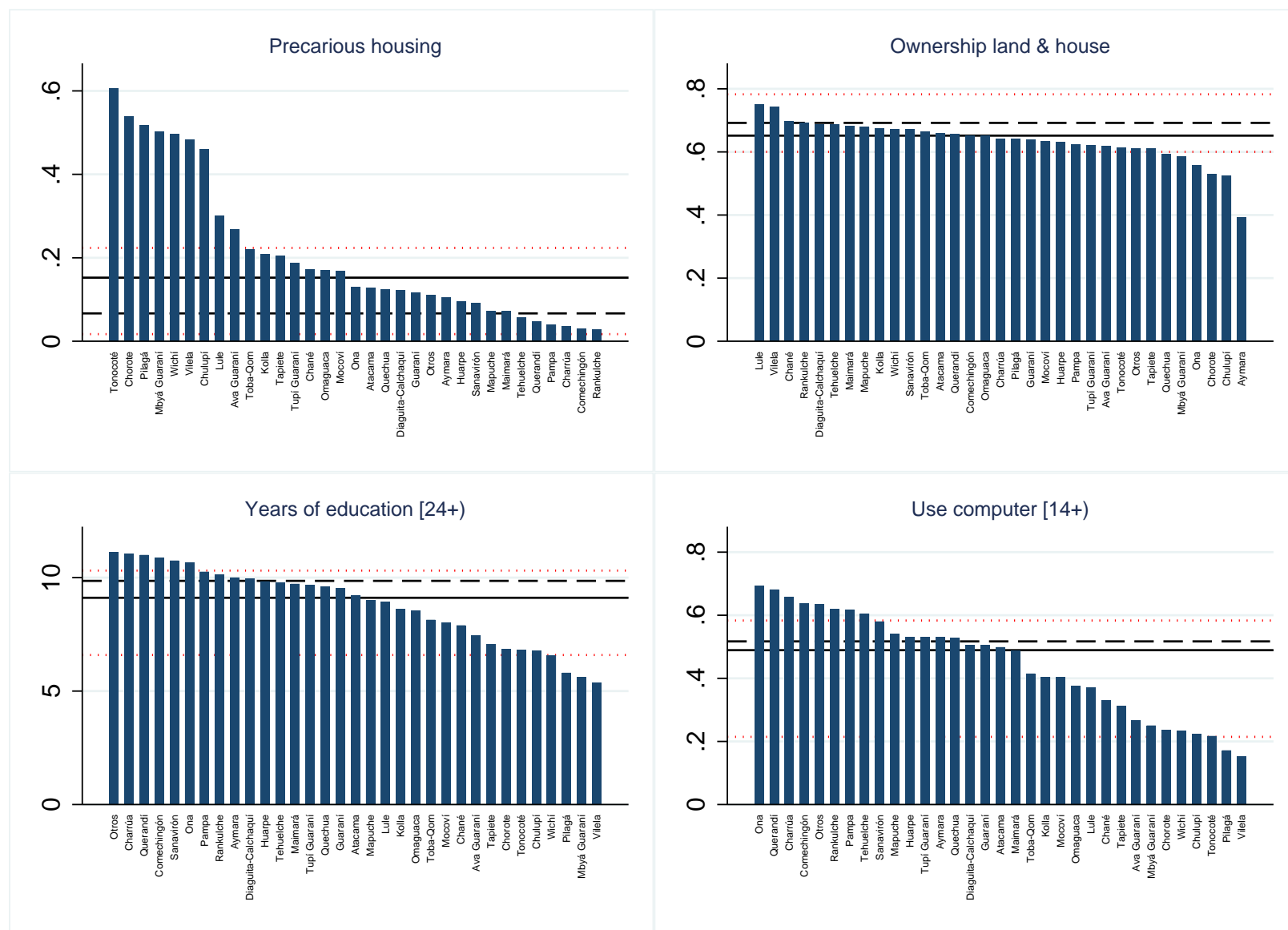
Sources: REDATAM INDEC Census Argentina 2010 (Instituto Nacional de Estadística y Censos, 2010). *Notes:* Solid horizontal lines show average for Natives, dashed horizontal lines show the average for non-Natives, and the dotted horizontal lines show the first and ninth decile by department.

Figure 7: Average Outcomes by Group
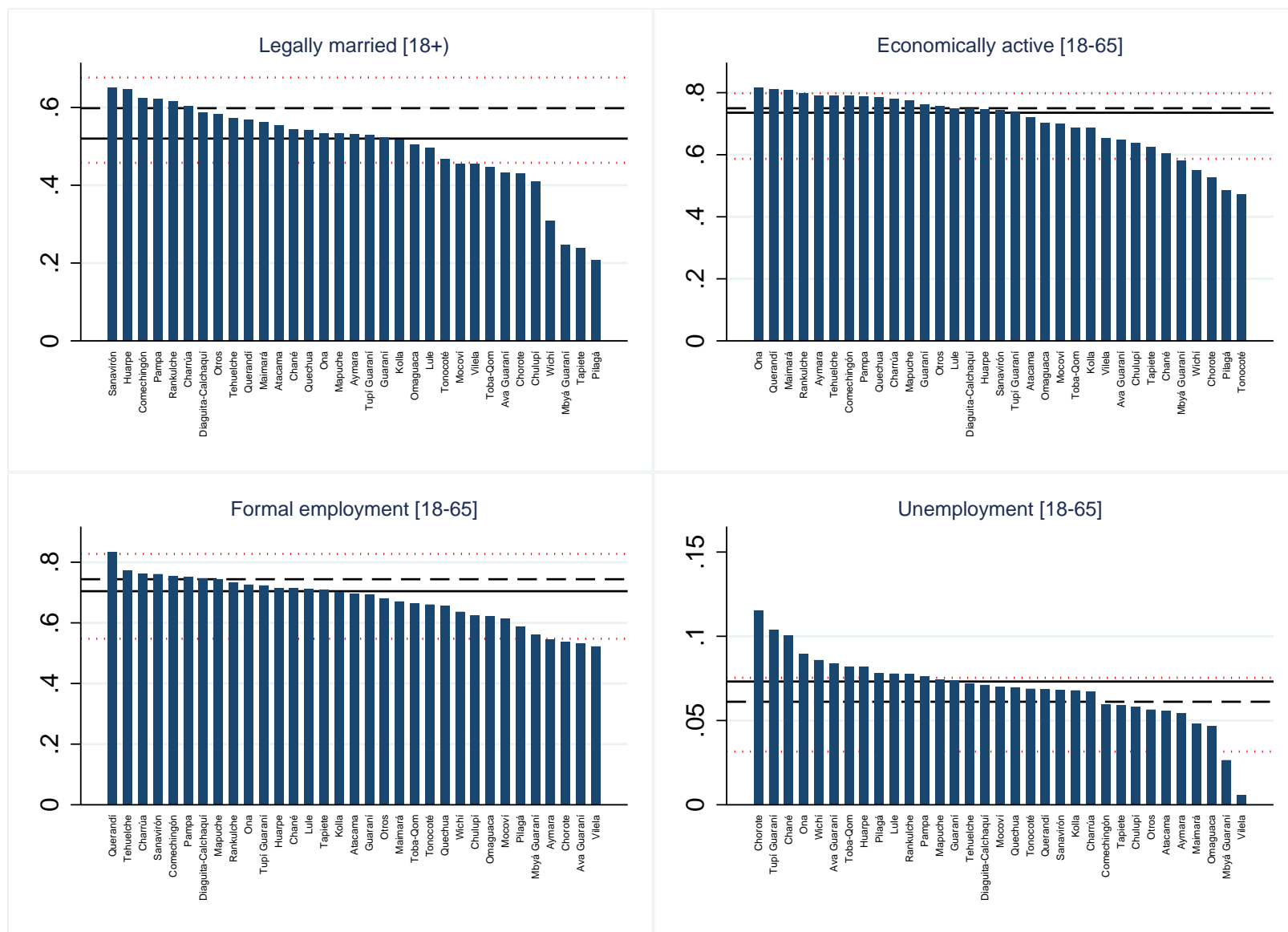
Sources: REDATAM INDEC Census Argentina 2010 (Instituto Nacional de Estadística y Censos, 2010). *Notes:* Solid horizontal lines show average for Natives, dashed horizontal lines show the average for non-Natives, and the dotted horizontal lines show the first and ninth decile by department.
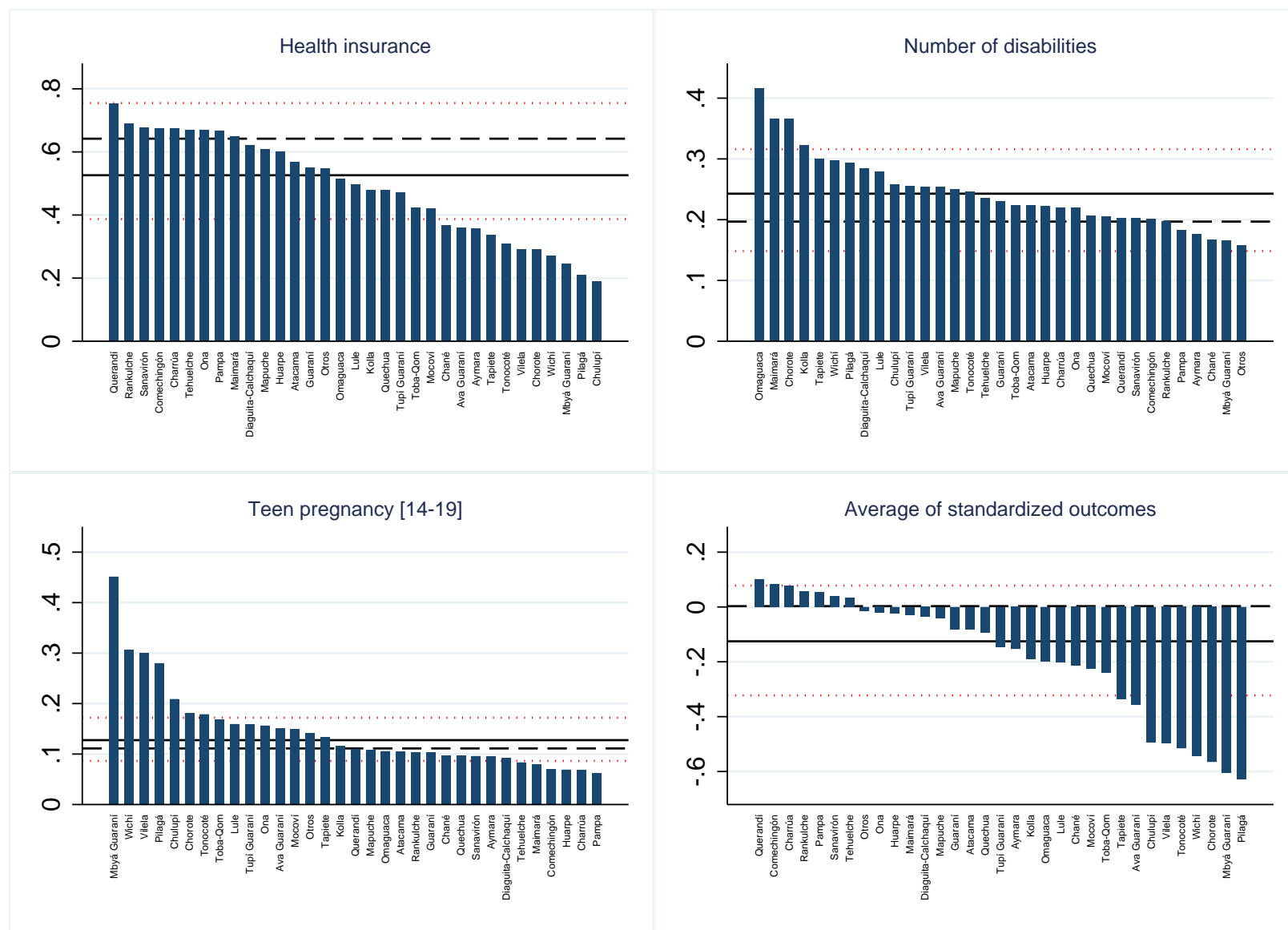
Figure 8: Average Outcomes by Group

Sources: REDATAM INDEC Census Argentina 2010 (Instituto Nacional de Estadística y Censos, 2010). *Notes:* Solid horizontal lines show average for Natives, dashed horizontal lines show the average for non-Natives, and the dotted horizontal lines show the first and ninth decile by department.

As a comparison point, Figures A7, A8 and A9, and Table A5 in the Appendix provide the average outcome by group for the US. While there are also large differences in outcomes across groups in the US, these differences are smaller than in Argentina. For example, if we focus on the average standardized outcome, the difference between the maximum and minimum across groups in the US is 38 percent of a standard deviation while it is 72 percent in Argentina.

The large differences in outcomes across native groups in Argentina stress the importance of not considering the native population as homogeneous. There may be many reasons for the observed differences across groups. In the following section we explore a particular one.

5   Historical Determinants of Socioeconomic Outcomes

Can the differences in outcomes across Native groups be explained by the type of economy they had before the arrival of European colonizers? In particular, given the existing work on the importance of pre-colonial agriculture in current economic development (see Michalopoulos et al., 2018), we focus on whether these groups relied primarily on hunting-gathering, or had an incipient or advanced agriculture.

Table 1 column (3) shows our measure of the type of economy of each group before colonization. This measure is based on the previous literature on the Native groups of Argentina (Colombres, 2008; Ibáñez, 2008; Lobos, 2011; Mandrini, 2008; Molocznik, 2011; Murdock, 1967; Nesis, 2005; Nordenskiöld, 2002; Outes and Bruch, 1910; Sacco, 2011; Martínez Sarasola, 2011, 2014; Serrano, 2012).[12]

Given that groups with agriculture tended to be colonized earlier than hunter-gatherer groups and there is evidence that years since colonization affects development (Feyrer and Sacerdote, 2009), we control for the years since colonization in some of the analysis. Our measure of the year of colonization is presented in the last column of Table 1.[13]

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[12] We were not able to find a clear assignment for the Mapuche, and as such they are dropped from the analysis in this section. While the Mapuche relied heavily on agriculture to the west of the Andes (see for example Murdock, 1967), in their expansion to the east they incorporated hunter-gatherer groups and relied less on agriculture.

[13] We use several data sources to construct the variable shown in Table 1 measuring the year of colonization of each group. Firstly, we define the ancestral area for each group based on the literature (Colombres, 2008; Ibáñez, 2008; Lobos, 2011; Mandrini, 2008; Molocznik, 2011; Nesis, 2005; Nordenskiöld, 2002; Outes and Bruch, 1910; Sacco, 2011; Martínez Sarasola, 2011, 2014; Serrano, 2012). Secondly, we use the 2010 Census to calculate the population density of Natives of each group across counties. Thirdly, for each group, we take into account the three counties with the largest concentration of people from that group among counties in the ancestral land of the group. Fourthly, we find the year of colonization of those counties based on historical records of arrival of the Spanish or foundation of the county or main city in

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In this section, for simplicity, we focus on the average of the standardized outcomes by group and the average years of education by group (for individuals aged 24 years old and older).[14] In addition to studying the outcomes of native groups in the whole country, we will also study outcomes of groups in the north of the country.[15] The reason is that a large part of Argentina, the pampas and Patagonia, only had original Native groups without agriculture. The north of the country, on the contrary, has greater variation in the type of pre-Columbian economy of the Native groups.[16]

Figure 9 shows the average standardized outcome by type of precolonial economy for all groups in Argentina and also for those in the north of the country.

In both cases, the standardized outcome is increasing on agriculture with larger differences in the north of the country. Figure 10 shows a similar pattern for years of education.

Figure 9: Precolonial Agriculture and Current Development
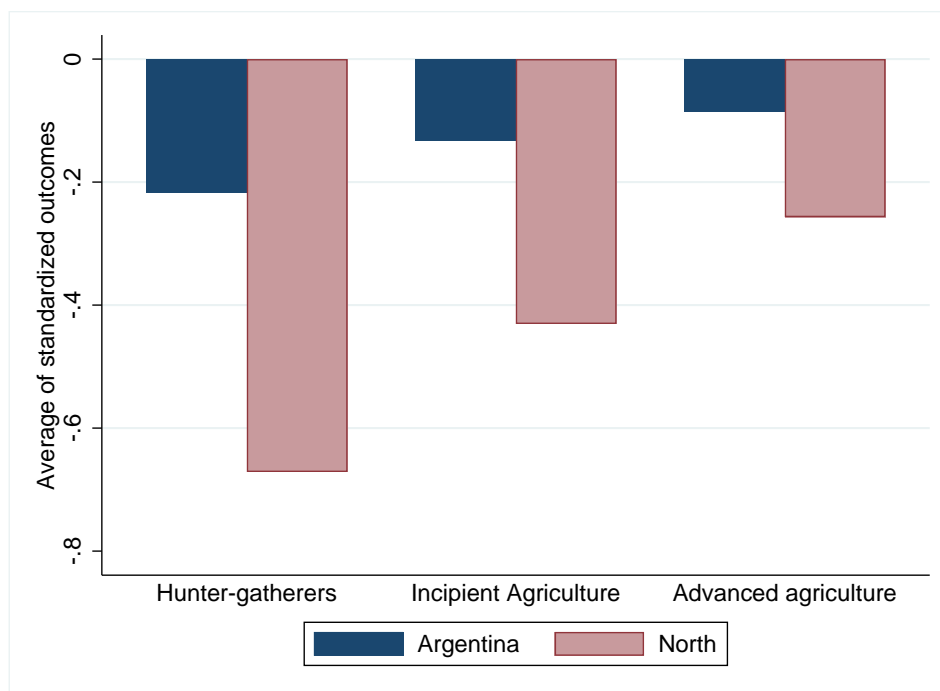
Table 7 provides the related regression analysis. We consider each group as the unit of observation and the statistical analysis is done weighting each group by its population.

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the county (we exclude the capital cities). Finally, we take the weighted average of the year of colonization of these counties as the year of colonization of the group.

[14] The analysis for all outcomes and for the first component is presented in the Appendix.

[15] The north of the country consists of the following provinces: Chaco, Formosa, Jujuy and Salta. For the analysis focusing on this part of the country, we only consider the 19 groups with ancestral land in these provinces. This sample consists of 21 percent of the native population of the country.

[16] Of the 19 groups with ancestral lands in the north of the country, nine were hunter-gatherers, four had incipient agriculture, and six had superior agriculture.

Figure 10: Precolonial Agriculture and Current Education
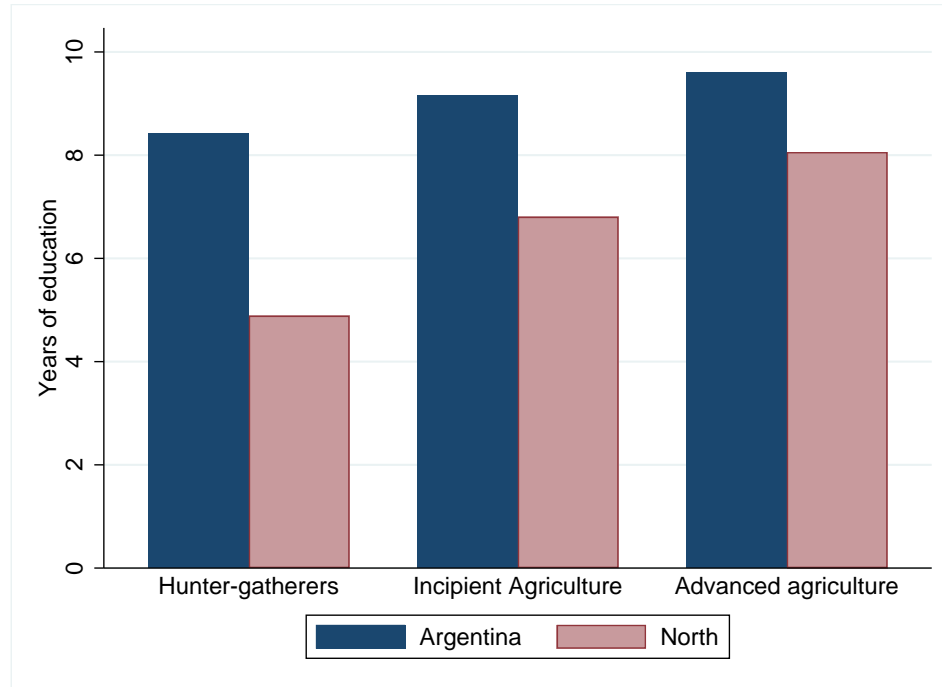
Considering groups throughout the entire country, we find that groups with superior agriculture before colonization obtain significantly better outcomes compared to those without agriculture. However, when we control for the centuries since colonization, the coefficient on superior agriculture becomes negative (but not statistically significant). The positive estimated coefficient on centuries since colonization is consistent with the evidence provided by Feyrer and Sacerdote (2009) on the positive causal effect of years since colonization and economic development on islands around the world.

We find stronger results on the relationship between pre-colonial economy and current outcomes for the north of the country. Groups which had incipient agriculture have significantly better outcomes than those that were hunter-gatherers at the 1 percent significance level, regardless of the specification. Groups which had superior agriculture have significantly better outcomes than those that were hunter-gatherers at the 5 percent significance level.

Our evidence of a relation between the type of economy native groups had before colonization and current development is consistent with what was found for Sub-Saharan Africa by Michalopoulos et al. (2018). They find that individuals from ethnicities which relied more on agriculture for subsistence before colonization are more educated and wealthier today than those relying on herding.

There are many other possible determinants of native outcomes that we do not study

here due to data limitations or lack of variation. These possible determinants include pre-colonial institutions, and experiences during and after colonization. For evidence on these dimensions from elsewhere, see Michalopoulos and Papaioannou (2013), Nunn (2008), Dell (2010), Valencia Caicedo (2019), Dippel (2014), Akee et al. (2015), Akee et al. (2015), Feir (2016), and Feir et al. (2022).

Table 7: Precolonial Agriculture and Current Outcomes

| | Argentina | | | | North | | | |
| | Average Outcomes | | Education | | Average Outcomes | | Education | |
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Incipient Agriculture	0.084	0.022	0.726	0.174	0.241***	0.314***	1.917***	1.777***
	(0.078)	(0.090)	(0.536)	(0.602)	(0.046)	(0.066)	(0.281)	(0.429)
Superior Agriculture	0.131*	-0.053	1.173**	-0.467	0.414***	0.689***	3.171***	2.647**
	(0.070)	(0.153)	(0.479)	(1.029)	(0.037)	(0.188)	(0.223)	(1.212)
Centuries since Colonization		0.068		0.609*		-0.108		0.207
		(0.051)		(0.341)		(0.073)		(0.469)
Constant	-0.217***	-0.305***	8.424***	7.635***	-0.671***	-0.547***	4.890***	4.653***
	(0.048)	(0.081)	(0.329)	(0.544)	(0.024)	(0.086)	(0.143)	(0.556)
Observations	31	31	31	31	19	19	19	19
R-squared	0.116	0.171	0.180	0.266	0.890	0.904	0.928	0.929
Pvalue Incipient=Superior	0.560	0.536	0.422	0.434	0.00260	0.0191	0.000633	0.362

Source: REDATAM INDEC Census Argentina 2010. *Notes*: Weighted Least Squares. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

6   Conclusion

We contribute to the study of differences in socioeconomic outcomes across Native and non-Native people by using new Argentine census data to describe the economic outcomes of Native Argentines. We find that, on average, Native Argentines obtain worse outcomes than non-Natives. These differences cannot be explained only by differences in location or educational attainment. We also find differences in the transmission of education that suggest that differences in educational attainment will not disappear with time. Interestingly, we find that differences among Native groups are much larger than the differences between Natives and non-Natives. We find that the economic outcomes of groups correlate with the practice of agriculture before the arrival of the Spanish.

These results suggest the importance of not considering the Native groups in Argentina as a homogeneous group, but stress the diversity of experiences among Natives. We hope that future research will help us understand the causes of these differences in outcomes and their implications for public policies aimed at improving the lives of Native people in Argentina.

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A Appendix

Table A1: Differences between Afro-Argentines and Non-Afro-Argentines

	(1)	(2)	(3)	(4)	(5)
					+ department
	Average	Average	Difference	with age and gender	and urban-rural
	Afro-Argentines	Non-Afro	(SE)	Fixed effects	Fixed effects
Precarious housing	0.072	0.069	0.003	0.003	0.003
			(0.004)	(0.004)	(0.004)
Ownership land & house	0.642	0.691	-0.050***	-0.047***	-0.038***
			(0.010)	(0.010)	(0.009)
Years of education [24+]	10.533	9.837	0.696***	0.552***	0.395***
			(0.070)	(0.069)	(0.052)
Use computer [14+]	0.600	0.516	0.084***	0.066***	0.049***
			(0.008)	(0.008)	(0.005)
Legally married [18+]	0.567	0.596	-0.029***	-0.030***	-0.025***
			(0.008)	(0.007)	(0.007)
Economically active [18-65]	0.787	0.749	0.037***	0.027***	0.022***
			(0.005)	(0.005)	(0.004)
Formal employment [18-65]	0.746	0.743	0.003	0.001	-0.009
			(0.007)	(0.007)	(0.006)
Unemployment [18-65]	0.061	0.061	0.000	0.001	0.001
			(0.003)	(0.003)	(0.003)
Health insurance	0.639	0.639	0.000	0.008	-0.002
			(0.007)	(0.007)	(0.007)
Number of disabilities	0.214	0.198	0.016***	0.034***	0.039***
			(0.005)	(0.005)	(0.005)
Teen pregnancy [14-19]	0.098	0.112	-0.014	-0.014*	-0.012
			(0.009)	(0.008)	(0.008)

Source: REDATAM INDEC Census Argentina 2010. SE clustered at department level in parenthesis. Column 4 includes gender and age fixed effects and column 5 also includes department and urban fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A2: Differences between Natives and Non-Natives in the US

| | (1) | (2) | (3) | (4) | (5) |
	Average Natives	Average Non-Natives	Difference (SE)	with age and gender Fixed effects	+ department and urban-rural Fixed effects
Precarious housing	0.022	0.008	0.014***	0.014***	0.012***
			(0.005)	(0.005)	(0.004)
Ownership	0.570	0.658	-0.088***	-0.070***	-0.070***
			(0.010)	(0.010)	(0.008)
Years of education	12.438	13.033	-0.596***	-0.669***	-0.607***
			(0.058)	(0.059)	(0.048)
Economically active	0.706	0.770	-0.064***	-0.065***	-0.060***
			(0.006)	(0.006)	(0.005)
Unemployment	0.099	0.068	0.031***	0.028***	0.031***
			(0.003)	(0.003)	(0.002)
Health insurance	0.872	0.859	0.014*	0.018**	0.017**
			(0.008)	(0.008)	(0.008)
Number of disabilities	0.410	0.282	0.128***	0.194***	0.186***
			(0.009)	(0.008)	(0.010)
Teen motherhood	0.036	0.024	0.012***	0.011***	0.008***
			(0.002)	(0.002)	(0.003)
Household income	65524.406	83434.773	-17900.000***	-18400.000***	-15600.000***
			(1778.393)	(1780.529)	(857.582)

Source: IPUMS-USA (Ruggles et al., 2021). *Notes*: SE clustered at department level in parenthesis. Column 4 includes gender and age fixed effects and column 5 also includes department and urban fixed effects.

Table A3: Magnitude of the Difference between Natives and Non-Natives in the US (percentages)

	(1) Difference / SD Total	(2) Difference / [Decil 9 - Decil 1]
Precarious housing	15.35	155.56
Ownership	18.51	39.29
Years of education	18.25	37.94
Economically active	15.28	61.54
Unemployment	12.44	68.89
Health insurance	3.89	12.17
Number of disabilities	14.09	72.73
Teen motherhood	7.83	30.77
Household income	21.61	39.60
Average	14.14	57.61

Source: IPUMS-USA (Ruggles et al., 2021). *Notes*: Difference corresponds to the columns without FE in Table 2. Deciles calculated at the county level.

Table A4: Average Outcomes by Groups

	(1) Precarious Housing	(2) Ownership land & house	(3) Years of education [24+]	(4) Use computer [14+]	(5) Legally married [18+]	(6) Economically Active [18-65]	(7) Formal Employment [18-65]	(8) Uneploy-ment [18-65]	(9) Teen [14-19] Pregnancy	(10) Health Insurance	(11) Number of disabilities	(12) Average Std. Outcomes
All	0.069	0.691	9.836	0.516	0.596	0.749	0.743	0.061	0.111	0.639	0.198	-0.000
Non-Natives	0.067	0.692	9.856	0.517	0.598	0.750	0.744	0.061	0.111	0.642	0.197	0.003
Atacama	0.128	0.658	9.219	0.499	0.554	0.719	0.696	0.056	0.104	0.568	0.223	-0.081
Ava Guaraní	0.268	0.619	7.448	0.266	0.431	0.647	0.533	0.084	0.151	0.359	0.254	-0.357
Aymara	0.105	0.392	10.007	0.530	0.530	0.791	0.545	0.054	0.095	0.357	0.176	-0.153
Chané	0.172	0.696	7.897	0.330	0.544	0.604	0.714	0.100	0.097	0.367	0.167	-0.214
Charrúa	0.036	0.641	11.039	0.659	0.603	0.779	0.762	0.067	0.068	0.673	0.220	0.077
Chorote	0.538	0.530	6.847	0.237	0.429	0.525	0.538	0.115	0.181	0.289	0.365	-0.565
Chulupí	0.459	0.525	6.772	0.223	0.409	0.638	0.624	0.058	0.209	0.190	0.258	-0.493
Comechingón	0.031	0.652	10.867	0.637	0.623	0.789	0.755	0.060	0.070	0.675	0.200	0.084
Diaguita-Calchaquí	0.122	0.688	9.948	0.506	0.587	0.747	0.746	0.071	0.092	0.621	0.284	-0.035
Guaraní	0.116	0.639	9.541	0.506	0.523	0.761	0.693	0.074	0.103	0.550	0.230	-0.081
Huarpe	0.096	0.630	9.838	0.531	0.646	0.746	0.715	0.082	0.069	0.600	0.222	-0.023
Kolla	0.208	0.674	8.611	0.404	0.516	0.685	0.701	0.068	0.116	0.479	0.323	-0.189
Lule	0.301	0.749	8.938	0.370	0.497	0.747	0.712	0.078	0.159	0.497	0.279	-0.201
Maimará	0.072	0.681	9.727	0.488	0.562	0.807	0.671	0.048	0.080	0.650	0.365	-0.029
Mapuche	0.073	0.679	9.000	0.541	0.532	0.774	0.744	0.074	0.109	0.607	0.250	-0.041
Mbyá Guaraní	0.501	0.586	5.623	0.251	0.247	0.581	0.561	0.026	0.451	0.245	0.165	-0.604
Mocoví	0.167	0.633	8.018	0.404	0.455	0.700	0.614	0.070	0.149	0.419	0.205	-0.225
Omaguaca	0.169	0.651	8.542	0.376	0.504	0.702	0.622	0.047	0.106	0.514	0.415	-0.197
Ona	0.129	0.558	10.674	0.694	0.532	0.815	0.726	0.089	0.156	0.668	0.219	-0.021
Pampa	0.040	0.623	10.259	0.618	0.622	0.788	0.751	0.076	0.062	0.667	0.183	0.055
Pilagá	0.518	0.640	5.807	0.172	0.207	0.485	0.587	0.078	0.280	0.209	0.294	-0.628
Quechua	0.124	0.593	9.602	0.527	0.542	0.785	0.655	0.070	0.097	0.477	0.206	-0.093
Querandí	0.047	0.655	10.999	0.682	0.567	0.811	0.834	0.068	0.111	0.753	0.202	0.100
Rankulche	0.028	0.691	10.145	0.620	0.615	0.799	0.732	0.078	0.104	0.689	0.198	0.057
Sanavirón	0.092	0.671	10.752	0.580	0.650	0.745	0.761	0.068	0.096	0.676	0.202	0.039
Tapiete	0.204	0.609	7.071	0.313	0.238	0.625	0.709	0.059	0.133	0.337	0.300	-0.336
Tehuelche	0.057	0.687	9.786	0.605	0.573	0.791	0.773	0.072	0.083	0.669	0.235	0.034
Toba-Qom	0.220	0.664	8.142	0.415	0.446	0.687	0.665	0.082	0.169	0.423	0.223	-0.240
Tonocoté	0.605	0.614	6.817	0.217	0.468	0.473	0.661	0.069	0.179	0.308	0.246	-0.516
Tupí Guaraní	0.187	0.620	9.682	0.531	0.529	0.737	0.724	0.104	0.159	0.471	0.255	-0.146
Vilela	0.484	0.744	5.379	0.152	0.455	0.652	0.523	0.006	0.300	0.291	0.254	-0.497
Wichí	0.497	0.672	6.561	0.234	0.308	0.550	0.637	0.086	0.306	0.269	0.297	-0.544
Other	0.111	0.612	11.123	0.635	0.583	0.756	0.681	0.057	0.141	0.547	0.157	-0.014
Natives	0.152	0.652	9.026	0.484	0.516	0.732	0.698	0.073	0.126	0.526	0.243	-0.125

Source: REDATAM INDEC Census Argentina 2010.

Table A5: Average Outcomes by Groups in the US

	(1) Precarious Housing	(2) Ownership	(3) Years of Education [24+]	(4) Economically Active [18-65]	(5) Uneploy-ment [18-65]	(6) Health Insurance	(7) Number of disabilities	(8) Teen [14-19] Motherhood	(9) Household Income	(10) Average Std. Outcomes
All	0.008	0.657	13.023	0.769	0.068	0.859	0.284	0.024	83116.811	-0.000
Non-Natives	0.008	0.658	13.033	0.770	0.068	0.859	0.282	0.024	83434.771	0.002
Alaskan Athabaskan	0.149	0.573	11.950	0.731	0.167	0.968	0.408	0.075	68150.310	-0.320
Aleut	0.014	0.595	12.346	0.667	0.137	0.920	0.491	0.038	73136.461	-0.131
Eskimo	0.234	0.661	11.728	0.675	0.152	0.958	0.290	0.043	72483.834	-0.380
Tlingit-Haida	0.035	0.536	12.437	0.712	0.136	0.947	0.356	0.006	74361.840	-0.106
Apache	0.041	0.491	11.959	0.664	0.154	0.877	0.437	0.086	50730.687	-0.282
Blackfoot	0.014	0.463	12.484	0.641	0.122	0.887	0.561	0.017	49369.658	-0.193
Cherokee	0.012	0.648	12.659	0.673	0.077	0.888	0.599	0.057	61798.998	-0.130
Cheyenne	0.017	0.481	12.469	0.667	0.139	0.942	0.325	0.032	48674.880	-0.160
Chickasaw	0.005	0.699	13.033	0.701	0.069	0.941	0.428	0.063	79820.571	-0.028
Chippewa	0.014	0.602	12.467	0.689	0.101	0.932	0.347	0.076	56590.728	-0.131
Choctaw	0.009	0.654	12.694	0.717	0.076	0.937	0.432	0.044	67228.438	-0.059
Colville	0.006	0.589	12.836	0.695	0.132	0.957	0.359	0.118	65957.876	-0.136
Comanche	0.022	0.564	12.798	0.696	0.095	0.910	0.404	0.010	62535.169	-0.093
Creek	0.007	0.640	12.779	0.698	0.071	0.933	0.401	0.089	60469.033	-0.099
Crow	0.013	0.485	12.532	0.764	0.255	0.921	0.222	0.056	52022.180	-0.184
Delaware	0.003	0.503	12.636	0.609	0.097	0.893	0.493	0.000	56041.001	-0.131
Iowa	0.000	0.587	10.664	0.595	0.031	0.726	0.479	0.000	60375.743	-0.195
Iroquois	0.015	0.608	12.714	0.691	0.096	0.927	0.438	0.050	59112.156	-0.111
Latin American	0.014	0.478	10.042	0.802	0.080	0.706	0.273	0.033	62221.380	-0.228
Lumbee	0.007	0.693	11.811	0.650	0.078	0.797	0.410	0.051	53978.981	-0.160
Menominee	0.010	0.535	12.737	0.781	0.216	0.917	0.226	0.000	58506.031	-0.092
Native Hawaiian	0.013	0.554	12.760	0.771	0.086	0.884	0.284	0.026	83039.593	-0.039
Navajo	0.121	0.606	11.513	0.631	0.115	0.904	0.346	0.034	49974.635	-0.304
Paiute	0.005	0.444	11.982	0.718	0.163	0.958	0.378	0.024	57885.247	-0.150
Pima	0.018	0.494	11.591	0.557	0.127	0.946	0.276	0.061	45724.995	-0.229
Potawatomie	0.002	0.643	12.942	0.705	0.048	0.939	0.350	0.011	68136.514	0.001
Pueblo	0.044	0.735	12.475	0.690	0.120	0.922	0.305	0.036	57957.350	-0.113
Puget Sound Salish	0.001	0.507	12.215	0.649	0.131	0.942	0.362	0.034	63678.350	-0.129
Seminole	0.004	0.519	12.198	0.615	0.106	0.935	0.335	0.027	68529.744	-0.116
Sioux	0.020	0.418	12.270	0.648	0.134	0.940	0.335	0.055	46597.263	-0.209
Tohono O'Odham	0.065	0.504	11.608	0.576	0.146	0.931	0.223	0.006	40461.453	-0.253
Yakima	0.007	0.578	12.438	0.535	0.100	0.815	0.270	0.000	49538.027	-0.153
Yaqui	0.009	0.515	11.813	0.677	0.125	0.902	0.420	0.036	52555.198	-0.177
Yuman	0.009	0.450	11.971	0.721	0.171	0.961	0.458	0.057	50257.656	-0.199
Other Am. Indian / Alaska Nat.	0.013	0.541	11.811	0.699	0.102	0.844	0.398	0.037	60163.104	-0.166
Multiracial	0.011	0.569	12.821	0.724	0.095	0.864	0.426	0.030	70890.648	-0.091
Natives	0.022	0.570	12.446	0.706	0.099	0.872	0.410	0.036	65524.408	-0.130

Source: IPUMS US (Ruggles et al., 2021).

Table A6: Precolonial Agriculture and Current Outcomes (Argentina)

	Precarious Housing		Ownership		Use Computer		Legally Married		Economically Active		Formal Employment		Unemployment		Health Insurance		Number of Disabilities		Teen Pregnancy		First Component	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
Incipient Agriculture	-0.065	-0.022	-0.027	0.004	0.030	-0.026	0.065	0.018	0.038	0.010	-0.004	-0.006	-0.004	-0.002	0.055	0.018	-0.006	0.017	-0.049	-0.031	1.488	0.335
	(0.058)	(0.067)	(0.025)	(0.027)	(0.054)	(0.060)	(0.039)	(0.043)	(0.033)	(0.038)	(0.028)	(0.033)	(0.004)	(0.005)	(0.058)	(0.067)	(0.021)	(0.023)	(0.029)	(0.034)	(1.285)	(1.463)
Superior Agriculture	-0.091*	0.036	-0.026	0.067	0.064	-0.104	0.094**	-0.044	0.056*	-0.027	0.014	0.008	-0.014***	-0.008	0.073	-0.034	0.025	0.096**	-0.071**	-0.017	2.330*	-1.099
	(0.052)	(0.114)	(0.022)	(0.046)	(0.048)	(0.103)	(0.035)	(0.074)	(0.029)	(0.064)	(0.025)	(0.056)	(0.004)	(0.008)	(0.052)	(0.115)	(0.019)	(0.040)	(0.026)	(0.059)	(1.148)	(2.502)
Centuries since Colonization		-0.047		-0.035**		0.062*		0.051**		0.031		0.002		-0.002		0.040		-0.026*		-0.020		1.273
		(0.038)		(0.015)		(0.034)		(0.025)		(0.021)		(0.019)		(0.003)		(0.038)		(0.013)		(0.019)		(0.830)
Constant	0.223***	0.284***	0.660***	0.705***	0.437***	0.356***	0.462***	0.396***	0.690***	0.651***	0.681***	0.678***	0.079***	0.082***	0.464***	0.413***	0.234***	0.268***	0.168***	0.194***	-1.541*	-3.190**
	(0.035)	(0.060)	(0.015)	(0.024)	(0.033)	(0.054)	(0.024)	(0.039)	(0.020)	(0.034)	(0.017)	(0.030)	(0.003)	(0.004)	(0.036)	(0.061)	(0.013)	(0.021)	(0.018)	(0.031)	(0.788)	(1.322)
Observations	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
R-squared	0.105	0.154	0.062	0.216	0.059	0.163	0.211	0.321	0.120	0.183	0.018	0.018	0.334	0.346	0.071	0.107	0.086	0.204	0.213	0.242	0.131	0.201
Pvalue Incipient=Superior	0.656	0.524	0.971	0.0892	0.546	0.344	0.471	0.292	0.590	0.474	0.526	0.752	0.0319	0.359	0.758	0.564	0.157	0.0183	0.476	0.766	0.527	0.471

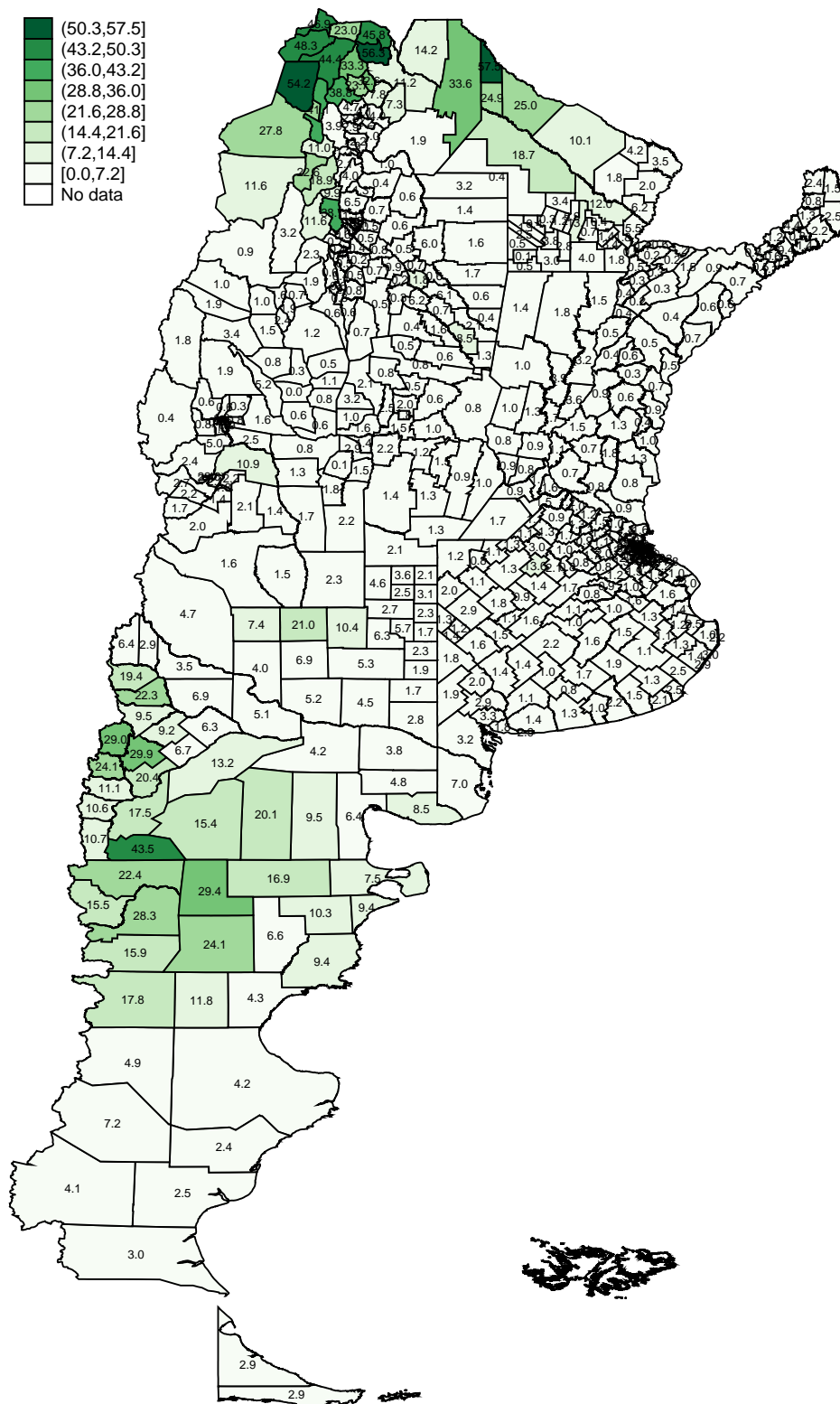*Source*: REDATAM INDEC Census Argentina 2010. *Notes*: Weighted Least Squares. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A7: Precolonial Agriculture and Current Outcomes (North)

	Precarious Housing		Ownership		Use Computer		Legally Married		Economically Active		Formal Employment		Unemployment		Health Insurance		Number of Disabilities		Teen Pregnancy		First Component	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
Incipient Agriculture	-0.196***	-0.296***	-0.036	0.046	0.078***	0.110***	0.177***	0.176***	0.121***	0.116***	0.024	0.064*	-0.001	0.020*	0.164***	0.140**	0.007	-0.050	-0.103***	-0.155***	2.953***	2.937***
	(0.057)	(0.080)	(0.027)	(0.030)	(0.019)	(0.027)	(0.026)	(0.040)	(0.022)	(0.033)	(0.025)	(0.035)	(0.008)	(0.010)	(0.033)	(0.049)	(0.030)	(0.041)	(0.032)	(0.045)	(0.439)	(0.675)
Superior Agriculture	-0.264***	-0.639**	-0.005	0.305***	0.211***	0.331***	0.277***	0.273***	0.178***	0.160	0.178***	0.330***	-0.024***	0.055*	0.288***	0.197	0.100***	-0.114	-0.145***	-0.342***	5.941***	5.878***
	(0.045)	(0.225)	(0.022)	(0.086)	(0.015)	(0.077)	(0.021)	(0.114)	(0.017)	(0.093)	(0.020)	(0.099)	(0.006)	(0.027)	(0.026)	(0.139)	(0.024)	(0.116)	(0.025)	(0.127)	(0.349)	(1.908)
Centuries since Colonization		0.148		-0.122***		-0.047		0.002		0.007		-0.060		-0.031***		0.036		0.084*		0.077		0.025
		(0.087)		(0.033)		(0.030)		(0.044)		(0.036)		(0.038)		(0.011)		(0.054)		(0.045)		(0.049)		(0.738)
Constant	0.509***	0.340***	0.688***	0.828***	0.115***	0.169***	0.229***	0.227***	0.473***	0.465***	0.495***	0.563***	0.092***	0.128***	0.167***	0.126*	0.271***	0.175***	0.278***	0.190***	-2.534***	-2.562**
	(0.029)	(0.103)	(0.014)	(0.040)	(0.010)	(0.035)	(0.013)	(0.052)	(0.011)	(0.043)	(0.013)	(0.046)	(0.004)	(0.012)	(0.017)	(0.064)	(0.015)	(0.053)	(0.016)	(0.058)	(0.224)	(0.875)
Observations	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
R-squared	0.698	0.747	0.101	0.525	0.923	0.934	0.920	0.920	0.876	0.876	0.845	0.867	0.506	0.689	0.888	0.891	0.548	0.634	0.689	0.733	0.948	0.948
Pvalue Incipient=Superior	0.274	0.0640	0.292	0.00133	6.39e-06	0.00193	0.00232	0.282	0.0234	0.544	2.01e-05	0.00320	0.0140	0.111	0.00235	0.601	0.00908	0.481	0.223	0.0741	8.00e-06	0.0613

Source: REDATAM INDEC Census Argentina 2010. *Notes*: Weighted Least Squares. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure A1: Screenshot of questions included in the census to identify Natives and Afro-Argentines.

Notes: Screenshot of the 2010 Census questionnaire (long version): Question 5 "Is any person in this household indigenous or a descendant of indigenous peoples (native or aboriginal)? Yes (indicate the ID of the individual, indicate which group)/No/Ignored" and Question 6 "Are you or any person in this household of African descent or have ancestors of African descent (father, mother, grandparents, great-grandparents)? Yes (indicate the ID of the individual)/No/Ignored."

Figure A2: Percentage of Natives by Departament

Sources: REDATAM INDEC Census Argentina 2010 (Instituto Nacional de Estadística y Censos, 2010).
Disclaimer: Falkland Islands - Islas Malvinas: A dispute concerning sovereignty over the islands exists between Argentina who claims this sovereignty and the U.K. which administers the islands.

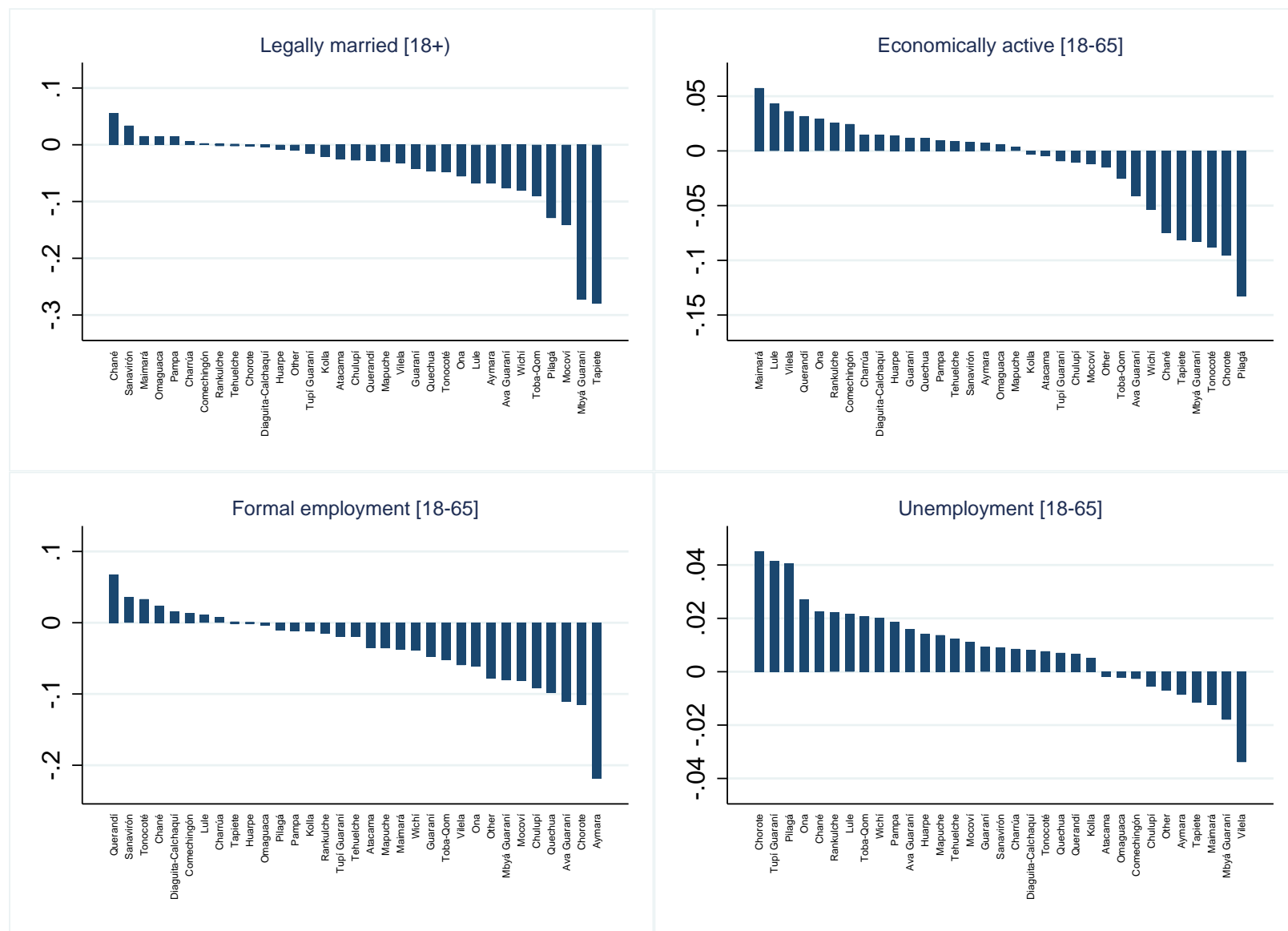Figure A3: Percentage of Natives by Departament. Buenos Aires Metropolitan Area
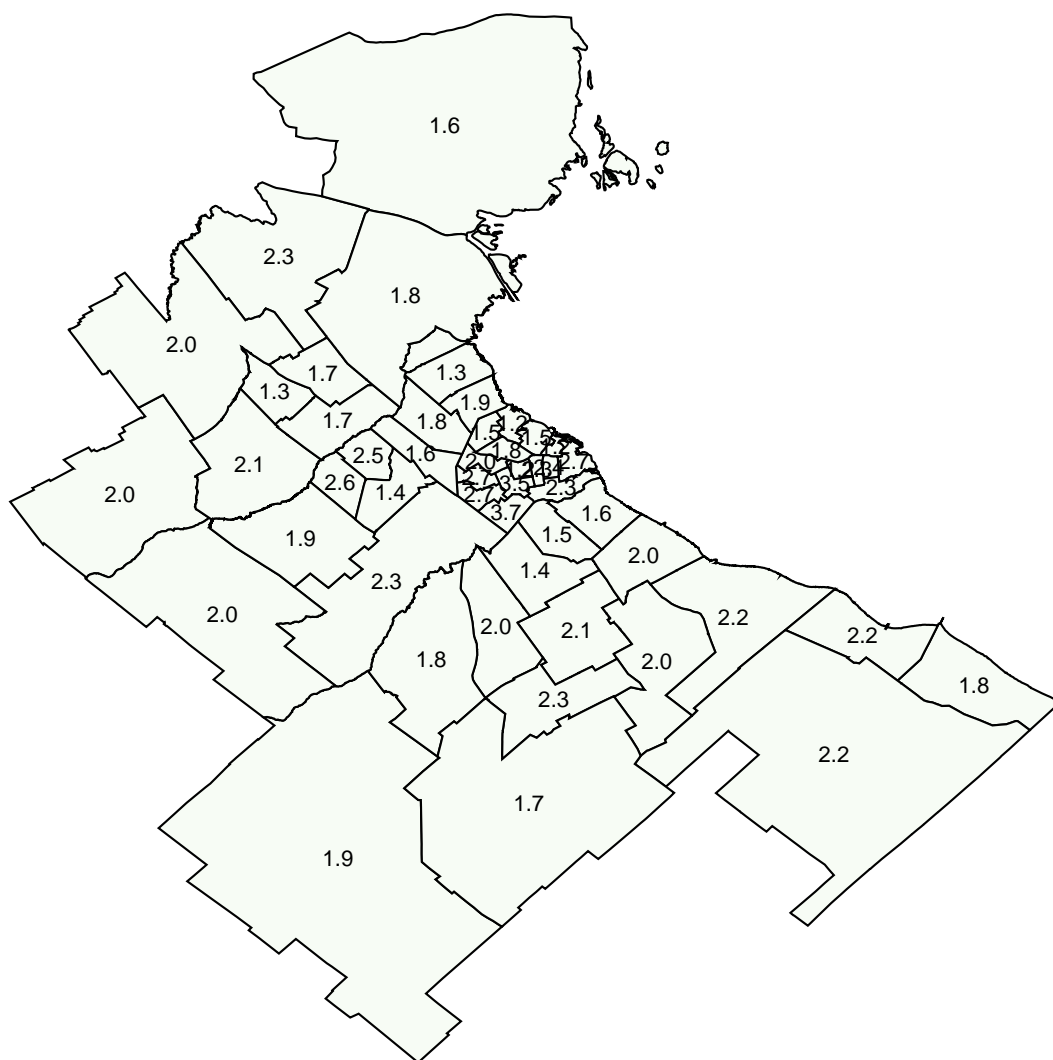
Sources: REDATAM INDEC Census Argentina 2010 (Instituto Nacional de Estadística y Censos, 2010). *Notes:* Buenos Aires metropolitan area includes the 15 communes of the city of Buenos Aires, and the following departments in the province of Buenos Aires: Almirante Brown, Avellaneda, Berisso, Berazategui, Canuelas, Ensenada, Escobar, Esteban Echeverría, Ezeiza, Florencio Varela, General Rodríguez, General San Martín, Hurlingham, Ituzaingó, José C. Paz, La Matanza, La Plata, Lanús, Lomas de Zamora, Malvinas Argentinas, Marcos Paz, Merlo, Moreno, Morón, Pilar, Presidente Perón, Quilmes, San Fernando, San Isidro, San Miguel, San Vicente, Tigre, Tres de Febrero y Vicente López.

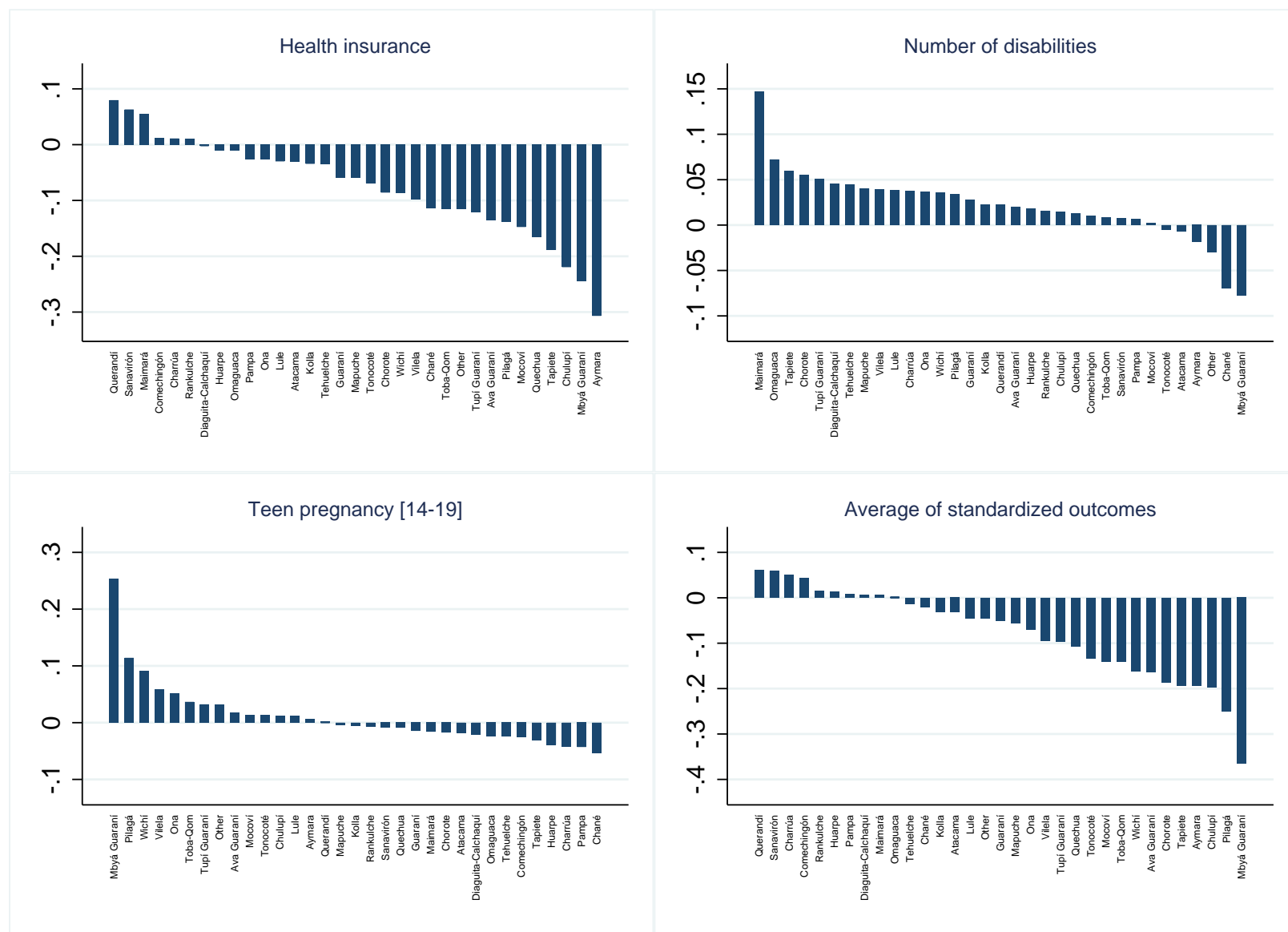## Figure A4: Average Outcomes by Group after Controlling for Location
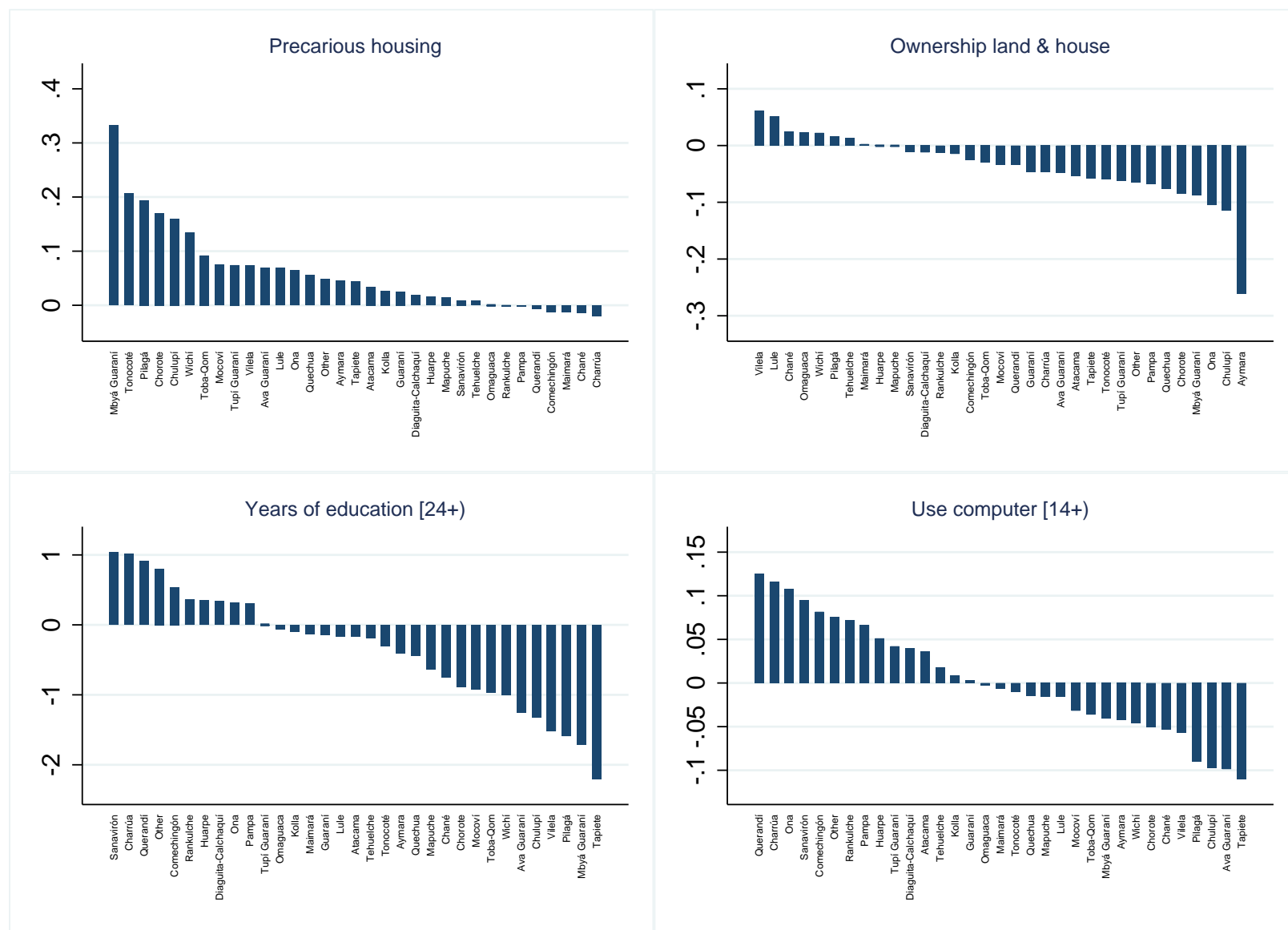
Sources: REDATAM INDEC Census Argentina 2010 (Instituto Nacional de Estadística y Censos, 2010). *Notes:* Average outcome of Natives by group relative to non-Natives in the same place (department and rural/urban).

Figure A5: Average Outcomes by Group after Controlling for Location

Sources: REDATAM INDEC Census Argentina 2010 (Instituto Nacional de Estadística y Censos, 2010). *Notes:* Average outcome of Natives by group relative to non-Natives in the same place (department and rural/urban).

Figure A6: Average Outcomes by Group after Controlling for Location

Sources: REDATAM INDEC Census Argentina 2010 (Instituto Nacional de Estadística y Censos, 2010). *Notes:* Average outcome of Natives by group relative to non-Natives in the same place (department and rural/urban).
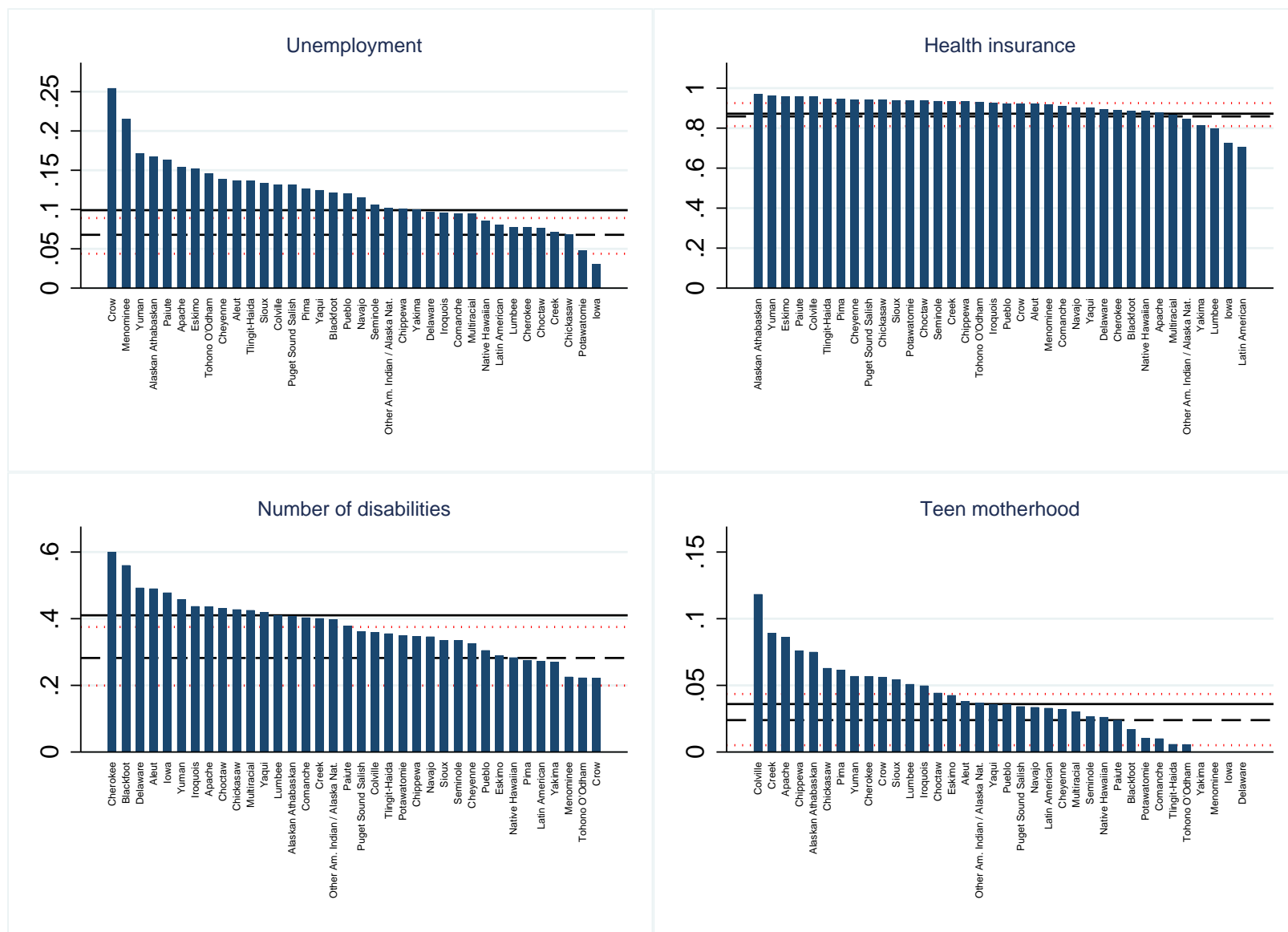
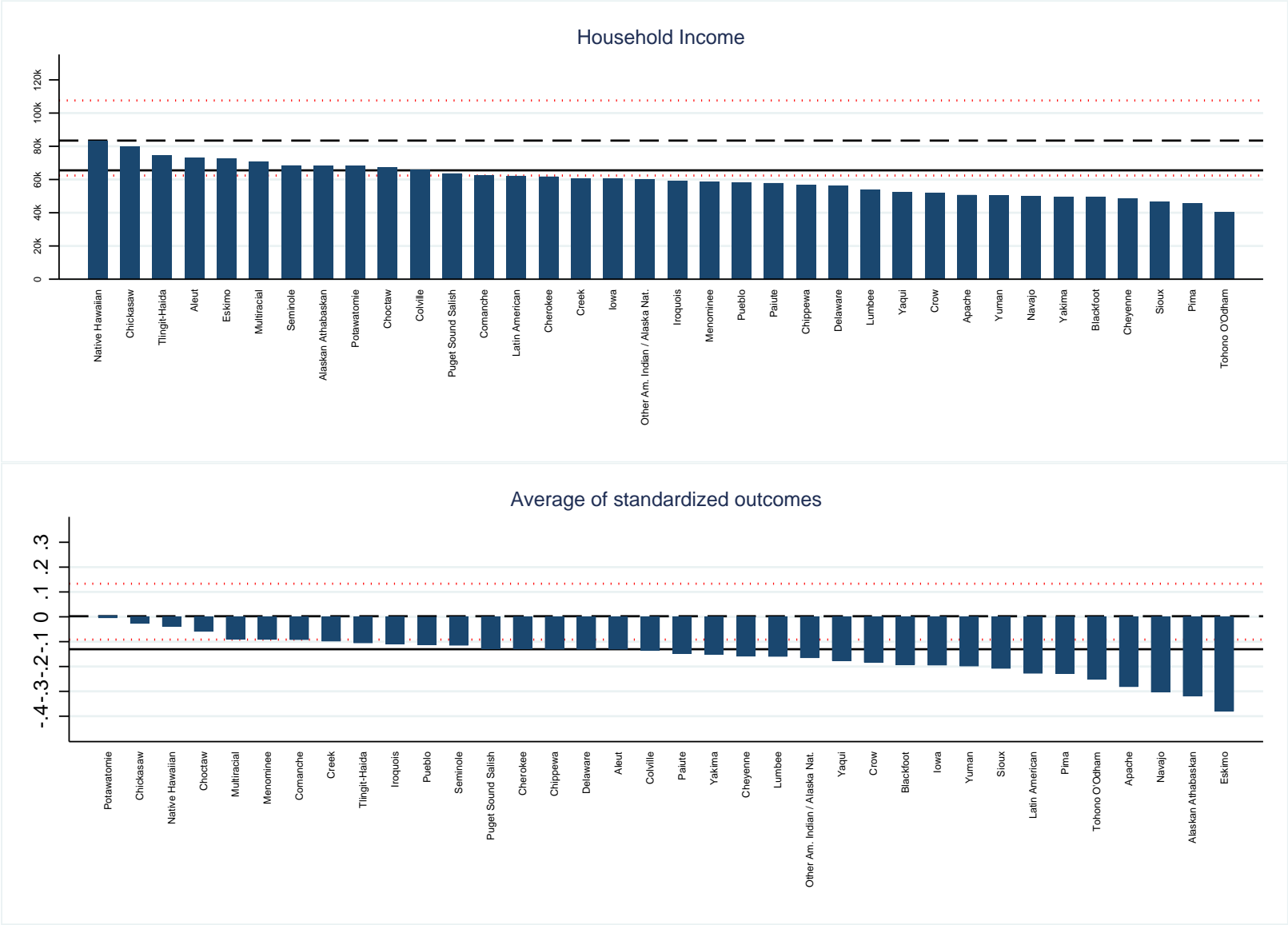## Figure A7: Average Outcomes by Group in the US
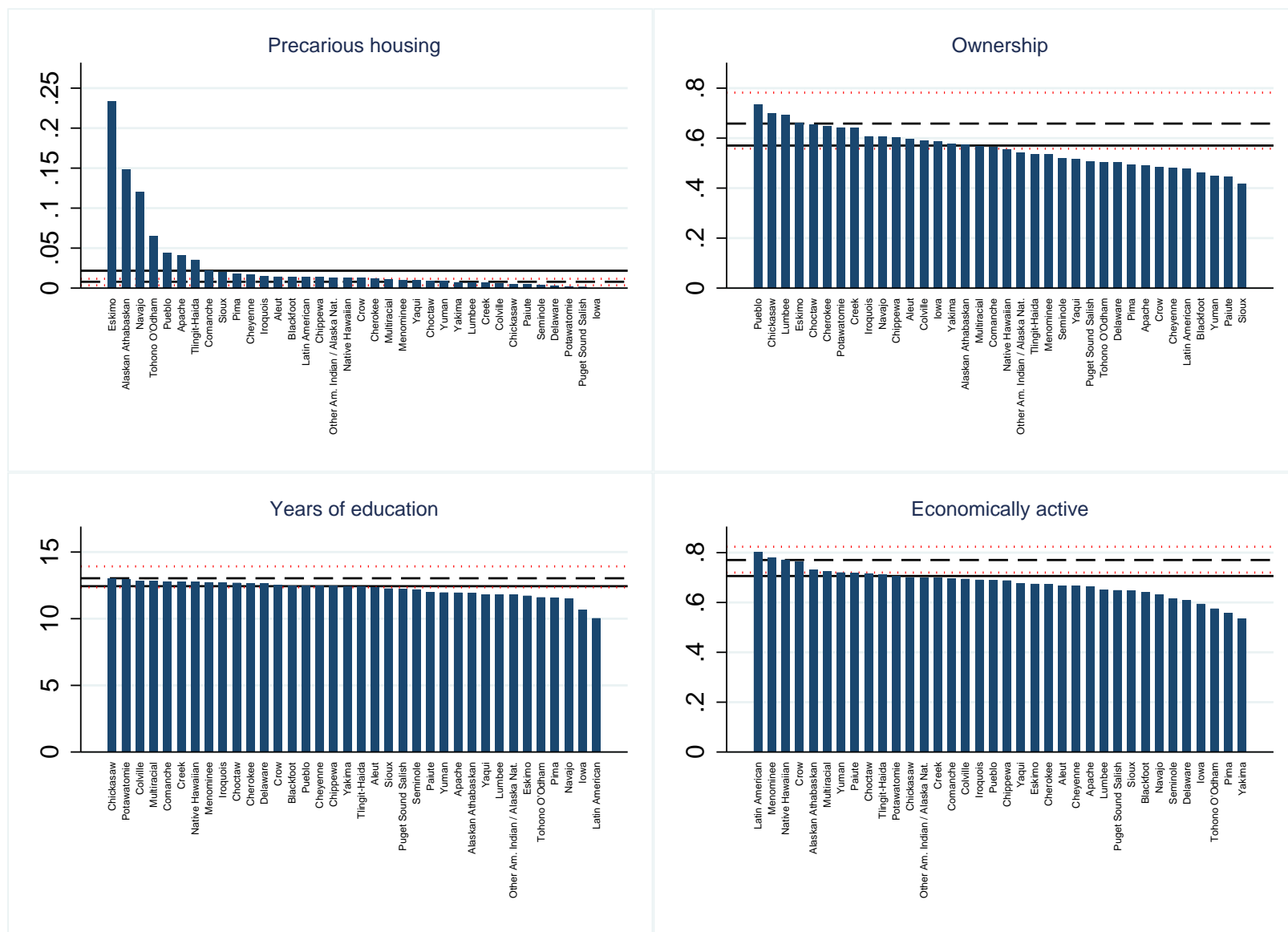
Source: IPUMS US (Ruggles et al., 2021). *Notes:* Solid horizontal lines show average for Natives, dashed horizontal lines show the average for non-Natives, and the dotted horizontal lines show the first and ninth decile by county.

Figure A8: Average Outcomes by Group in the US

Source: IPUMS US (Ruggles et al., 2021). *Notes:* Solid horizontal lines show average for Natives, dashed horizontal lines show the average for non-Natives, and the dotted horizontal lines show the first and ninth decile by county.

Figure A9: Average Outcomes by Group in the US

Source: IPUMS US (Ruggles et al., 2021). *Notes:* Solid horizontal lines show average for Natives, dashed horizontal lines show the average for non-Natives, and the dotted horizontal lines show the first and ninth decile by county.