Horizontal and intersecting inequalities in Mozambique

1997–2017

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June 2021

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Abstract: This study seeks to add to the research on inequality in least developed countries, namely in Mozambique, by measuring and mapping indicators of horizontal wealth inequality along geographic regions and ethnolinguistic identities. Using census data for 1997, 2007, and 2017, we identify possible intersecting inequalities, measuring between-group inequality along joint provincial–urban/rural–ethnolinguistic identities. Additionally, we find heterogeneous evolutions of group inequality between 1997 and 2017 among the country's eleven provinces. We find that, while there is a general improvement in the average household wealth indicators, there is a strong suggestion of increasing group inequalities between 1997 and 2017. Although this is manifest throughout the country, in general, there is evidence that the southern provinces may be experiencing a more equitable development. We find evidence that this evolution may be driven by an urban–rural decoupling, added to low internal migration. These are insights from correlates. No causal inference can be made from this analysis. However, the differences in average wealth between groups, if perceived, may feed grievances. They should be better understood so that underlying causes can be addressed.

Key words: inequality, horizontal wealth inequality, intersecting inequalities, wealth, Mozambique

JEL classification: D31, D63, I32, O18

Note: figures and tables at the end of the paper

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1   Introduction

Despite significant poverty reduction, Mozambique is still one of the poorest countries in the world (World Bank 2021). In the past decade, poverty reduction seems to have slowed down and inequality increased (Egger et al. 2020; Gradín and Tarp 2019a, 2019b; Gradín 2020). The focus of analyses on inequality has so far been on vertical inequality in terms of consumption level. Yet, one recurring finding of several studies of monetary and multidimensional poverty in Mozambique is that it remains high in rural areas and there exists a regional divide (as reviewed by Arndt et al. 2018). The north and centre of the country experience only slow improvements, if at all, while the southern provinces continue reducing poverty. Lastly, conflicts in the northern province Cabo Delgado have drawn attention to potential grievances along ethnolinguistic divides in the population. These observations raise the question about the prevalence of between-group inequalities, or horizontal inequalities, and how they overlap in the form of intersecting inequalities (Kabeer 2010).

In their persistence, horizontal inequalities have been demonstrated to be detrimental to inclusive growth. A correlate aspect of group inequalities, ethnic fractionalization, was found by Alesina and La Ferrara (2005) to weaken public good provision and by Posner (2004) to correlate negatively with economic growth in African countries. Gershman and Rivera (2018) also find a negative correlation between ethnic inequality and per capita gross domestic product. Furthermore, there is strong evidence of higher risks of violent conflict in settings where larger horizontal inequalities prevail (Østby 2008; Stewart 2008; reviewed by Justino 2006, 2009, 2012), especially if economic horizontal inequalities overlap with political inequality.

In light of its role as a consequence and cause of un-inclusive growth, it is important to enquire whether horizontal, and intersecting, inequalities have increased, together with the already verified growth in vertical inequality. To do so, we calculate a wealth index that more closely represents the distribution of asset endowments of the Mozambican population. We use the population and housing censuses of 1997, 2007, and 2017 to compute a comparable index and assess the evolution of inequalities over the past two decades. The data allow us to identify three main groups of possible horizontal inequalities: urban/rural residence, provinces, and ethnolinguistic identity.

Horizontal inequalities can be defined as inequalities between groups when these are defined by a salient identifier (Stewart 2001, 2014). This can be, as noted before, geographical origin, urbanity or rurality, ethnicity, race, religion, or gender. On an equal measure, ascriptive attributes such as skin colour, maternal language, tribe, caste, religion, and sometimes region build into one 'ethnic' identity, as highlighted by Canelas and Gisselquist (2018). While there is a debate on causes of vertical inequality around effort versus opportunity (as per Ferreira et al. 2010, 2014), as Stewart (2014) highlights, it is harder to argue that sustained, or increased, horizontal inequalities cannot be attributed to shared unequal levels of effort among individuals of different groups. Arguably, it can only be due to intrinsically unjust inequalities of opportunity.

Vertical inequality considers each individual, irrespective of the multiple identities that can be attributed to them: white Catholic man, Muslim Makuwa woman, and so on. Horizontal inequality specifically accounts for each one of these identities. It can then be taken a step further, by acknowledging the intersecting nature of an individual's multiple identity attributes (Stewart 2014). This corresponds to considering the concept of intersecting inequalities (Kabeer 2010, 2014) and to recognize their role in reinforcing the intensity and persistence of horizontal inequalities [as explored by Hancock (2007) or Kabeer and Santos (2017)].

A caveat needs to be raised at this point. Following Canelas and Gisselquist (2018), we acknowledge that ethnic identities, even ethnolinguistic ones, are social constructs. Also, as highlighted by Nix and Qian (2015), analysing historical censuses in the United States, from 1880 to 1940, we acknowledge that individuals, given the choice, may 'pass' to a different ethnic identity (in their case, a racial identity) and even later return to the one they originally self-assigned to. In their particular study, the choice of 'passing' into a socially privileged identity (e.g., white), could occur upon relocation and to benefit from better political–economic and social opportunities.

That being said, horizontal inequalities can take form around those types of identities. Following Canelas and Gisselquist (2018), they can have different types of causes: colonialism and conquest, historical institutions, geographic endowments, modernization, migration and integration, and contemporary government policies. They can also take different forms, as enumerated by Kabeer (2014): cultural, spatial, economic, and political inequalities. Once established they can be persistent, even if signals of discrimination may not be evident, because of interactions between different types of deprivation and privilege (Stewart 2014), including through interactions of the different forms horizontal inequalities can take, as delineated by Kabeer (2014). As Stewart and Langer (2008) highlight, horizontal identities can persist because of factors such as unequal rates of accumulation, unequal access to the different types of capital, social capital asymmetries, discontinuities in returns to capital, present and past discrimination, and political inequalities leading to discrimination by the state.

By presenting illustrative statistics and estimating a linear regression, we establish three main observations. First, while average household wealth has grown in both decades, group inequality between urban and rural areas, between ethnolinguistic groups, and at their intersections have increased between 2007 and 2017. Rural areas are worse off throughout. Second, this trend has been more pronounced in the northern and central regions and less so in the southern provinces of Mozambique. Third, the most advantaged ethnolinguistic group are Portuguese speakers. This group appears to represent an urban upper and middle class and its advantage towards other groups has increased between 2007 and 2017, which cannot be fully explained by a rural–urban divide.

The paper will first present the data used and variables constructed in the next section. In Section 2, we also discuss poverty and vertical inequality trends in Mozambique before presenting an assessment of horizontal and intersecting inequalities in Section 3. Section 4 discusses the role of Portuguese speakers before we conclude in Section 5.

2   Unequal development in Mozambique

Mozambique was one of the latest countries to become independent in the twentieth century. After centuries of Portuguese colonization, ending in 1975 and a 17-year-long internal conflict, Mozambique at the beginning of the 1990s was one of the poorest countries in the world, with a poverty rate estimated to be around 80 per cent of the total population (Arndt et al. 2018).

From the early 2000s, Mozambique started experiencing stronger growth and stability. As a result, a substantial fall in poverty occurred. From its first poverty assessment, based on the 1996/97 household survey, the Mozambican government conducted four similar exercises (as per Arndt et al. 2018; MEF/DEEF 2016) based on similar surveys conducted in 2002/03, 2008/09, and 2014/15. Figure 1 displays the key poverty indicators, poverty headcount and poverty gap calculated in those assessments.

From Figure 1 it emerges that poverty sensibly decreased between 1996/97 and 2002/03; yet, from 2002/03 to 2008/09 there was essentially a stagnation in poverty rates, also due to the food crisis started in 2007 (Arndt et al. 2008, 2016). From 2008/09 to 2014/15, the Mozambican economy experienced a period of high and stable growth, which translated into improved welfare levels and diminished consumption poverty (Arndt et al. 2018; MEF/DEEF 2016).

Figure 2 suggests that, underneath the positive developments in poverty reduction at the national level, there is a very heterogeneous performance between provinces and between rural and urban areas. While poverty reduction was substantial in both rural and urban areas, it was more pronounced in urban areas.

At the provincial level, we find lower poverty reduction in the northern provinces of Niassa, Cabo Delgado, and Nampula, together with Gaza, Zambézia, and, to a lower extent, Manica. On the other end of the spectrum, we find a stronger improvement in the provinces of Tete, Maputo Província, and Sofala, and, to a lesser extent, Maputo Cidade and Inhambane.

The suggestion that well-being has strongly improved in the country between 1996/97 and 2014/15 is also reinforced by multidimensional poverty analyses. From MEF/DEEF (2016) and Arndt et al. (2018) it emerges that, in 1996/97, almost half of the population was characterized by having no household member with complete primary education, not having access to safe drinking water, having inadequate sanitation, having a grass or palm roof, not having electricity, and very limited possession of durable goods. In addition, only 2 per cent of the population lived in a household where all these basic characteristics were present. Conversely, in 2014/15, less than 15 per cent of the population was deprived in all these indicators and more than 15 per cent of the population was deprived in none of them.

The multidimensional poverty index calculated using the Alkire–Foster method and based on the six indicators just discussed showed that the incidence of poverty (H) at the national level substantially reduced over time (Figure 3). Nonetheless, the differences between rural and urban areas and between different provinces remained very large. In fact, the suggestion is of increasing divergence between urban and rural areas and between some of the southern provinces, namely Gaza and Maputo Província, more central provinces such as Inhambane (still in the southern region), Sofala, and Manica, and even more so the remaining, nethermost, provinces (see Figure 4).

Using the Mozambique demographic and health surveys/malaria indicator survey datasets for 2009, 2011, 2015, and 2018, Egger et al. (2020) also apply the Alkire–Foster method to measure multidimensional poverty. They confirm a nationwide improvement, mostly driven by urban areas and the (more urbanized) southern provinces (see Figure 5).

This situation may have worsened during the most recent years: from 2015 onwards a series of economic and natural shocks hit Mozambique, causing a major economic slowdown and possibly strong impacts on living standards. Indeed, both consumption and multidimensional poverty appear to have stagnated or worsened due to the various crises[1] (Egger et al. 2020; Mambo et al. 2018).

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[1] They include a sharp drop in commodity prices, weakened international demand, a series of severe weather shocks, increasing violence against civilians in the northern province of Cabo Delgado, a debt crisis, and the most recent COVID-19 pandemic (Baez et al. 2018; Betho et al. 2021; DTM and INGC 2020; FAO 2020; Mussagy and Mosca 2020).

As already suggested in our review on poverty, inequality of consumption has been increasing since 1996/97, mainly in urban areas and more so in the most recent period (2008/09–2014/15) (Figure 6) (Arndt et al. 2018; MEF/DEEF 2016; Figure 7).[2]

Gradín and Tarp (2019a, 2019b) discuss and examine the underlying trends behind this increased inequality in consumption in Mozambique after the post-independence war. They find that the robust economic growth path that critically contributed to the reduction of poverty up until 2014/15 (also highlighted in World Bank 2016) has been very unbalanced, and it disproportionally benefited the better-off. They argue that this increasing inequality trend may be related to an increasing dualization of the Mozambican economy, with an emerging sector of the population with higher education, working in the private sector outside the subsistence economy. This argument is reinforced by the findings in Gradín (2020): that the richest, highly educated, and urban population may have disproportionally contributed to high and increasing inequality in Mozambique in recent years.[3]

While Mozambique and its provinces were experiencing these significant economic dynamics on poverty and vertical inequality, data from population censuses suggest three particularly relevant demographic dynamics: on rurality/urbanity, on ethnolinguistic composition of the population, and on inter-provincial migration (Figure 8).

The first notable dynamic of the three relates to an increasing urbanization in Mozambique and all provinces (to the obvious exception of the fully urban province of Maputo Cidade). If, as suggested, urban dwellers experienced faster well-being improvements, this may suggest that provinces that witnessed a faster urbanization may also have experienced a more virtuous evolution in inequality.

Also worth noting is the relative stability of the ethnolinguistic composition within each province. In Table 1, we present the most represented mother languages among urban and rural households in each province. Not only is the relative stability evident, also there is some evidence of a regional nature of the ethnic composition of Mozambique's population. This is also evident in Appendix Figure A1.

Finally, as shown in Figure 9 and Table 4, the Mozambican provinces have witnessed low levels of migration and mostly of a regional nature, that is, mostly from ethnolinguistic groups prevalent in the region.

These demographic dynamics can, potentially, impact the dynamics of vertical inequality. More likely than not, socio-economic dynamics are bound to be granular, with some groups improving to the effective or apparent detriment of others. This uneven distribution of benefits and liabilities between groups of people can take the form of horizontal inequalities.

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[2] These already high levels of inequality may even be underestimated, because of underreporting consumption of richer households (Arndt and Mahrt 2017) and changes observed in relative prices of commodities consumed in different shares across income groups (Arndt et al. 2015). Once relative price increases are accounted for, inequality of real consumption may be substantially higher.

[3] The role of educational inequality, in particular that of a narrow access to high levels of education, is further discussed and confirmed by van der Berg et al. (2017). Their study finds that while the gender gap in access to education has been largely closed, significant geographical and wealth inequalities in education persist: in particular, the South—and especially Maputo Cidade—is disproportionally better served than other areas. Their study also notes that richer children remain in school longer. Moreover, van der Berg et al. (2017) suggest that the overall weakness of the national school system amplifies the difficulty in overcoming these inequalities.

3 Horizontal and intersecting inequalities of wealth in Mozambique

3.1 Data and variables

In this study, we draw on data from three population and housing censuses in Mozambique conducted in 1997, 2007, and 2017. We use the full dataset for the first two and a representative 10 per cent weighted sample of the latest survey. The census data contain information at individual level about demographics, education, work, and language spoken. At the household level, the survey covers housing quality, access to public services, and asset ownership. Given the focus of our analysis, we have one main outcome of interest—household wealth—and two main character typologies, along which we measure horizontal and intersecting inequalities: (i) household geographic references (i.e. province of residence and urbanity/rurality), (ii) ethnolinguistic identities.

To determine each household's ethnolinguistic identity, we first identify the mother language for each individual, based on their responses to the census. The language spoken by most household members is used to define each household's ethnolinguistic identity. The most common languages are Emakhuwa, Xichangana, Elomwe, Cinyanja, Cisena, Echuabo, Cindau, Xitswa, and Portuguese.

Second, we calculate a wealth index at the household level. Instead of using principal component or factor analysis, we use the multidimensional poverty index as in Egger et al. (2020) as an uncensored and reversed index. Reversed means that we identify for each component whether the household is not deprived instead of deprived. Uncensored means that we then apply the weights of Egger et al. (2020) to combine the indicators into one wealth index and do not define a cut-off at which a household would be declared poor. Instead, the index is a continuous measure of weighted welfare indicators.[4]

Formally, the household wealth index (HWI) is calculated using Equation (1):

$$HWI = \frac{1}{4} * (Schooling + Child\ Schooling) + \frac{1}{10} * (Sanitation + Water + Electricity + Radio) + \frac{1}{30} * (Walls + Roof + Floor) \tag{1}$$

Schooling is equal to one if at least one adult household member has completed primary school. Child schooling captures whether school-aged children are frequenting school. Sanitation, drinking water, and electricity all indicate that a household has access to an adequate source of each of these. They are weighted the same as radio ownership that captures access to information. Lastly, we include the combination of adequate walls, roofs, and floor of the family's home.[5] Appendix Table A1 provides details of what is considered adequate. These definitions follow the global multidimensional poverty index initiative (Alkire et al. 2019).

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[4] Alternatively, principal component or factor analysis methods offer the possibility to endogenize the weights, reducing the risk of an arbitrary choice. However, comparability would require a choice of weights, based on one of the datasets, on full information or on a standard set of criteria. The present study applies standard weights that follow Alkire et al. (2019) and Egger et al. (2020). These express the political choices of the Mozambican government, as they equate the ones adopted in the country's multidimensional poverty calculation.

[5] While the HWI calculations do not censure observations of non-poor households, it should be acknowledged that all added components of the weighted sum are bounded between zero and one.

As seen in Figure 10, the two decades from 1997 to 2017 witnessed an improvement in HWI. However, Figure 11 suggests this improvement was uneven. This seems to be confirmed by Figure 12 that, while showing a reduction in vertical inequality from 1997 to 2007, also indicates a worsening in the indicators during the second decade, from 2007 to 2017. In our study, we seek to better understand the evolution of horizontal and intersecting inequalities, during the same period.

Inequality is computed using the half-squared coefficient of variation, GE(2). This generalized entropy index shares with all other indicators of the same family, and with the Gini index, the property of symmetry; it follows the principle of population, the Pigou–Dalton principle of transfers, and, being an indicator of relative inequality, the principle of scale independence. However, and contrary to the Gini index, it also allows the decomposition of total inequality in two components: (i) inequality between groups (instrumental to this study) and (ii) inequality within groups. Finally, because some observations of our indicator of interest have a value of zero (as seen in Figure 11), GE(2) is the one generalized entropy measure with the lowest positive α that can be calculated. Because, by construction, GE(α) indicators are decreasingly responsive to status changes among the poorest as α increases and our asset index is more sensitive to changes exactly among the poorest, we use GE(2) as it allows the best compromise towards the characteristics of our data.

In the following section, we present evidence on the changes in group inequality, both horizontal and intersecting, in Mozambique.

3.2 Group inequality: evolution and decomposition

The virtuous evolution of wealth inequality during the decades from 1997 to 2017 appears to have prevailed among all Mozambican provinces, as suggested by Figure 13. It also shows two diverging dynamics in the second decade (2007–17), with inequality increasing strongly in the northern provinces of Niassa, Cabo Delgado, Nampula, and Zambézia, and slightly in the central province of Tete, while reducing in the remaining central region and southern provinces of Inhambane, Gaza, Maputo Província, and Maputo Cidade.

A cursory analysis of the 1997, 2007, and 2017 Lorenz curves of the provincial mean wealth indicators in Mozambique (Figure 14) suggests an uneven evolution of inequality between provinces, with unclear overall results. While we find a reduction of between-province inequality among the top wealthy provinces, the inverse appears to be the case below the eighth decile.

The mixed evolution becomes further apparent when decomposing the GE(2) indicator, as presented in Figure 15. It suggests that the reduction in overall inequality, while it occurred, was mostly driven by within-province inequality, and that the increase in inequality was mostly driven by between-province inequality.

Further insight can be added by deepening the analysis to what happened between and within rural and urban areas and to possible dynamics around ethnolinguistic identities.

As can be seen in Figure 16, inequality between urban and rural households is playing an increasing role in total inequality in Mozambique and most of its provinces, to the exception of Maputo Província and, obviously, Maputo Cidade. To some degree, this cannot be separated from the different speeds of urbanization along the country, presented in Figure 8 earlier. It suggests that provinces with greater urbanization, or a higher rate of urbanization (such as Maputo Cidade, Maputo Província, and Sofala), may have experienced a virtuous evolution (mitigated increase or even a reduction) in the urban/rural divide. The converse happens in provinces with a lower

urbanization rate, such as the northernmost ones, where the divide increased, favouring a possible increase in other forms of horizontal inequality.[6]

This appears to be the case for ethnolinguistic inequality, as presented in Figure 17. With the exception of Sofala, it appears that the role of ethnolinguistic inequality in total inequality mirrors the urban/rural divide. Notably here, in the urban province of Maputo Cidade, the role of inequality between ethnolinguistic groups appears to be decreasing, as it happened in Maputo Província.

A first summary can be made at this point of the study. The evidence found suggests three dynamics at work on wealth inequality as we measure it, from 1997 to 2017: first, reducing vertical and group inequalities in the southern provinces of Maputo Cidade and Maputo Província; second, coexistence of decreasing vertical inequalities and an increasing importance of between-group inequalities in the remaining southern provinces and in most of the central provinces; third, a joint increase of vertical and horizontal inequalities in the northernmost provinces of Niassa, Cabo Delgado, Nampula, and Zambézia. These dynamics seem to strongly correlate with an improvement in urban wealth and the different dynamics of urbanization within the country.

These three dynamics have the potential of inducing an increase in group inequalities at the intercept of provincial residence, urbanity and ethnicity. The Lorenz curve of mean wealth of the intersecting identity groups (province – urban/rural – ethnicity) suggests such a worsening. While the 2007 Lorenz curve appears to be closer to the equality line, the 2017 suggests a clear increase in this form of intersecting inequality during the second decade under analysis (Figure 18).

This insight is confirmed when analysing the growth incidence curves of mean group wealth of all intersecting identities, as in Figure 19. The curves clearly indicate decreasing intersecting inequalities in the 1997–2007 decade, while, from 2007 to 2017, the growth incidence curve suggests that, in relative terms, middle-wealth groups saw their situation improving more than both the poorest and the richest.

An analysis of intersecting inequalities in 1997, 2007, and 2017 at the various provincial levels reinforces the suggestion that these dynamics were not homogeneous within the territory of Mozambique. The Lorenz curves in Appendix Figure A2 suggest how intersecting inequalities, starting from initially low inequality levels, appear to increase in all three northern provinces. As we look further south, the dynamic of intersecting inequalities appears to change. Looking at the central region in Appendix Figure A3 we find that Tete appears to be the province with the noticeably strongest increase of intersecting inequalities, while there is still an apparent increase in Zambézia. However, the Lorenz curves for Manica and Sofala are inconclusive, with the latter suggesting a possible reduction. The Lorenz curves in Appendix Figure A4 suggest that intersecting inequalities in the southern provinces appear to have reduced from 1997 to 2017. This is particularly clear in Maputo Província and Maputo Cidade, but less clear in Inhambane and Gaza.

The dynamics suggested by the growth incidence curves and Lorenz curves are confirmed when decomposing the total inequality along intersecting identities, as in Figure 20. It shows that

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[6] It should be noted that the more virtuous evolution of urban–rural inequality in Maputo Província (and Gaza and Sofala, to a lesser extent) may have partially resulted from the way urban and rural areas were defined. Areas that were defined as rural by the Mozambican statistics bureau years ago (5–6 years ago or earlier) have now completely urban characteristics. It may, therefore, not be the case that households in those areas, still classified as rural, have become richer, but that they have become 'urbanized'.

inequality between intersecting groups is becoming more prevalent throughout the country. The exceptions are the provinces where the urban/rural divide reduced, Maputo Província and the urban-only province of Maputo Cidade.

3.3 The role of geographic and ethnolinguistic identities

Given the evidence presented before, a clear pattern emerges that group inequality and intersecting inequalities have been rising in Mozambique, particularly in the last decade.

While we do not seek to establish causality in this study, we can disentangle how provincial, rural, and ethnolinguistic identities correlated with HWI. We estimate a simple linear regression at the household level. The empirical model used is represented by Equation (2):

$$HWI = \alpha + \beta_1 Province + \beta_2 Rural + \beta_3 Mother\ Language + \beta_4 Province * Rural \\ + \beta_5 Province * Mother\ Language + \beta_6 Rural * Mother\ Language \\ + \beta_7 Province * Rural * Mother\ Language + \beta_8 * Main\ Language \tag{2}$$

where *Province* identifies one of the eleven provinces in Mozambique, with Maputo Cidade as the base province; *Rural* identifies rural households compared with urban ones; *Mother Language* identifies one of Mozambique's most common languages, with *Other* identifying all remaining and the base category being 'Portuguese'; and *Main Language* identifying if the household's mother language is the most prevalent one in the province. By applying the ordinary least-squares estimation, we seek the best linear fit to the population's mean HWI. Therefore, the model's constant estimate corresponds to the mean estimation of HWI for the base intersect of the three identities: urban Portuguese speakers (as a mother language) residing in Maputo Cidade. According to our data, this has been the most privileged group in the country over the last two decades.

The interaction terms allow us to observe correlates of identities within narrower spaces, moving from the national sphere to the provincial to eventually identifying significant differences in the average wealth indexes of rural households, within each province, according to ethnolinguistic identities.

In the following tables, we present the full regression output results. To aide reading, we present separately the coefficient estimates of the provincial categories (Table 2), ethnolinguistic groups (Table 3), their interaction with rural residence (Table 4), and ethnolinguistic groups and their interaction with rurality for individual provinces (Tables 5–14).

In Table 2, we find confirmation of an apparent privileged status of the base group. We also find evidence of relative privilege of average Maputo Cidade residents vis-à-vis remaining inhabitants of Mozambique, controlled for urbanity/rurality, ethnicity, and interactions. Yet, this advantage appears to reduce. In particular, there seems to be a full mitigation of a direct disadvantage of provinces such as Tete, Manica, and Inhambane and, controlled for the other identity factors, an apparent benefit accruing, in 2017, to Sofala and Gaza residents.

In Table 3, we find that, controlled for other covariates, all ethnolinguistic groups in the base province of Maputo Cidade appear to be disadvantaged vis-à-vis those that identify Portuguese as their mother language. As Portuguese became the dominant mother language in this province by 2007, the estimates in 2017 again reinforce this indication.

Another relevant signal is that of an apparent disadvantage of belonging to the main language group. This somewhat unexpected result raises concerns that majority groups in each province

may identify themselves as also being the worse-off group, potentially discriminated against vis-à-vis the base group or others in equivalent situation.

In Table 4, we see a confirmation of the rural penalty over the mean wealth of households, controlled by all other covariates, and against the base category. We note that, in some cases, the penalty is mitigated in 2007 among rural households with ethnic identities other than Portuguese, a (relative) advantage that all but disappears in 2017.

While average effects already reinforce some of the suggestions of horizontal inequalities around provincial, rural, and ethnolinguistic identities, we also find province-specific effects pointing at added sources of intersecting inequalities.

Tables 5 and 6 show that the rural penalty is stronger in the Niassa and Cabo Delgado provinces. They also show that, despite being the most prevalent ethnolinguistic group in both provinces, Emakhuwa mother-language speakers, appear to also have significantly lower wealth indicators. On the opposite side, we find Xichangana speakers, that appear to be better-off than or as well-off as the base ethnolinguistic group, in both provinces. Other significant differences seem to be less systematic and vary between the three datapoints.

In Nampula and Zambézia, as shown in Tables 7 and 8, respectively, we find similar correlations of added rural penalty and, once again, patterns of ethnic disadvantage of the main linguistic groups in each province (Emakhuwa in Nampula and Elomwe, Echuabo, and Emakhuwa in Zambézia). Notably, any relative advantage of Xichangana mother-language speakers is mostly prevalent in the urban areas.

The province of Tete, presented in Table 9, shows some of the highest rural penalties. Here, as well as in Manica (Table 10), the most prevalent language groups (Cinyanja in Tete and Cindau in Manica) appear to be further penalized compared with the base ethnic group. Rural Cindau speakers in Manica appear to have particularly less average wealth than their comparators.

In Tables 11 and 12, showcasing Sofala and Inhambane, respectively, rural penalty is confirmed. However, while average Cisena and Cindau mother-language speakers in Sofala show a statistically significantly lower wealth than the base category, in Inhambane we do not find this disadvantage. In these two provinces, Xichangana speakers also do not appear to have a systematic advantage and in Inhambane actually display significant disadvantages.

Also in Gaza, as per Table 13, we find rural penalty. In both southern provinces of Gaza and Maputo Província, as per Tables 13 and 14, we find that the average wealth of households with provincially more prevalent mother language, here Xichangana, is lower than the base average wealth.

In summary, the regression analysis strongly suggests that the urban/rural divide has a significant role in understanding intersecting wealth inequalities in Mozambique over the last two decades. However, it did not dispel the possibility that other factors, correlated with ethnolinguistic identities, may be linked with apparent disadvantages of some groups, particularly those more represented in each province, vis-à-vis those that have Portuguese as their mother language and in some cases those that have Xichangana as their mother language, outside of the (southern) provinces where this is the most representative linguistic group.

4 Portuguese speakers

To better understand the suggested advantage by those that state Portuguese as their mother language, we provide more details on the characteristics of this group. It could be expected to be a (relatively small) group of residents in Mozambique that could be traced to the country's former colonial occupier. However, as documented in Table 15, this is a much more homogeneous group with non-white self-attributed race.

As Portuguese is not only Mozambique's official language but also the *de facto lingua franca* in the country, there are strong reasons to believe those who identify Portuguese as their mother language are, more than an ethnic group, members of a mostly urban and affluent middle to upper class. This is reinforced by the prevalence of Portuguese in urban areas of Zambézia, Manica, Sofala, Maputo Província, and Maputo Cidade, as shown in Table 1, and the indication that Portuguese is commonly the second, third, or fourth most common mother language of migrants in the various Mozambican provinces and the only one significantly represented in all of them, as shown in Appendix Table A2. It is, however, important to note that we cannot disprove a possible endogenous self-attribution of Portuguese as a mother language by most affluent Mozambicans, mimicking the 'passing' behaviour found by Nix and Qian (2015) in the United States.

5 Conclusion

In this study, we document the evolution of wealth inequality in Mozambique from 1997 to 2017, with a focus on horizontal and intersecting inequalities. This is a descriptive study that does not seek nor is able to determine causality between identity and wealth. All the insights derived from these analyses result from correlations. With that caveat in mind, this study did find a general improvement in the average HWI, and a suggestion of a decrease in inequality between 1997 and 2007. However, while we found that poverty continued to reduce from 2007 to 2017, inequality reversed. Most notably, group inequality between provinces, between urban and rural areas, between ethnolinguistic groups, and at the intersection of these identity markers have increased in Mozambique. Moreover, while this is manifest throughout the country, there is evidence that the southern provinces may be experiencing a more equitable development.

What is the key driver of this increase in group inequality? We document strong evidence suggesting an important role of an urban/rural decoupling, an increasing divide in the welfare of those living in urban and rural Mozambique. This factor has shown to correlate significantly with lower wealth of more rural groups.

There are, however, some instances in which there is an apparent worsening in the average condition of ethnolinguistic groups vis-à-vis Portuguese speakers, beyond what can be attributed to rurality. Some previous relative advantage of Xichangana speakers in provinces where that group is not dominant seems to be reducing, against Portuguese speakers, but not necessarily against the locally dominant ethnolinguistic groups, especially in the last recorded decade.

The differences in average wealth between groups, if perceived, may feed grievances. They should be better understood, so that underlying causes can be addressed.

The key remaining questions: what may be the underlying causes and what can be done? A first step can be the analysis of the three components of the wealth index: schooling, home, and services.

The role of urbanization in the processes of group inequality in the country found stronger support and deserve attention. The literature reviewed on inequality in Mozambique, namely Baez et al. (2018) and Gradín and Tarp (2019a), already noted that economic opportunities, including for the few, high-quality jobs available are skewed towards urban, male, and skilled workers. In a strong measure, it could be said that the worsening of income inequality observed from 2002/03 onwards is 'purely the result of higher concentration in urban areas' (Baez et al. 2018: 37). The evidence found in this study seems to suggest that a similar process can be found in horizontal inequalities.

However, that should not be a reassurance. If the literature is to be read as a warning, horizontal inequalities are more persistent and allow for the rallying up of common grievances among groups of people that share common identities, increasing the risk of violent conflict.

In Mozambique, the suggestion is that provinces with a more advanced pace in urbanization may be experiencing a virtuous evolution in wealth inequality. This suggests that a possible focus on fostering the growth of second-tier and third-tier cities, especially from mid-central provinces to the northern provinces, may contribute to the mitigation of the inequality-inductive processes. In a low-income country, this cannot be done without a purposeful strategy and difficult choices to consider investing in the socio-economic growth and a faster economic transition of those provinces of the country, to the possible relative detriment of the wealthier ones.

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Figures

Figure 1: Poverty headcount (PH) and poverty gap (PGap) (%)
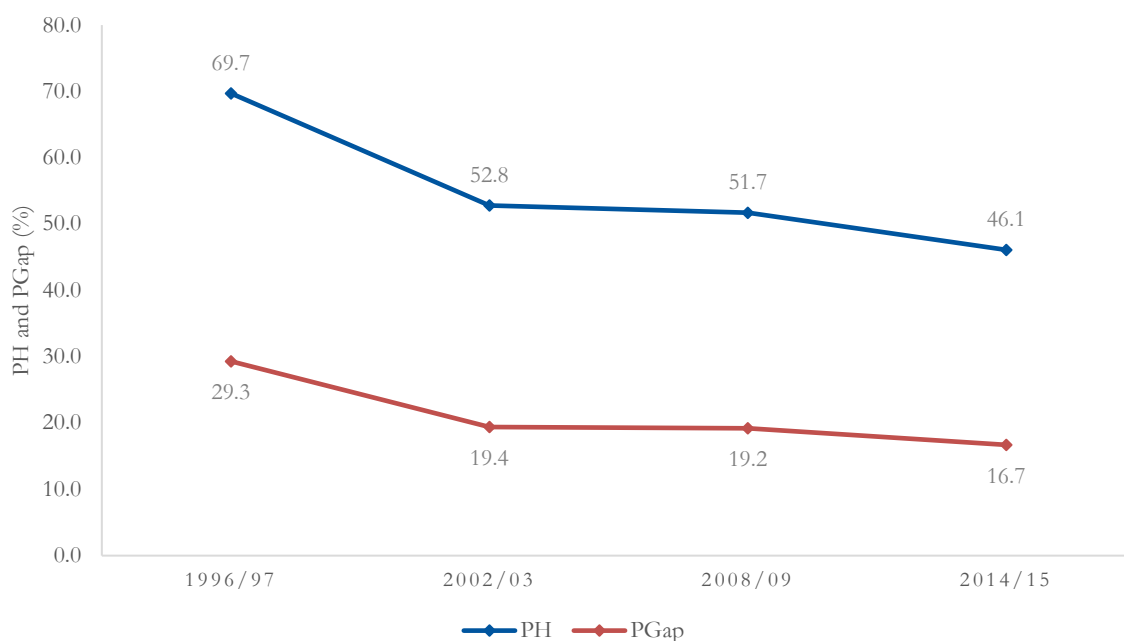
Figure 2: Poverty in 1996/97 versus change in consumption poverty
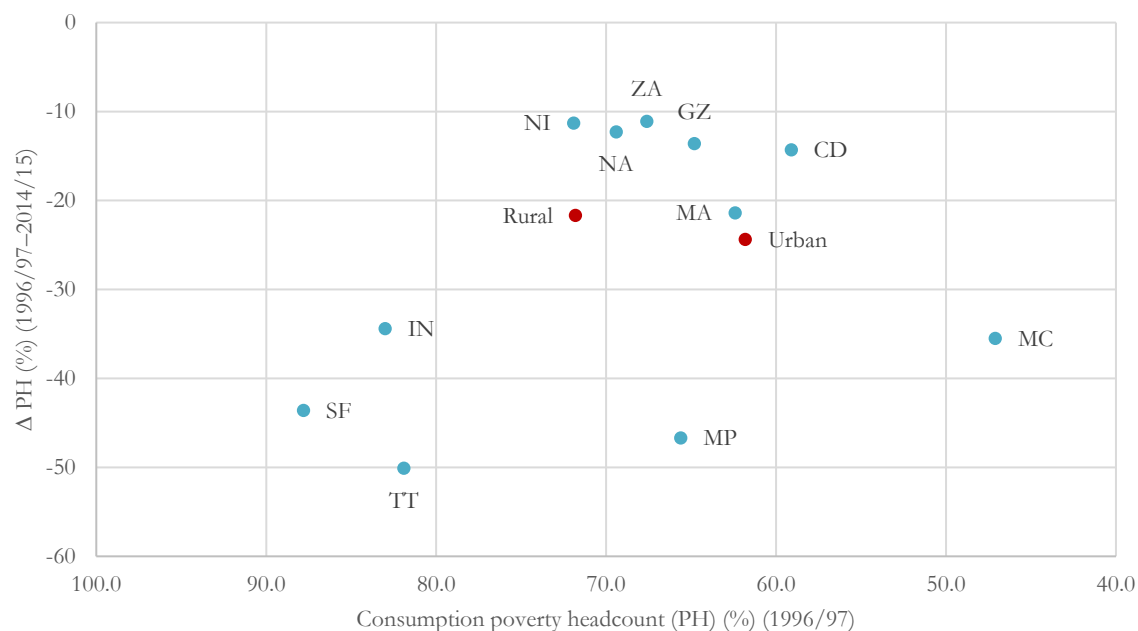
Note: CD, Cabo Delgado; GZ, Gaza; IN, Inhambane; MA, Manica; MC, Maputo Cidade; MP, Maputo Província; NA, Nampula; NI, Niassa; SF, Sofala; TT, Tete; ZA, Zambézia.

Figure 3: Multidimensional poverty incidence (*H*)
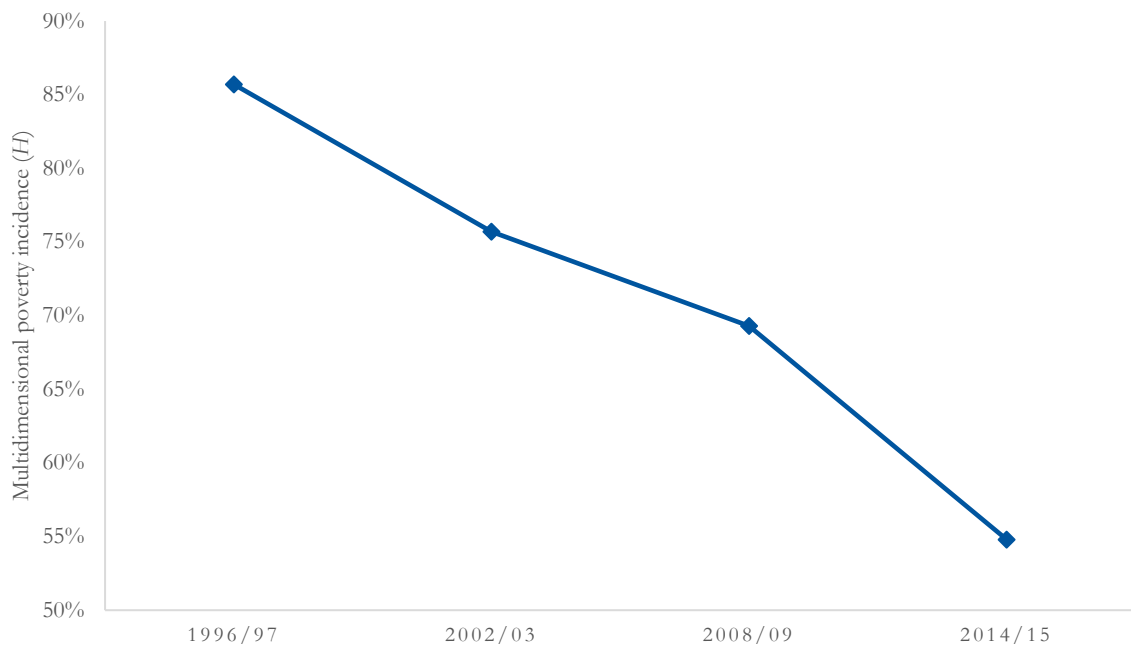
Source: authors' elaboration based on MEF/DEEF (2016).

Figure 4: Multidimensional poverty incidence in 1996/97 versus change in poverty incidence
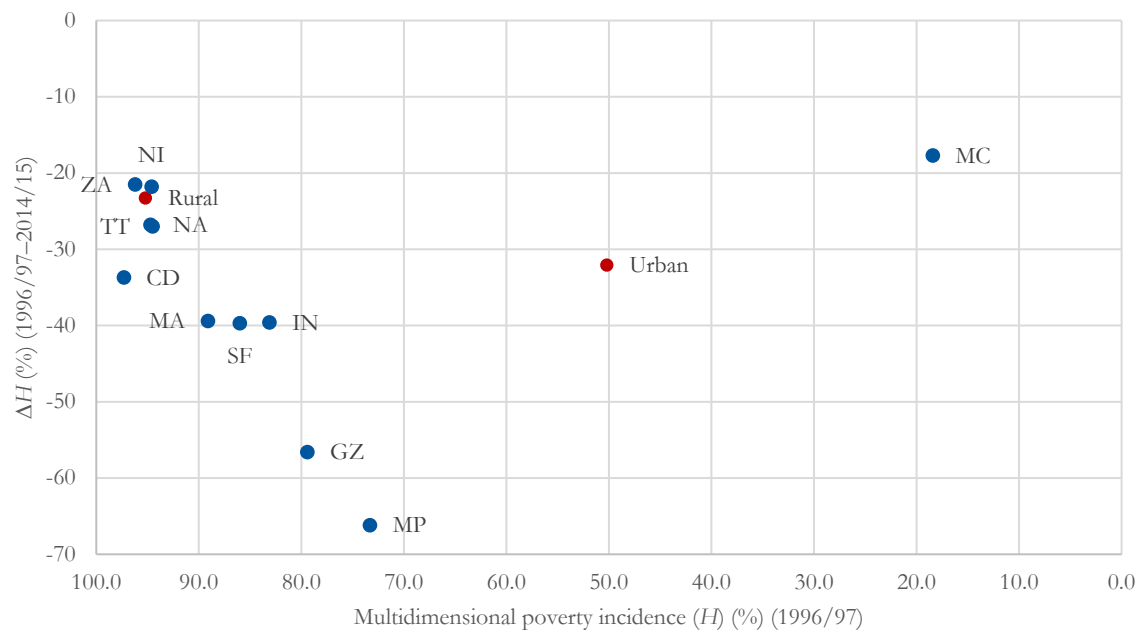
Source: authors' elaboration based on MEF/DEEF (2016).

Figure 5: Multidimensional poverty incidence (*H*)
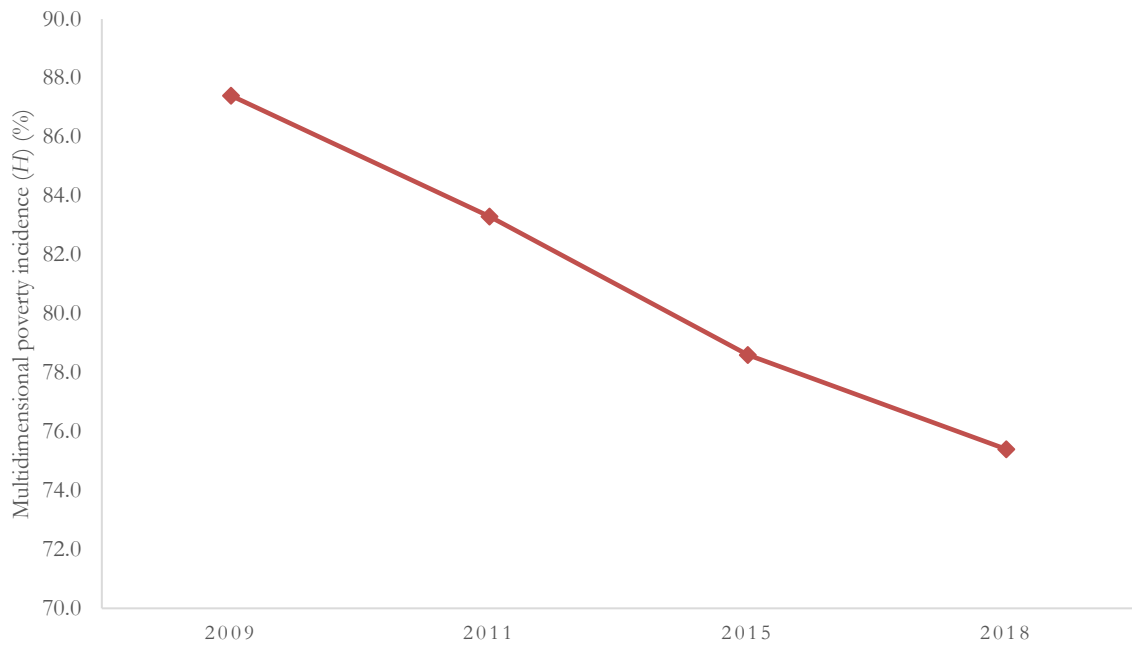
Source: authors' elaboration based on Egger et al. (2020).

Figure 6: Multidimensional poverty incidence in 1996/97 versus change in poverty incidence
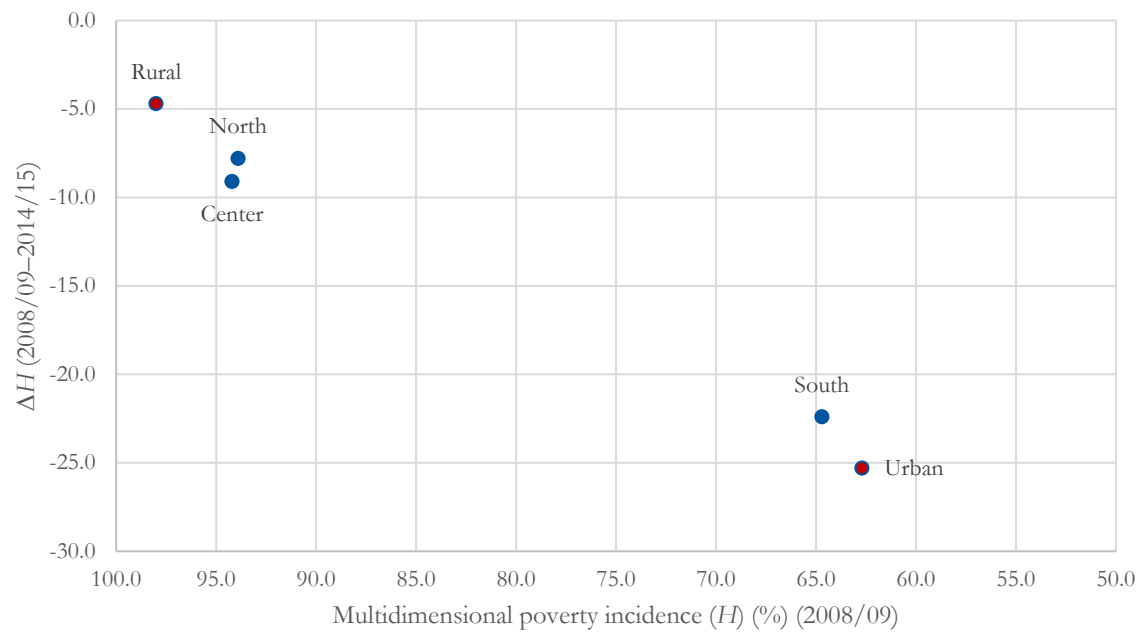
Source: authors' elaboration based on Egger et al. (2020).

Figure 7: Consumption inequality, Gini (1996/97–2014/15)
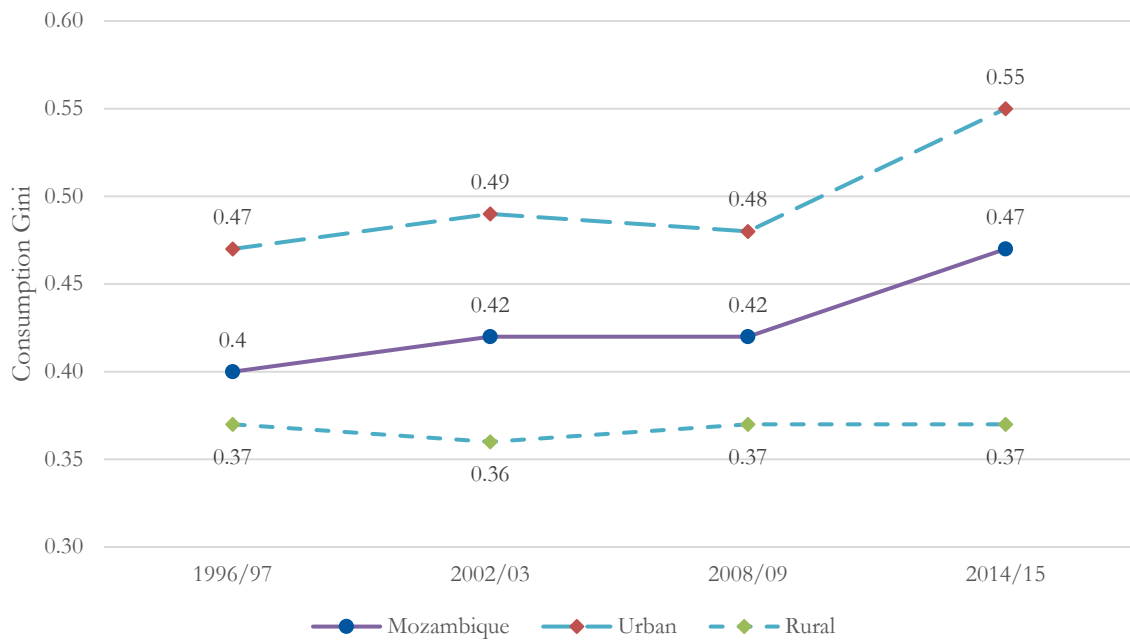
Source: authors' computation based on DEEF (2016).

Figure 8: Share of urban population
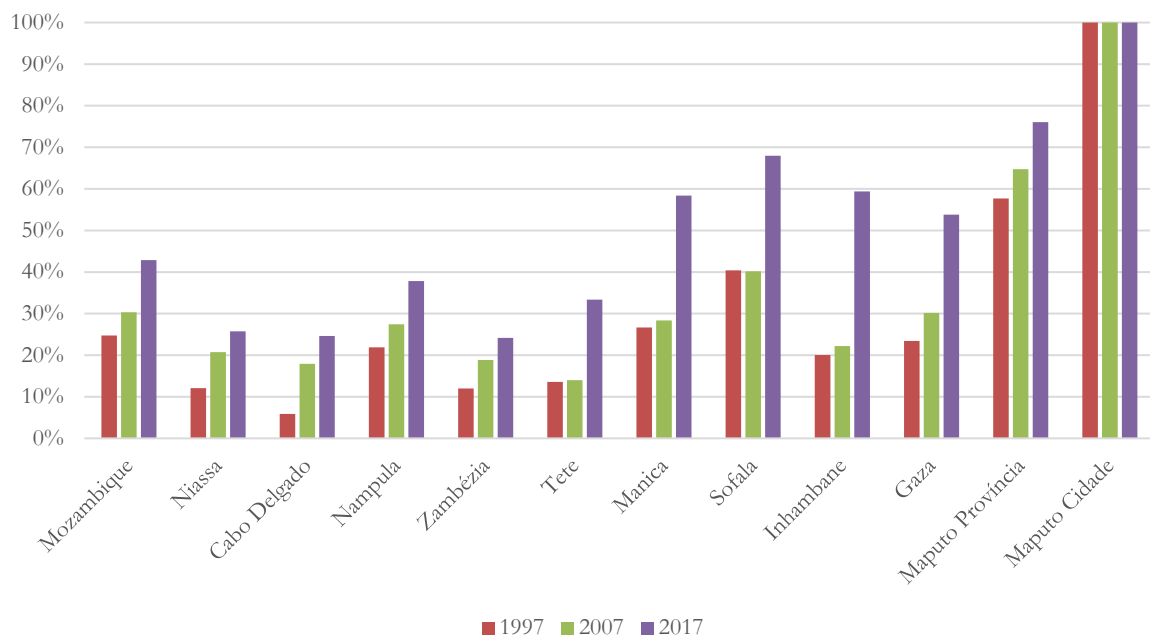
Source: authors' computation using data from 1997 and 2007 Mozambique censuses and 10 per cent sample of 2017 Mozambique census.

Figure 9: Share of migrant residents
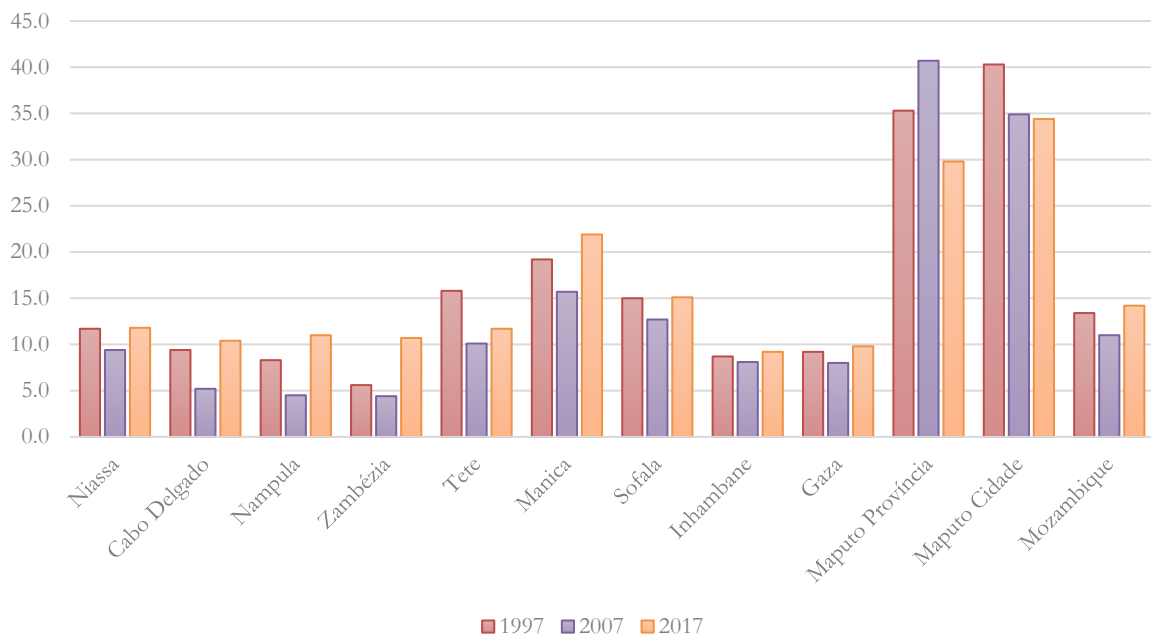
Note: for this purpose, migrants are defined as residents born in a different province or country.

Source: authors' computation using data from 1997 and 2007 Mozambique censuses and 10 per cent sample of 2017 Mozambique census.

Figure 10: Household wealth index (HWI) (1997–2017)
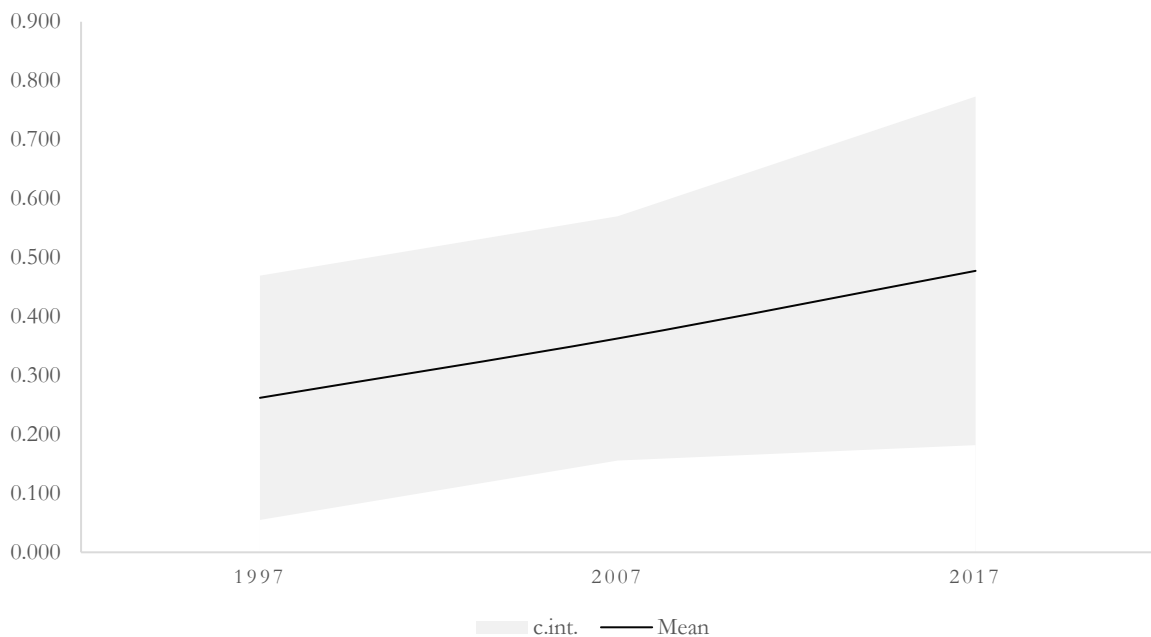
Note: c.int. stands for confidence interval.

Source: authors' computation using data from 1997 and 2007 Mozambique censuses and 10 per cent sample of 2017 Mozambique census.

Figure 11: HWI distribution
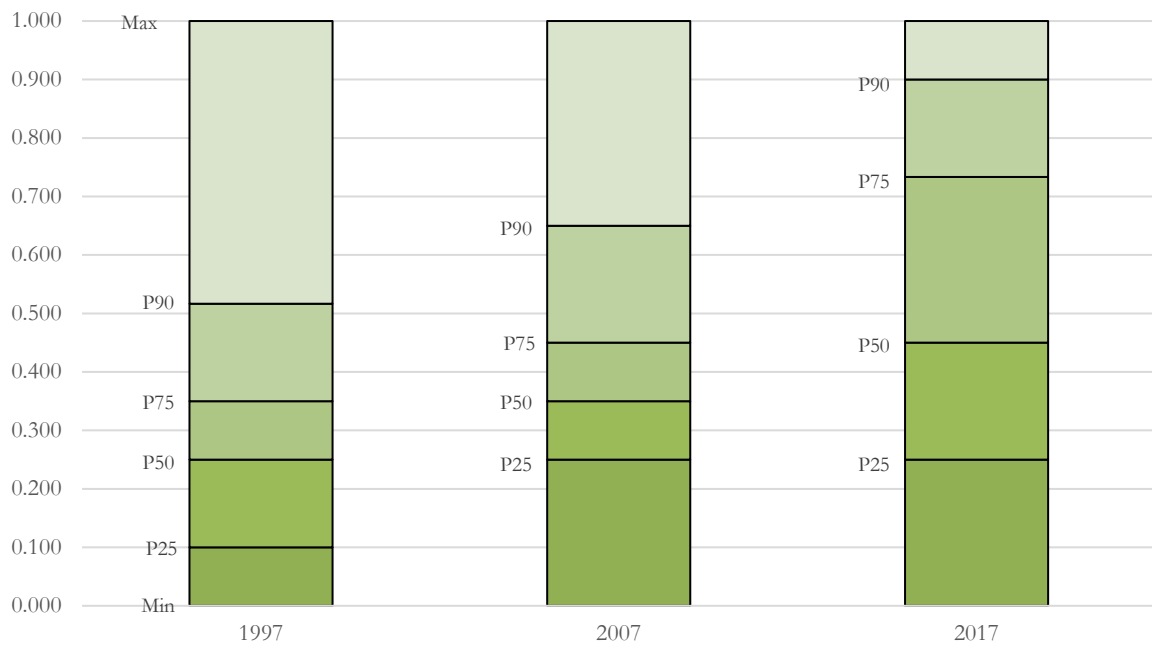
Figure 12: Wealth vertical inequality (HWI)
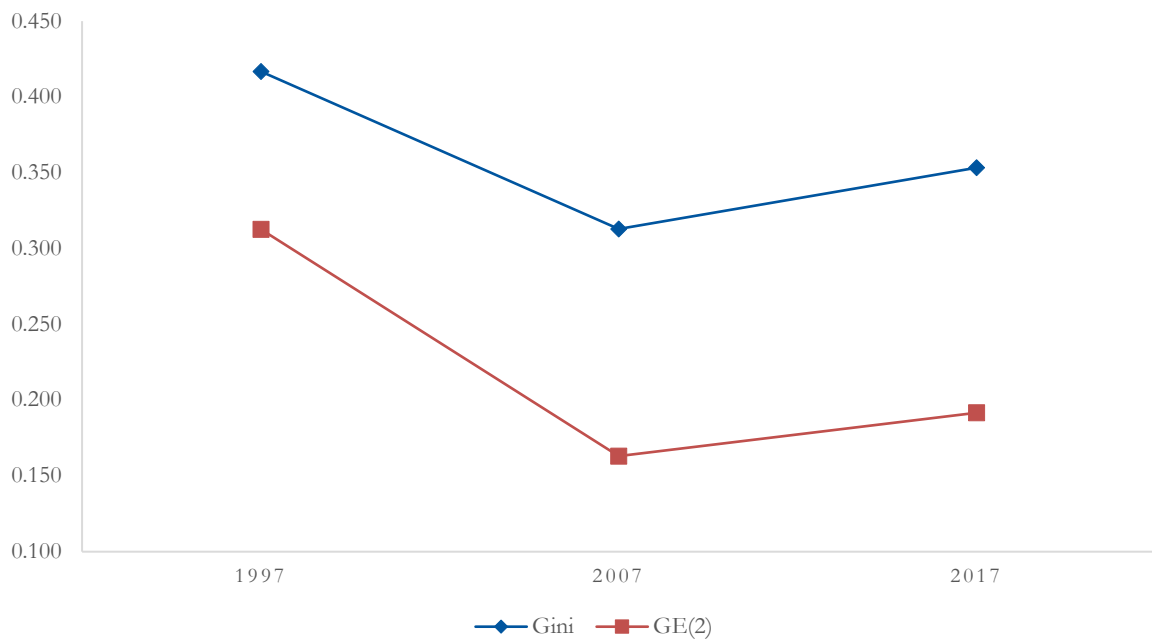
Figure 13: Inequality within Mozambique and provinces, GE(2)
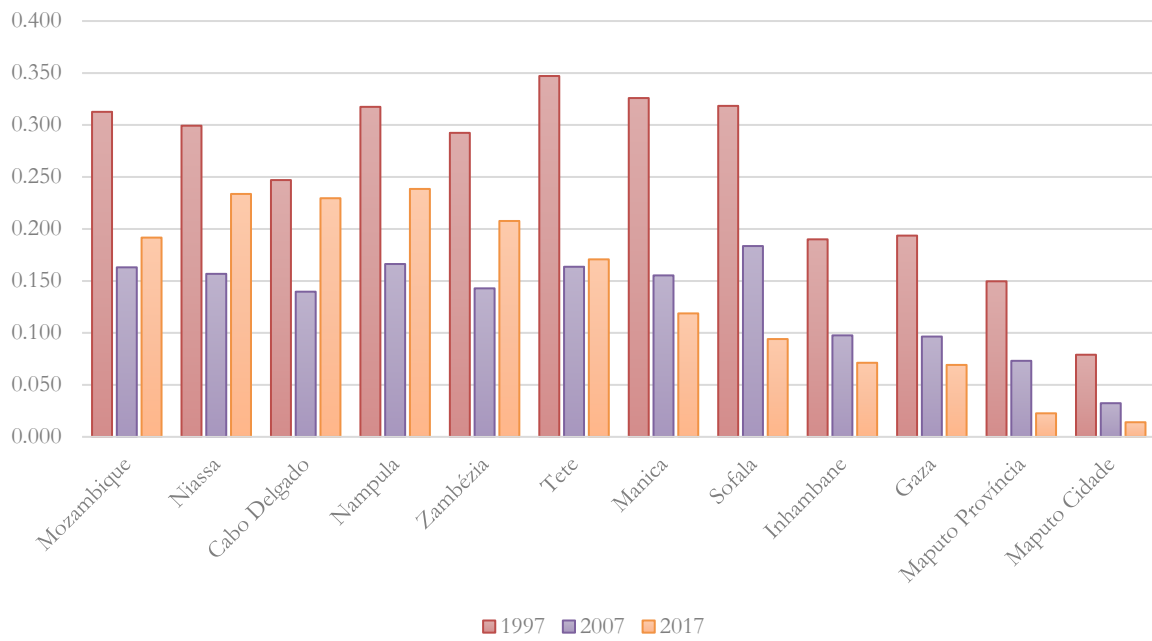
Source: authors' computation using data from 1997 and 2007 Mozambique censuses and 10 per cent sample of 2017 Mozambique census.

Figure 14: Lorenz curves showing between-province inequality
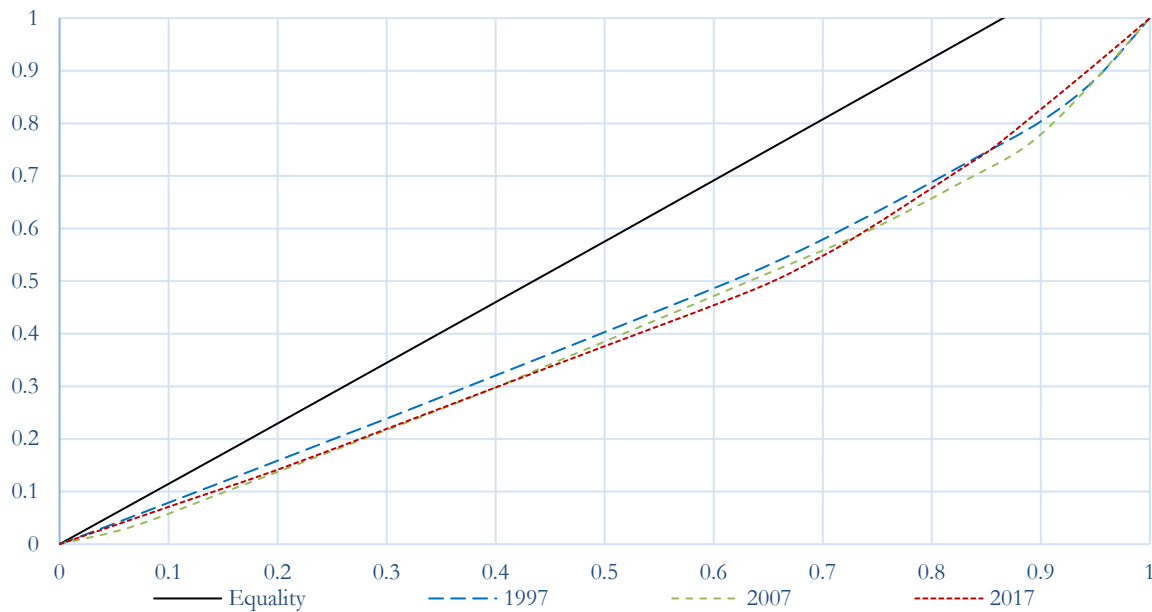
Source: authors' computation using data from 1997 and 2007 Mozambique censuses and 10 per cent sample of 2017 Mozambique census.

Figure 15: Decomposing province inequality

Source: authors' computation using data from 1997 and 2007 Mozambique censuses and 10 per cent sample of 2017 Mozambique census.

Figure 16: Urban/rural divide—between/total GE(2)
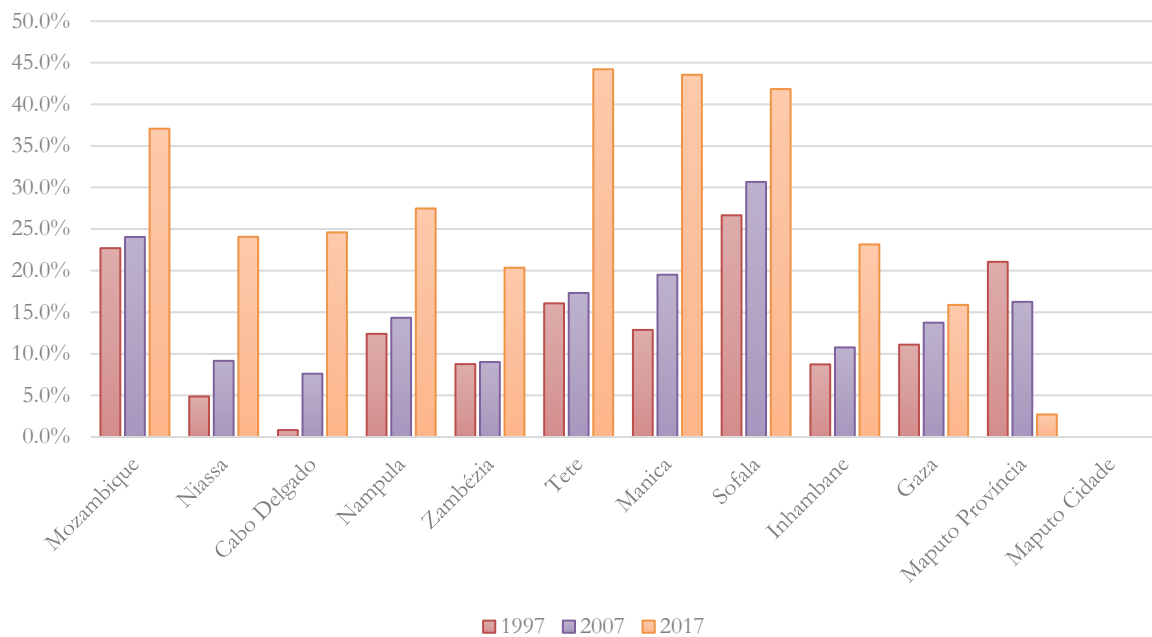
Source: authors' computation using data from 1997 and 2007 Mozambique censuses and 10 per cent sample of 2017 Mozambique census.

Figure 17: Ethnolinguistic inequality—between/total GE(2)
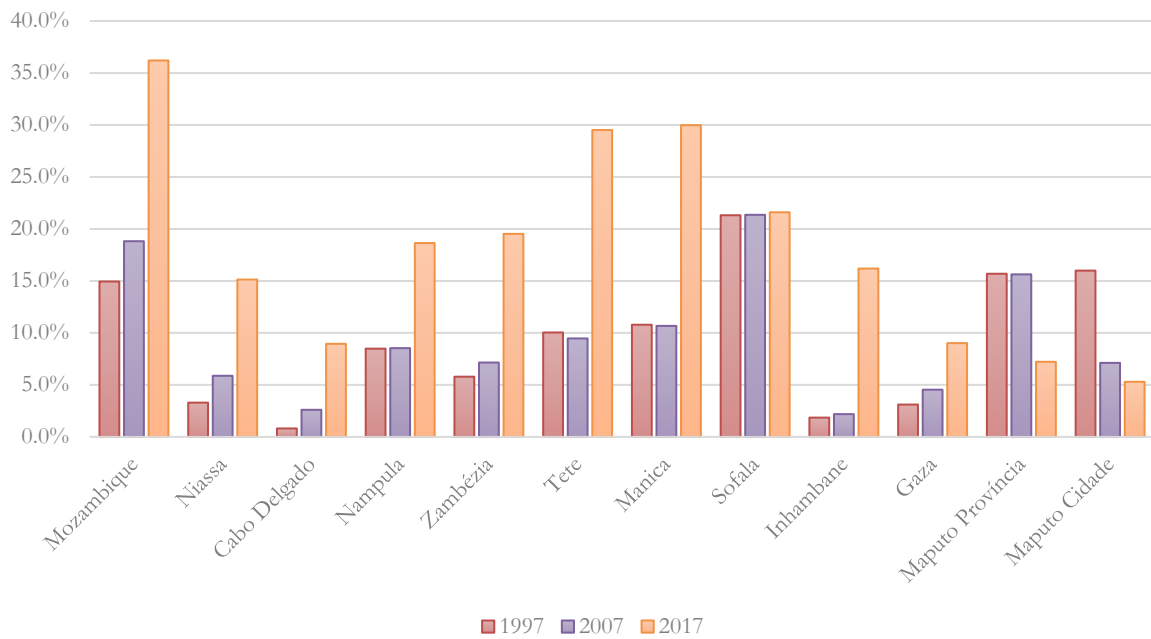
Source: authors' computation using data from 1997 and 2007 Mozambique censuses and 10 per cent sample of 2017 Mozambique census.

Figure 18: Lorenz curve—intersecting groups (province – urban/rural – ethnicity) in Mozambique
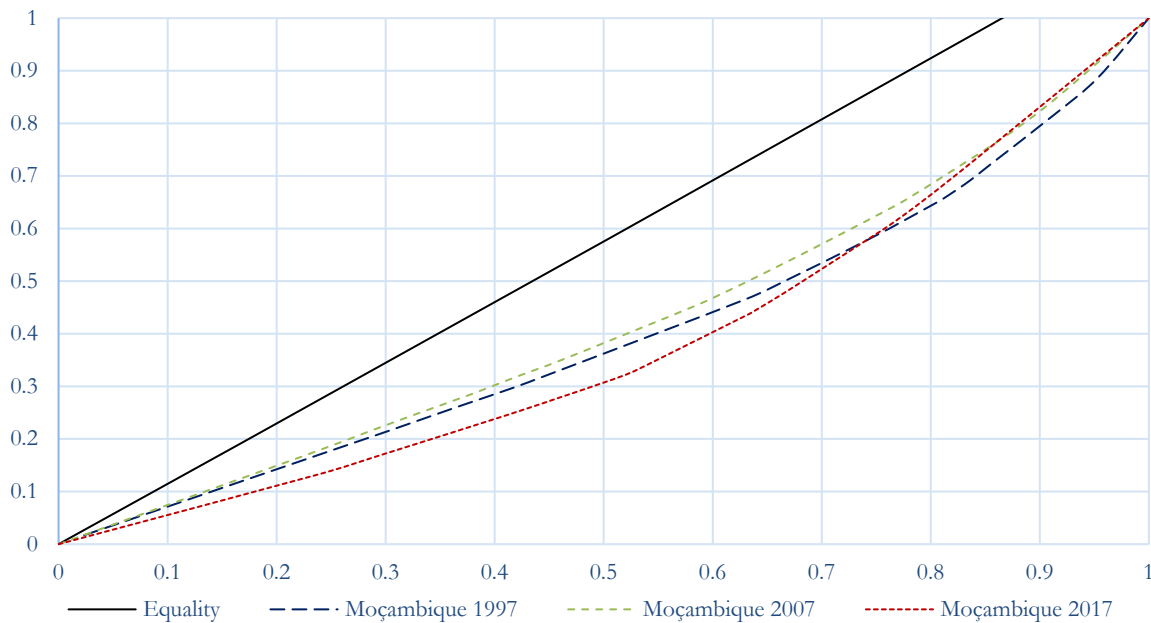
Source: authors' computation using data from 1997 and 2007 Mozambique censuses and 10 per cent sample of 2017 Mozambique census.

Figure 19: Growth incidence curves (GICs) of mean group wealth of intersecting identities (1997–2007 and 2007–17)
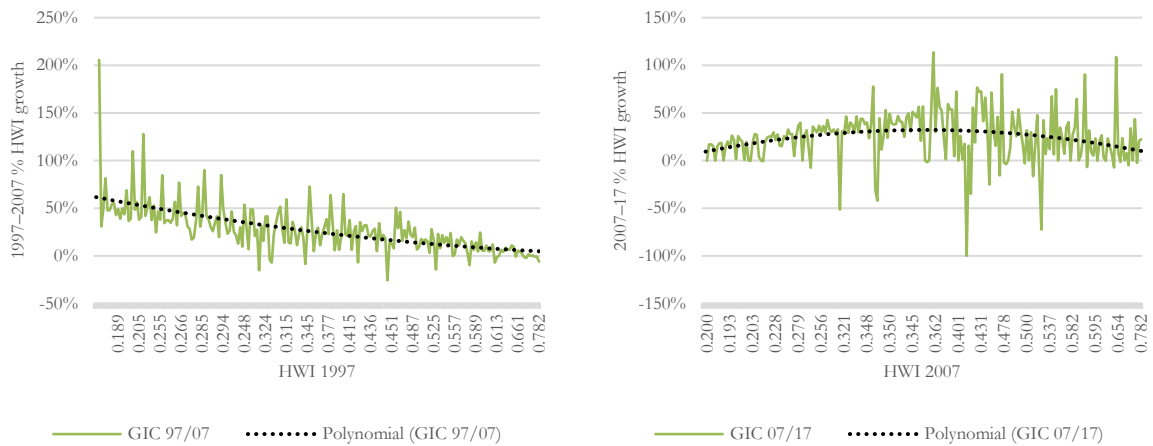
Note: polynomial (GIC 97/07) and (GIC 07/17) are second-degree polynomial trendlines, best fits to the observed GICs.

Source: authors' computation using data from 1997 and 2007 Mozambique censuses and 10 per cent sample of 2017 Mozambique census.

Figure 20: Urban/rural–ethnolinguistic inequality, between/total GE(2)
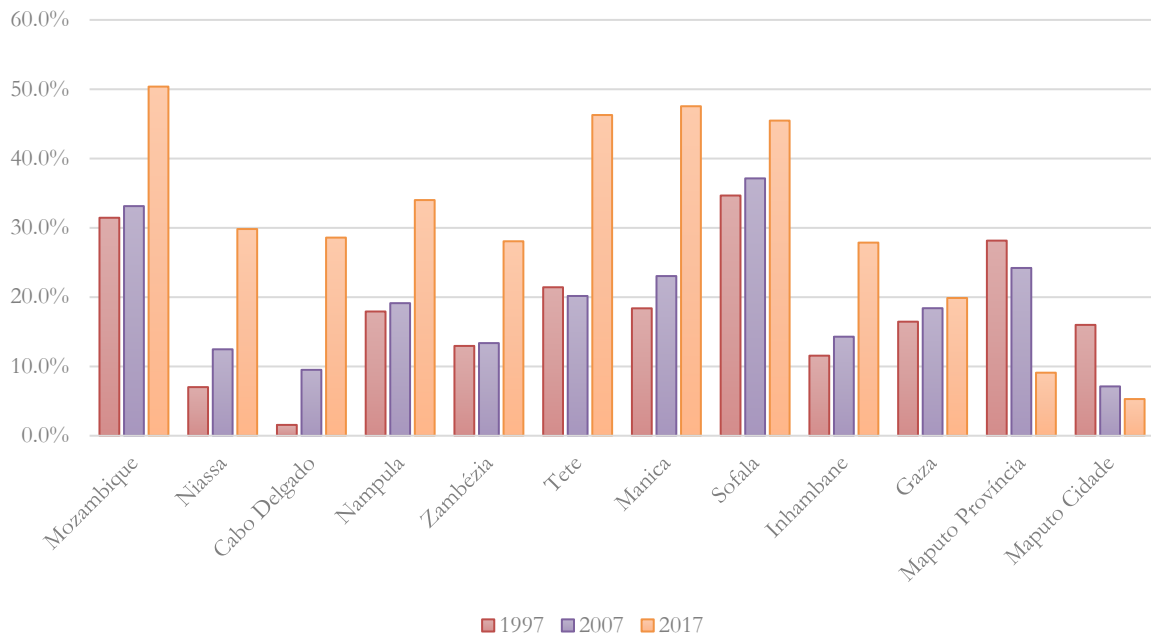
Source: authors' computation using data from 1997 and 2007 Mozambique censuses and 10 per cent sample of 2017 Mozambique census.

Tables

Table 1: Most represented mother language

	Rural households			Urban households		
Province	1997	2007	2017	1997	2007	2017
North						
Niassa	Emakhuwa	Emakhuwa	Emakhuwa	Emakhuwa	Emakhuwa	Emakhuwa
Cabo Delgado	Emakhuwa	Emakhuwa	Emakhuwa	Emakhuwa	Emakhuwa	Emakhuwa
Nampula	Emakhuwa	Emakhuwa	Emakhuwa	Emakhuwa	Emakhuwa	Emakhuwa
Centre						
Zambézia	Elomwe	Elomwe	Elomwe	Elomwe	Elomwe	Portuguese
Tete	Other	Cinyanja	Cinyanja	Other	Other	Other
Manica	Cindau	Cindau	Cindau	Other	Other	Portuguese
Sofala	Cisena	Cisena	Cisena	Cisena	Cisena	Portuguese
South						
Inhambane	Xitswa	Xitswa	Xitswa	Other	Other	Other
Gaza	Xichangana	Xichangana	Xichangana	Xichangana	Xichangana	Xichangana
Maputo Província	Xichangana	Xichangana	Xichangana	Xichangana	Portuguese	Portuguese
Maputo Cidade	—	—	—	Xichangana	Portuguese	Portuguese

Source: authors' computation using data from 1997 and 2007 Mozambique censuses and 10 per cent sample of 2017 Mozambique census.

Table 2: Household wealth index (HWI) regression (provincial categories)

	1997	2007	2017
	b/se	*b/se*	*b/se*
Constant	0.745***	0.919***	0.787***
	−0.001	−0.005	−0.026
Niassa	−0.302***	−0.415***	−0.077**
	−0.004	−0.005	−0.027
Cabo Delgado	−0.335***	−0.365***	−0.071**
	−0.009	−0.006	−0.027
Nampula	−0.227***	−0.360***	−0.065*
	−0.001	−0.005	−0.027
Zambézia	−0.245***	−0.403***	−0.226***
	−0.002	−0.005	−0.012
Tete	−0.083***	−0.245***	0.037
	−0.003	−0.006	−0.027
Manica	−0.170***	−0.309***	−0.028
	−0.002	−0.005	−0.02
Sofala	−0.128***	−0.277***	0.153***
	−0.001	−0.005	−0.02
Inhambane	−0.221***	−0.324***	0.027
	−0.002	−0.005	−0.027
Gaza	−0.084***	−0.230***	0.083**
	−0.002	−0.005	−0.026
Maputo Província	−0.107***	−0.061***	−0.013***
	−0.001	−0.001	−0.002
			(cont.)

Note: *b/se*, beta estimate/standard error; *$p<0.05$, **$p<0.01$, ***$p<0.001$.

Source: authors' calculation using censuses data.

Table 3: HWI regression (continuation; ethnolinguistic groups)

	1997	2007	2017
	b/se	*b/se*	*b/se*
Emakhuwa	−0.042***	−0.214***	0.023
	−0.004	*−0.007*	*−0.032*
Xichangana	−0.047***	−0.273***	0.021
	−0.005	*−0.005*	*−0.027*
Elomwe	−0.048***	−0.224***	0.001
	−0.012	*−0.011*	*−0.044*
Cinyanja	0.038*	−0.184***	0.076
	−0.015	*−0.016*	*−0.075*
Cisena	−0.036***	−0.217***	0.045
	−0.007	*−0.008*	*−0.035*
Echuabo	−0.091***	−0.272***	0.018
	−0.004	*−0.006*	*−0.028*
Cindau	−0.084***	−0.223***	0.05
	−0.005	*−0.007*	*−0.036*
Xitswa	−0.201***	−0.309***	−0.015
	−0.002	*−0.006*	*−0.028*
Other	−0.191***	−0.270***	−0.007
	−0.001	*−0.005*	*−0.027*
Main language	−0.172***	−0.181***	0.077**
	−0.004	*−0.005*	*−0.026*
			(cont.)

Note: *b/se*, beta estimate/standard error; *p<0.05, **p<0.01, ***p<0.001.

Source: authors' calculation using censuses data

Table 4: HWI regression (continuation; interaction with rurality)

	1997	2007	2017
	b/se	*b/se*	*b/se*
Rural	−0.202***	−0.272***	0.061*
	−0.003	*−0.005*	*−0.026*
Rural Emakhuwa	0.053**	0.181***	−0.094*
	−0.017	*−0.012*	*−0.048*
Rural Xichangana	0.040***	0.315***	−0.220***
	−0.004	*−0.01*	*−0.052*
Rural Elomwe	0.035	0.217***	−0.099
	−0.044	*−0.021*	*−0.063*
Rural Cinyanja	−0.035	0.135***	−0.251
	−0.038	*−0.031*	*−0.206*
Rural Cisena	0.009	0.157***	−0.181***
	−0.021	*−0.014*	*−0.049*
Rural Echuabo	0.019	0.209***	−0.086**
	−0.019	*−0.009*	*−0.032*
Rural Cindau	0.056**	0.150***	−0.066
	−0.018	*−0.014*	*−0.06*
Rural Xitswa	0.042***	0.121***	−0.126***
	−0.005	*−0.006*	*−0.029*
Rural Other	0.014***	0.114***	−0.102***
	−0.004	*−0.005*	*−0.024*
			(cont.)

Note: *b/se*, beta estimate/standard error; *p<0.05, **p<0.01, ***p<0.001.

Source: authors' calculation using censuses data.

Table 5: HWI regression (continuation; Niassa)

Niassa specific	1997	2007	2017
	b/se	*b/se*	*b/se*
Rural	0.052***	0.128***	−0.386***
	−0.006	*−0.006*	*−0.028*
Emakhuwa	0.050***	0.299***	−0.324***
	−0.007	*−0.011*	*−0.056*
Xichangana	0.081***	0.374***	0.069
	−0.019	*−0.012*	*−0.048*
Elomwe	−0.008	0.128***	−0.075
	−0.017	*−0.015*	*−0.054*
Cinyanja	−0.186***	0.119***	−0.326***
	−0.016	*−0.016*	*−0.076*
Cisena	−0.045	0.305***	0.011
	−0.031	*−0.02*	*−0.07*
Echuabo	0.084***	0.293***	−0.068
	−0.024	*−0.015*	*−0.054*
Cindau	0.112**	0.326***	−0.198**
	−0.042	*−0.03*	*−0.07*
Xitswa	0.140*	0.462***	−0.037
	−0.068	*−0.035*	*−0.06*
Other	0.022***	0.109***	−0.240***
	−0.005	*−0.006*	*−0.027*
Rural Emakhuwa	0.006	−0.166***	0.208***
	−0.017	*−0.013*	*−0.049*
Rural Xichangana	−0.054*	−0.400***	0.067
	−0.021	*−0.019*	*−0.082*
Rural Elomwe	−0.054	−0.211***	0.081
	−0.047	*−0.025*	*−0.07*
Rural Cinyanja	0.090*	−0.127***	0.419*
	−0.039	*−0.031*	*−0.206*
Rural Cisena	0.027	−0.224***	0.109
	−0.045	*−0.038*	*−0.118*
Rural Echuabo	0.032	−0.278***	0.09
	−0.039	*−0.021*	*−0.105*
Rural Cindau	−0.092	−0.223***	0.204
	−0.056	*−0.047*	*−0.131*
Rural Xitswa	0.041	−0.224***	0.059
	−0.076	*−0.052*	*−0.067*
Rural Other	0.051***	−0.043***	0.220***
	−0.007	*−0.006*	*−0.026*
Main language[a]	0	0	0
	(.)	*(.)*	*(.)*
			(cont.)

Note: *b/se*, beta estimate/standard error; *$p<0.05$, **$p<0.01$, ***$p<0.001$. [a] Interaction of province and main language excluded in this province due to collinearity (applicable to all similar cases in other provinces).

Source: authors' calculation using censuses data.

Table 6: HWI regression (continuation; Cabo Delgado)

Cabo Delgado specific	1997	2007	2017
	b/se	b/se	b/se
Rural	0.115***	0.071***	−0.381***
	−0.01	−0.006	−0.028
Emakhuwa	0.052***	0.227***	−0.293***
	−0.011	−0.011	−0.056
Xichangana	0.027	0.359***	0.004
	−0.041	−0.014	−0.042
Elomwe	−0.095	0.277***	−0.032
	−0.097	−0.027	−0.077
Cinyanja	0.078	0.079***	−0.088
	−0.119	−0.023	−0.116
Cisena	0.230**	0.299***	−0.026
	−0.084	−0.031	−0.075
Echuabo	0.309***	0.398***	0.096
	−0.069	−0.021	−0.06
Cindau	0.152	0.366***	0.034
	−0.097	−0.028	−0.145
Xitswa	0.392*	0.501***	0.043
	−0.167	−0.043	−0.118
Other	0.053***	0.110***	−0.252***
	−0.009	−0.006	−0.028
Rural Emakhuwa	−0.009	−0.084***	0.154**
	−0.019	−0.013	−0.049
Rural Xichangana	−0.007	−0.366***	0.239*
	−0.043	−0.022	−0.098
Rural Elomwe	0.074	−0.09	0.105
	−0.111	−0.051	−0.111
Rural Cinyanja	−0.104	−0.109**	0.143
	−0.129	−0.036	−0.245
Rural Cisena	−0.245**	−0.204***	0.154
	−0.091	−0.05	−0.099
Rural Echuabo	−0.266***	−0.273***	−0.003
	−0.077	−0.038	−0.117
Rural Cindau	−0.151	−0.248***	0.269
	−0.101	−0.042	−0.208
Rural Xitswa	−0.263	−0.273***	0.452*
	−0.173	−0.058	−0.184
Rural Other	0.011	−0.018**	0.254***
	−0.01	−0.006	−0.026
Main language	0	0	0
	(.)	(.)	(.)
			(cont.)

Note: b/se, beta estimate/standard error; *p<0.05, **p<0.01, ***p<0.001.

Source: authors' calculation using censuses data.

Table 7: HWI regression (continuation; Nampula)

Nampula specific	1997	2007	2017
	b/se	b/se	b/se
Rural	−0.033***	0.049***	−0.357***
	−0.004	−0.005	−0.027
Emakhuwa	−0.01	0.219***	−0.339***
	−0.006	−0.011	−0.056
Xichangana	0.169***	0.424***	0.075
	−0.011	−0.01	−0.038
Elomwe	0.024	0.205***	−0.056
	−0.012	−0.012	−0.047
Cinyanja	0.062**	0.282***	−0.115
	−0.021	−0.02	−0.087
Cisena	0.101***	0.330***	−0.091
	−0.017	−0.017	−0.048
Echuabo	0.144***	0.298***	0.018
	−0.008	−0.009	−0.033
Cindau	0.186***	0.325***	0.076
	−0.02	−0.018	−0.07
Xitswa	0.378***	0.457***	−0.001
	−0.026	−0.022	−0.06
Other	0.037***	0.158***	−0.157***
	−0.002	−0.005	−0.027
Rural Emakhuwa	0.067***	−0.077***	0.171***
	−0.017	−0.012	−0.048
Rural Xichangana	−0.120***	−0.344***	0.148
	−0.023	−0.028	−0.207
Rural Elomwe	−0.015	−0.207***	0.071
	−0.045	−0.023	−0.072
Rural Cinyanja	−0.122*	−0.153***	0.353
	−0.049	−0.041	−0.239
Rural Cisena	−0.129***	−0.212***	0.132
	−0.033	−0.033	−0.074
Rural Echuabo	0.055	−0.191***	0.125
	−0.032	−0.02	−0.079
Rural Cindau	−0.186***	−0.237***	0
	−0.039	−0.029	(.)
Rural Xitswa	−0.217***	−0.223***	0
	−0.053	−0.045	(.)
Rural Other	0.079***	−0.024***	0.131***
	−0.004	−0.005	−0.026
Main language	0	0	0
	(.)	(.)	(.)
			(cont.)

Note: *b/se*, beta estimate/standard error; *p<0.05, **p<0.01, ***p<0.001.

Source: authors' calculation using censuses data.

Table 8: HWI regression (continuation; Zambézia)

Zambézia specific	1997	2007	2017
	b/se	b/se	b/se
Rural	−0.027***	0.104***	−0.154***
	−0.004	−0.005	−0.01
Emakhuwa	−0.089***	0.198***	0.041
	−0.005	−0.008	−0.029
Xichangana	0.137***	0.430***	0.224***
	−0.015	−0.012	−0.036
Elomwe	−0.024	0.233***	−0.137***
	−0.013	−0.014	−0.038
Cinyanja	−0.090***	0.196***	−0.047
	−0.023	−0.019	−0.079
Cisena	−0.164***	0.084***	−0.099***
	−0.008	−0.008	−0.029
Echuabo	−0.047***	0.157***	−0.041**
	−0.004	−0.006	−0.015
Cindau	0.095***	0.360***	0.038
	−0.022	−0.021	−0.057
Xitswa	0.249***	0.472***	0.143***
	−0.045	−0.025	−0.034
Other	0.002	0.135***	−0.059***
	−0.002	−0.005	−0.012
Rural Emakhuwa	−0.003	−0.254***	−0.185***
	−0.017	−0.013	−0.046
Rural Xichangana	−0.101***	−0.374***	−0.042
	−0.022	−0.021	−0.062
Rural Elomwe	0.127**	−0.111***	−0.077
	−0.044	−0.021	−0.064
Rural Cinyanja	0.006	−0.247***	0.058
	−0.042	−0.033	−0.207
Rural Cisena	0.089***	−0.117***	0.073
	−0.021	−0.014	−0.045
Rural Echuabo	0.050**	−0.155***	−0.03
	−0.019	−0.009	−0.022
Rural Cindau	−0.061	−0.243***	−0.106
	−0.035	−0.033	−0.097
Rural Xitswa	−0.135**	−0.232***	−0.171***
	−0.052	−0.047	−0.037
Rural Other	0.091***	−0.035***	0
	−0.004	−0.005	(.)
Main language	0	0	0.074***
	(.)	(.)	−0.012
			(cont.)

Note: *b/se*, beta estimate/standard error; *p<0.05, **p<0.01, ***p<0.001.

Source: authors' calculation using censuses data.

Table 9: HWI regression (continuation; Tete)

Tete specific	1997	2007	2017
	b/se	b/se	b/se
Rural	−0.115***	−0.019***	−0.297***
	−0.006	−0.006	−0.03
Emakhuwa	−0.095***	0.144***	−0.025
	−0.013	−0.012	−0.05
Xichangana	0.029*	0.301***	−0.014
	−0.014	−0.012	−0.042
Elomwe	−0.130***	0.176***	−0.169*
	−0.029	−0.025	−0.083
Cinyanja	−0.445***	−0.007	−0.268***
	−0.015	−0.016	−0.076
Cisena	−0.232***	0.018*	−0.162***
	−0.009	−0.009	−0.037
Echuabo	−0.018	0.149***	−0.048
	−0.01	−0.009	−0.038
Cindau	−0.026*	0.160***	−0.018
	−0.013	−0.011	−0.054
Xitswa	0.135***	0.300***	−0.018
	−0.017	−0.021	−0.041
Other	0.090***	0.075***	−0.115***
	−0.005	−0.004	−0.018
Rural Emakhuwa	0.099***	−0.027	0.072
	−0.026	−0.019	−0.098
Rural Xichangana	0.01	−0.264***	0.349*
	−0.022	−0.023	−0.154
Rural Elomwe	0.120*	−0.189***	−0.221
	−0.057	−0.038	−0.22
Rural Cinyanja	0.286***	−0.046	0.18
	−0.038	−0.033	−0.212
Rural Cisena	0.107***	−0.052***	0.066
	−0.021	−0.015	−0.053
Rural Echuabo	0.074**	−0.155***	0.128
	−0.026	−0.012	−0.203
Rural Cindau	−0.112***	−0.169***	−0.173
	−0.022	−0.017	−0.102
Rural Xitswa	0.095*	0.076	−0.153*
	−0.041	−0.042	−0.074
Rural Other	0.107***	0	0
	−0.006	(.)	(.)
Main language	0	0.177***	−0.058
	(.)	−0.01	−0.052
			(cont.)

Note: *b/se*, beta estimate/standard error; *p<0.05, **p<0.01, ***p<0.001.

Source: authors' calculation using censuses data.

Table 10: HWI regression (continuation; Manica)

Manica specific	1997	2007	2017
	b/se	b/se	b/se
Rural	0.006	0.065***	−0.251***
	−0.006	−0.006	−0.01
Emakhuwa	−0.101***	0.056***	−0.194***
	−0.009	−0.007	−0.041
Xichangana	−0.063***	0.294***	0.027
	−0.011	−0.01	−0.034
Elomwe	−0.132***	0.085***	−0.022
	−0.016	−0.015	−0.059
Cinyanja	−0.160***	0.108***	0.116
	−0.022	−0.02	−0.158
Cisena	−0.209***	0.055***	−0.123***
	−0.008	−0.008	−0.031
Echuabo	−0.061***	0.153***	−0.041
	−0.006	−0.007	−0.028
Cindau	−0.176***	0.114***	−0.104**
	−0.006	−0.008	−0.034
Xitswa	0.045***	0.252***	−0.028
	−0.007	−0.009	−0.033
Other	0.026***	0.067***	−0.047*
	−0.006	−0.004	−0.02
Rural Emakhuwa	0.044*	−0.144***	0.284*
	−0.022	−0.013	−0.112
Rural Xichangana	−0.136***	−0.426***	−0.068
	−0.012	−0.014	−0.047
Rural Elomwe	0.112*	−0.086*	0.127
	−0.049	−0.034	−0.158
Rural Cinyanja	0.091*	−0.109**	−0.134
	−0.046	−0.036	−0.285
Rural Cisena	0.052*	−0.081***	0.077
	−0.021	−0.014	−0.045
Rural Echuabo	−0.048*	−0.078***	0.021
	−0.02	−0.014	−0.085
Rural Cindau	0.074***	−0.204***	−0.191**
	−0.021	−0.018	−0.065
Rural Xitswa	0.012	−0.106***	0.043
	−0.013	−0.013	−0.059
Rural Other[a]	0	0	0
	(.)	(.)	(.)
Main language	0.108***	0.227***	−0.031
	−0.006	−0.01	−0.02
			(cont.)

Note: *b/se*, beta estimate/standard error; *p<0.05, **p<0.01, ***p<0.001. [a] No other languages are reported in rural Manica province.

Source: authors' calculation using censuses data.

Table 11: HWI regression (continuation; Sofala)

Sofala specific	1997	2007	2017
	b/se	*b/se*	*b/se*
Rural	−0.037***	0.032***	−0.333***
	−0.005	−0.005	−0.015
Emakhuwa	−0.075***	0.145***	−0.201***
	−0.007	−0.008	−0.035
Xichangana	−0.01	0.299***	−0.161***
	−0.011	−0.009	−0.029
Elomwe	−0.130***	0.054***	−0.253***
	−0.014	−0.013	−0.049
Cinyanja	−0.043*	0.109***	−0.289**
	−0.021	−0.019	−0.093
Cisena	−0.049***	0.200***	−0.276***
	−0.009	−0.012	−0.031
Echuabo	−0.075***	0.139***	−0.253***
	−0.004	−0.006	−0.022
Cindau	−0.132***	0.085***	−0.249***
	−0.006	−0.007	−0.032
Xitswa	0.066***	0.255***	−0.124***
	−0.003	−0.006	−0.026
Other	0.071***	0.209***	−0.190***
	−0.002	−0.006	−0.019
Rural Emakhuwa	0	−0.133***	−0.078
	−0.02	−0.015	−0.068
Rural Xichangana	−0.099***	−0.354***	0.281***
	−0.016	−0.017	−0.074
Rural Elomwe	0.078	−0.114***	0.134
	−0.045	−0.023	−0.079
Rural Cinyanja	−0.033	−0.080*	0.247
	−0.045	−0.036	−0.254
Rural Cisena	0.059**	−0.098***	0.242***
	−0.021	−0.014	−0.056
Rural Echuabo	0.130***	−0.099***	0.091*
	−0.02	−0.01	−0.036
Rural Cindau	−0.034	−0.148***	−0.047
	−0.018	−0.015	−0.057
Rural Xitswa	0.005	−0.116***	0.213***
	−0.009	−0.008	−0.055
Rural Other	−0.012*	−0.112***	0
	−0.006	−0.006	(.)
Main language	0	0	−0.197***
	(.)	(.)	−0.02
			(cont.)

Note: *b/se*, beta estimate/standard error; *$p<0.05$, **$p<0.01$, ***$p<0.001$.

Source: authors' calculation using censuses data.

Table 12: HWI regression (continuation; Inhambane)

Inhambane specific	1997	2007	2017
	b/se	b/se	b/se
Rural	−0.068***	0.029***	−0.285***
	−0.004	−0.005	−0.032
Emakhuwa	0.039	0.252***	−0.059
	−0.023	−0.018	−0.074
Xichangana	−0.057***	0.217***	−0.088*
	−0.009	−0.008	−0.036
Elomwe	−0.276	0.240***	−0.183
	−0.167	−0.056	−0.157
Cinyanja	−0.095	0.291***	0
	−0.07	−0.064	(.)
Cisena	0.068*	0.189***	−0.029
	−0.027	−0.017	−0.096
Echuabo	0.149***	0.202***	−0.029
	−0.027	−0.02	−0.069
Cindau	−0.128***	0.078***	−0.069
	−0.011	−0.011	−0.089
Xitswa	0.027***	0.155***	−0.121***
	−0.003	−0.006	−0.029
Other	0.199***	0.164***	0.032
	−0.004	−0.003	−0.023
Rural Emakhuwa	0.025	−0.149***	0
	−0.04	−0.032	(.)
Rural Xichangana	0.025**	−0.282***	0.240**
	−0.009	−0.012	−0.082
Rural Elomwe	0.535**	−0.052	0
	−0.191	−0.08	(.)
Rural Cinyanja	0.076	−0.265***	0
	−0.083	−0.078	(.)
Rural Cisena	0.052	−0.066*	−0.425
	−0.04	−0.028	−0.224
Rural Echuabo	0.017	−0.039	0.473*
	−0.042	−0.037	−0.211
Rural Cindau	0.114***	−0.047**	−0.123
	−0.02	−0.017	−0.11
Rural Xitswa	0.300***	0.069***	0.311***
	−0.009	−0.011	−0.065
Rural Other	0	0	0
	(.)	(.)	(.)
Main language	0	0.135***	−0.235***
	(.)	−0.01	−0.054
			(cont.)

Note: *b/se*, beta estimate/standard error; *p<0.05, **p<0.01, ***p<0.001.

Source: authors' calculation using censuses data.

Table 13: HWI regression (continuation; Gaza)

Gaza specific	1997	2007	2017
	b/se	b/se	b/se
Rural	−0.174***	−0.009*	−0.212***
	−0.004	−0.004	−0.018
Emakhuwa	−0.017	0.192***	−0.227*
	−0.021	−0.017	−0.094
Xichangana	−0.059***	0.262***	−0.247***
	−0.003	−0.01	−0.052
Elomwe	−0.012	0.168**	−0.075
	−0.064	−0.059	−0.109
Cinyanja	−0.015	0.163**	0
	−0.052	−0.057	(.)
Cisena	−0.022	0.159***	−0.109
	−0.027	−0.021	−0.072
Echuabo	0.045*	0.197***	−0.05
	−0.019	−0.014	−0.051
Cindau	−0.019	0.180***	−0.082
	−0.023	−0.021	−0.083
Xitswa	0.048***	0.205***	−0.095*
	−0.01	−0.011	−0.045
Other	0.027***	0.166***	−0.085***
	−0.004	−0.004	−0.022
Rural Emakhuwa	0.120***	−0.013	0.389*
	−0.034	−0.031	−0.151
Rural Xichangana	0.220***	−0.153***	0.207***
	−0.005	−0.009	−0.041
Rural Elomwe	0.088	−0.111	0
	−0.099	−0.087	(.)
Rural Cinyanja	0.186*	−0.182	0
	−0.081	−0.096	(.)
Rural Cisena	0.114**	0.024	0.291
	−0.042	−0.036	−0.16
Rural Echuabo	0.172***	0.001	0.148
	−0.037	−0.026	−0.205
Rural Cindau	0.106**	−0.053	0
	−0.033	−0.033	(.)
Rural Xitswa	0.176***	−0.026*	0.038
	−0.014	−0.013	−0.058
Rural Other	0.186***	0	0
	−0.006	(.)	(.)
Main language	0	0	0
	(.)	(.)	(.)
			(cont.)

Note: *b/se*, beta estimate/standard error; *$p<0.05$, **$p<0.01$, ***$p<0.001$.

Source: authors' calculation using censuses data.

Table 14: HWI regression (continuation; Maputo Província)

Maputo Província specific	1997	2007	2017
	b/se	b/se	b/se
Emakhuwa	−0.024**	0.003	0.013
	−0.009	−0.007	−0.028
Xichangana	0.029***	−0.040***	−0.012*
	−0.002	−0.001	−0.005
Elomwe	0.01	−0.008	0.009
	−0.021	−0.015	−0.049
Cinyanja	−0.003	−0.012	−0.01
	−0.03	−0.023	−0.084
Cisena	−0.002	−0.009	0.018
	−0.013	−0.009	−0.032
Echuabo	0.066***	0.019***	−0.009
	−0.007	−0.004	−0.013
Cindau	−0.017	0.008	−0.043
	−0.01	−0.009	−0.037
Xitswa	0.043***	0.007*	0.002
	−0.003	−0.003	−0.011
Other	0.040***	−0.005**	0.006
	−0.002	−0.002	−0.007
Main language	0	0	0
	(.)	(.)	(.)
R-squared	0.356	0.375	0.549
N	3,592,104	4,338,156	349,771

Note: *b/se*, beta estimate/standard error; *p*<0.05, **p*<0.01, ***p*<0.001. Interaction variables between ethnic identities and rurality in Maputo Província are excluded due to multicollinearity.

Source: authors' calculation using censuses data.

Table 15: Portuguese mother language residents' self-attributed race (%)

Province	Black			White			Mixed			Other		
	1997	2007	2017	1997	2007	2017	1997	2007	2017	1997	2007	2017
Niassa	99.2	99.4	98.7	0.3	0.1	0.1	0.4	0.3	1.1	0.1	0.2	0.1
Cabo Delgado	96.9	97.7	96.7	0.7	0.4	0.6	1.5	1.2	2.4	0.9	0.7	0.3
Nampula	97.9	99.0	98.0	0.3	0.1	0.3	1.3	0.4	1.4	0.5	0.5	0.3
Zambézia	97.7	99.3	98.6	0.2	0.1	0.1	1.6	0.4	1.1	0.5	0.2	0.2
Tete	95.3	96.9	95.9	1.3	0.4	0.5	2.8	2.1	3.5	0.6	0.6	0.1
Manica	96.9	97.8	98.2	0.7	0.3	0.3	1.7	1.4	1.4	0.7	0.5	0.1
Sofala	90.6	95.0	95.7	0.8	0.4	0.4	7.3	3.9	3.5	1.3	0.7	0.4
Inhambane	99.0	98.7	96.4	0.1	0.1	0.2	0.7	0.9	3.2	0.2	0.3	0.2
Gaza	96.7	96.5	93.9	0.2	0.3	0.9	2.7	2.7	4.9	0.4	0.5	0.3
Maputo Província	95.3	96.5	97.3	0.5	0.3	0.3	3.9	2.8	2.3	0.3	0.4	0.1
Maputo Cidade	85.6	90.5	93.0	3.0	1.7	1.4	9.5	6.4	4.7	1.9	1.4	0.9
Mozambique	94.4	96.3	96.5	0.9	0.5	0.5	3.9	2.6	2.6	0.8	0.6	0.4

Source: authors' computation using data from 1997 and 2007 Mozambique censuses and 10 per cent sample of 2017 Mozambique census.

Appendix

Figure A1: Mozambican identities—languages, 1967/1997/2007
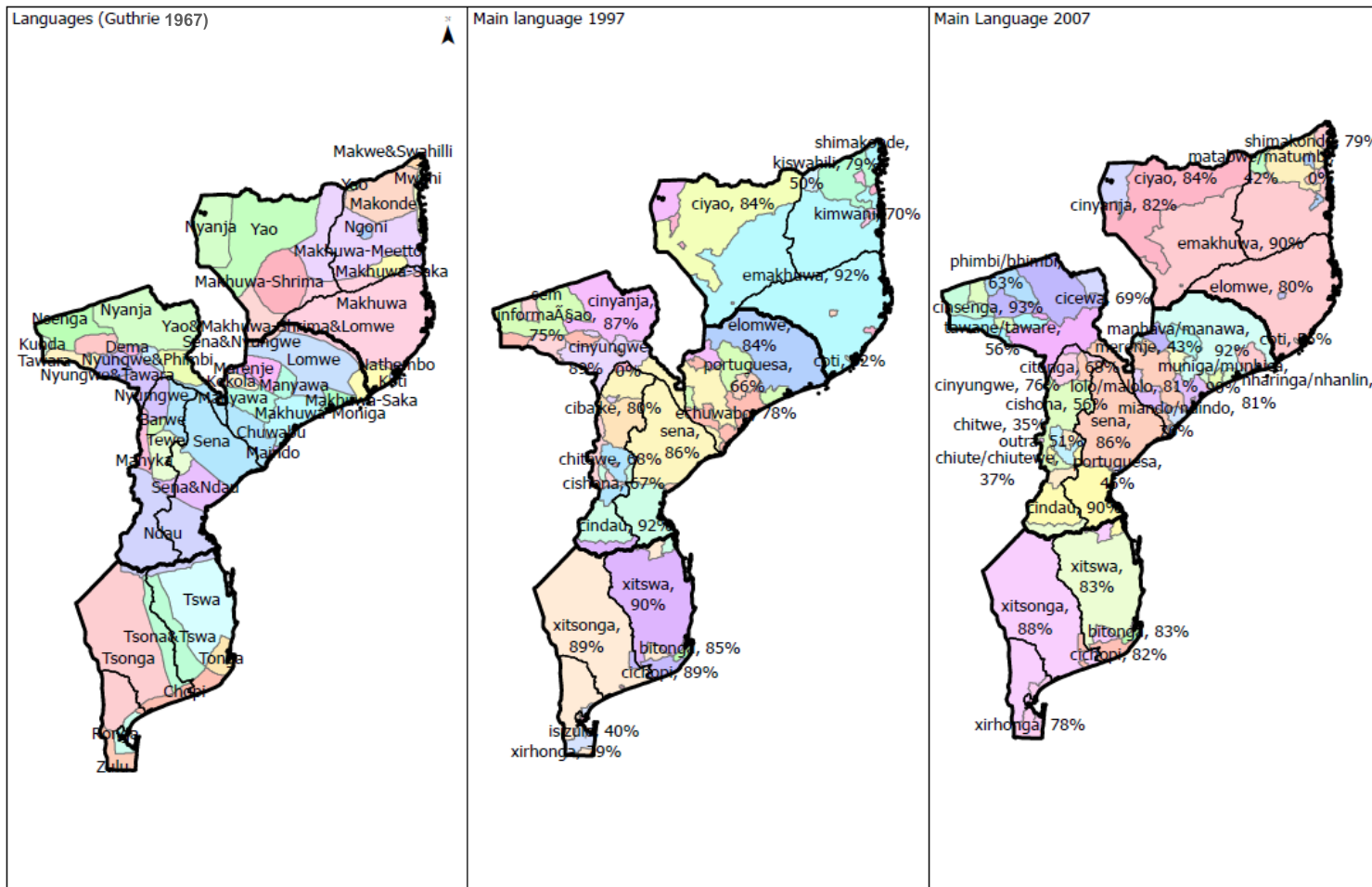
Source: composed by authors using ArcGis and data from the 1997 and 2007 censuses and the languages map in Guthrie (1967).

Figure A2: Lorenz curves for intersecting inequalities—northern region

Niassa

	Equality	Niassa 1997
	Niassa 2007	Niassa 2017

Cabo Delgado

	Equality	Cabo Delgado 1997
	Cabo Delgado 2007	Cabo Delgado 2017

Nampula

	Equality	Nampula 1997
	Nampula 2007	Nampula 2017

Source: authors' computation using data from 1997 and 2007 Mozambique censuses and 10 per cent sample of 2017 Mozambique census.

Figure A3: Lorenz curves for intersecting inequalities—central region
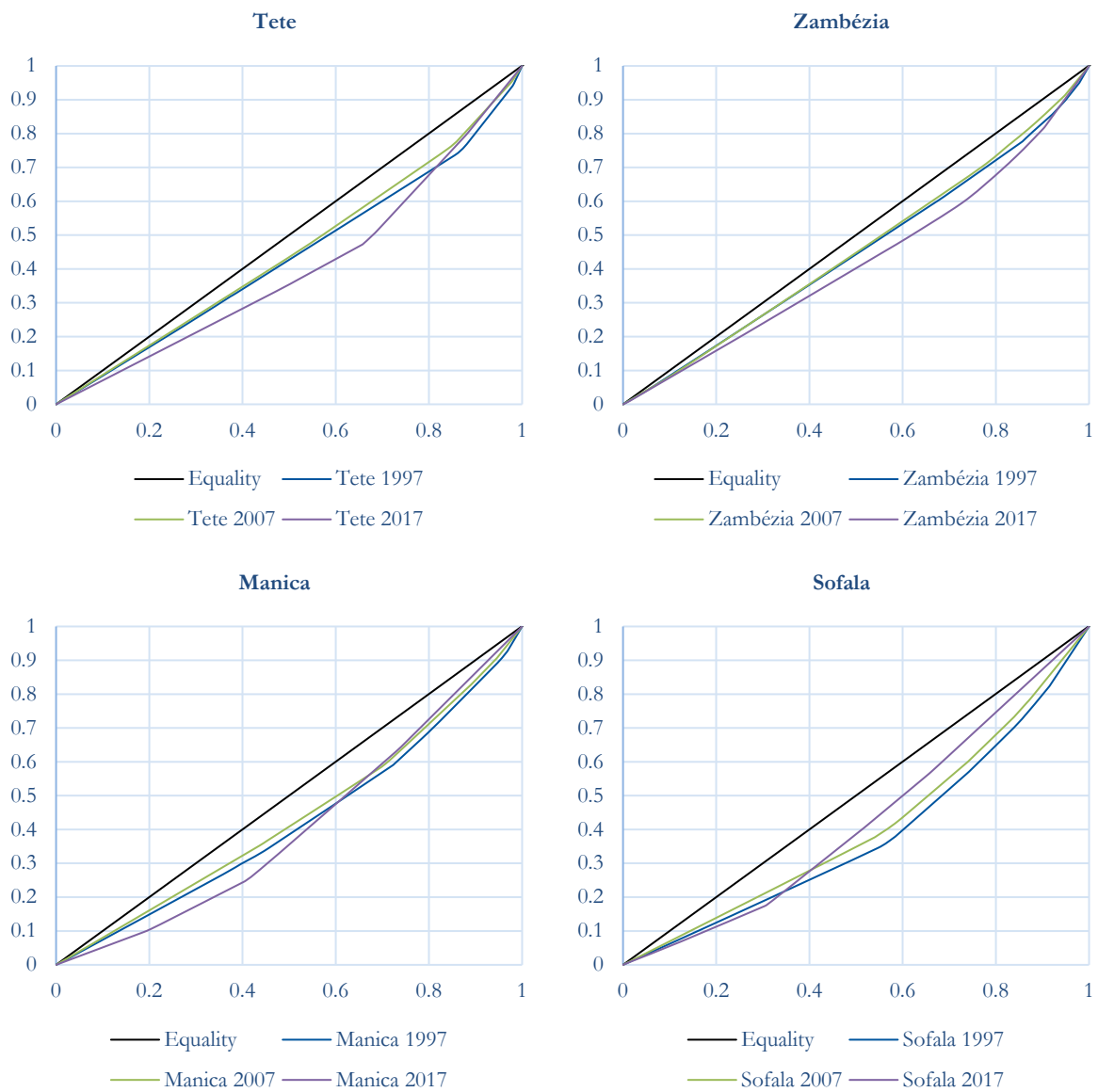
Figure A4: Lorenz curves for intersecting inequalities—southern region
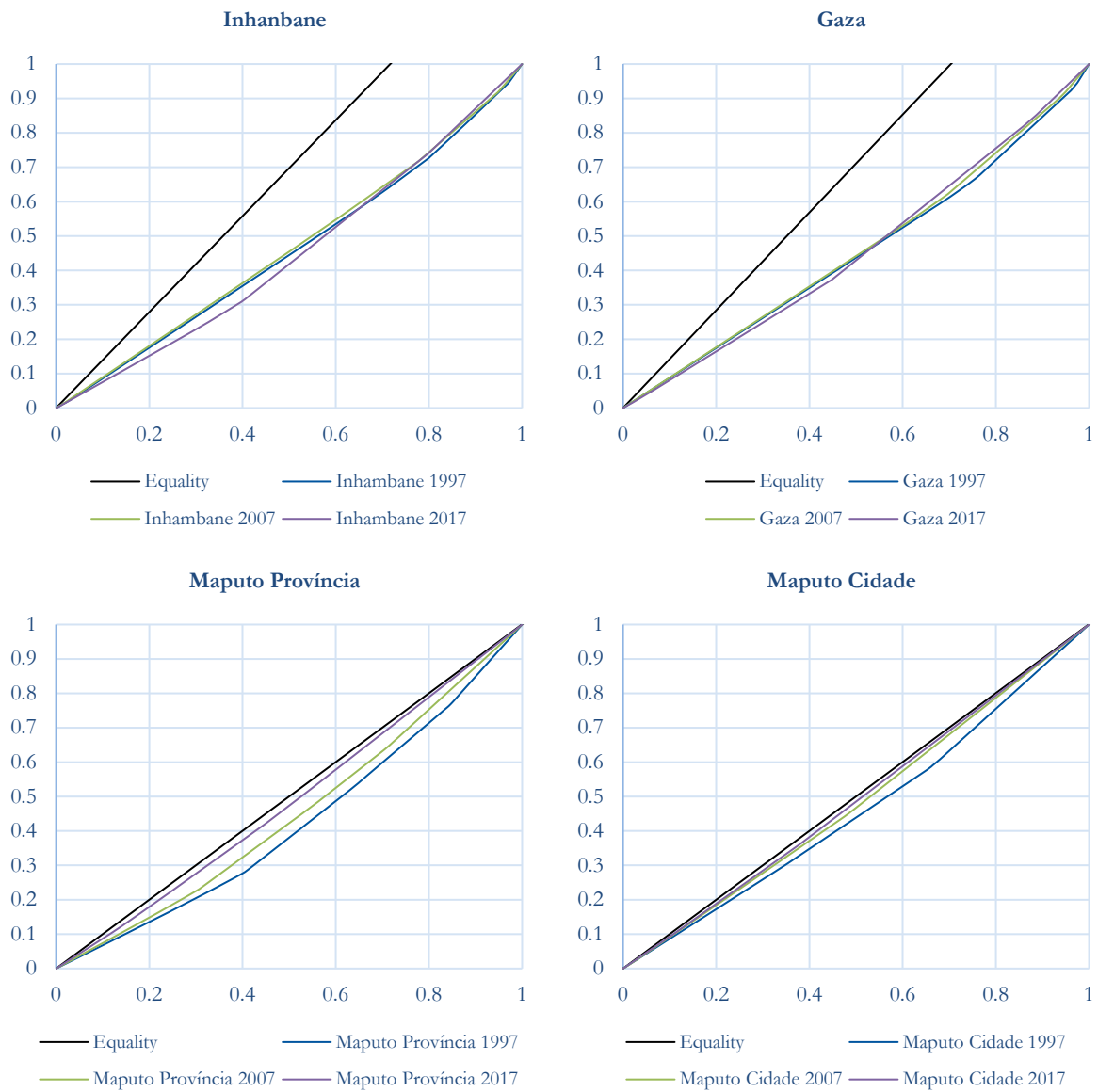
Source: authors' computation using data from 1997 and 2007 Mozambique censuses and 10 per cent sample of 2017 Mozambique census.

Table A1: Description of wealth indicators

Wealth indicator	Not deprived if …
Schooling	At least one adult household member has completed primary school.
Child schooling	School-aged children, members of the household are frequenting school.
Sanitation	A household's sanitation facility is improved (according to SDG guidelines) and not shared with other households even if improved. A household is considered to have access to improved sanitation if it has some type of flush toilet or latrine, or ventilated improved pit or composting toilet, provided they are not shared.
Drinking water	A household has access to improved drinking water (according to SDG guidelines). A household has access to clean drinking water if the water source is any of the following types: piped water, public tap, borehole or pump, protected well, protected spring or rainwater.
Electricity	A household has access to the electricity grid.
Housing	A household has adequate housing. A household is deprived in housing if the floor is made of mud/clay/earth, sand, or dung; or if the dwelling has no roof or walls or if either the roof or walls are constructed using natural materials such as cane, palm/trunks, sod/mud, dirt, grass/reeds, thatch, bamboo, sticks, or rudimentary materials such as carton, plastic/polythene sheeting, bamboo with mud/stone with mud, loosely packed stones, adobe not covered, raw/reused wood, plywood, cardboard, unburnt brick, or canvas/tent.

Note: SDGs, Sustainable Development Goals.

Source: authors' adaptation from Alkire et al. (2019).

Table A2: Ethnolinguistic composition of migrant population

	Niassa			Cabo Delgado			Nampula			Zambézia			Tete			Manica		
	1997	2007	2017	1997	2007	2017	1997	2007	2017	1997	2007	2017	1997	2007	2017	1997	2007	2017
Emakhuwa	*33.8*	*31.9*	*36.7*	*61.6*	*50.2*	*60.7*	*64.8*	*39.2*	*73.3*	8.6	*12.6*	5.2	0.7	1.0	0.9	1.6	1.5	0.8
Português	6.8	9.8	*11.2*	4.3	8.7	*10.3*	*13.7*	*23.0*	*13.8*	6.7	*11.2*	*13.6*	3.1	4.0	*12.8*	5.8	7.0	*17.9*
Xichangana	1.9	1.3	0.8	1.0	1.8	0.7	0.7	1.5	0.4	0.8	1.2	0.6	0.7	0.8	0.9	3.2	2.6	1.4
Elomwue	1.8	1.2	2.7	0.3	0.5	0.3	5.2	7.8	1.8	*20.4*	*14.4*	*31.0*	0.2	0.2	0.2	0.9	0.7	0.4
Cinyanja	*10.3*	*14.9*	*13.3*	0.3	0.7	0.2	0.6	1.1	0.2	2.4	*23.8*	4.1	*30.4*	*50.7*	*42.2*	0.5	0.9	0.4
Cisena	0.8	0.7	0.4	0.4	0.7	0.3	0.7	1.1	0.3	*20.9*	*19.9*	8.8	*16.4*	*12.5*	*10.9*	*23.0*	*27.1*	*17.3*
Echuabo	1.0	1.0	0.6	0.5	1.1	0.4	1.9	3.9	1.0	2.7	5.0	*12.4*	0.9	2.2	1.1	2.9	4.3	2.0
Cindau	0.3	0.2	0.1	0.3	0.4	0.1	0.2	0.4	0.1	0.4	0.4	0.1	0.6	0.9	0.6	*28.0*	*22.6*	*18.2*
Xitswa	0.2	0.1	0.5	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.8	0.3	0.2	0.4	1.9	1.6	0.6
Other	*43.1*	*38.9*	*33.7*	*31.2*	*35.7*	*26.9*	*12.1*	*21.8*	9.0	*37.0*	*11.4*	*23.4*	*46.7*	*27.5*	*30.0*	*32.2*	*31.7*	*41.0*
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

	Sofala			Inhambane			Gaza			Maputo Província			Maputo Cidade			Mozambique		
	1997	2007	2017	1997	2007	2017	1997	2007	2017	1997	2007	2017	1997	2007	2017	1997	2007	2017
Emakhuwa	3.1	3.4	2.0	0.9	1.2	0.9	1.2	1.3	0.8	1.4	1.5	1.8	2.0	2.4	2.0	*13.3*	7.8	*18.0*
Português	*14.4*	*14.7*	*22.7*	*11.1*	*16.9*	*18.8*	9.7	*16.4*	*18.1*	*13.6*	*27.7*	*36.9*	*13.8*	*21.4*	*43.1*	*10.6*	*17.4*	*21.7*
Xichangana	1.1	1.4	1.5	*19.3*	*19.5*	9.3	*56.7*	*50.2*	*62.5*	*38.0*	*33.1*	*30.9*	*37.0*	*34.5*	*28.8*	*17.8*	*18.1*	*11.0*
Elomwue	1.9	2.7	1.9	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.3	0.3	0.3	2.4	1.9	4.8
Cinyanja	0.6	1.1	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	3.5	6.9	4.6
Cisena	*31.6*	*33.3*	*34.7*	1.3	1.7	0.7	0.7	0.9	0.6	0.8	1.0	1.1	0.8	1.3	0.9	8.6	9.1	7.4
Echuabo	*15.3*	*19.8*	*13.1*	0.6	0.7	0.6	0.9	1.5	1.1	1.4	2.6	4.3	2.8	4.5	4.6	3.2	4.8	4.5
Cindau	6.5	5.8	*12.1*	3.7	3.9	2.6	1.0	0.9	0.4	0.7	0.7	0.6	1.1	1.2	0.7	4.0	3.6	3.4
Xitswa	9.9	6.4	2.1	*23.7*	*23.9*	*42.1*	3.2	4.3	3.7	*12.3*	*10.3*	*10.5*	9.2	8.5	5.8	6.1	6.0	4.3
Other	*15.6*	*11.4*	9.5	*39.0*	*31.9*	*24.7*	*26.3*	*24.2*	*12.6*	*31.4*	*22.7*	*13.3*	*32.8*	*25.7*	*13.7*	*30.5*	*24.4*	*20.3*
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: entries in bold-italics indicate shares above 10 per cent.

Source: authors' computation using data from 1997 and 2007 Mozambique censuses and 10 per cent sample of 2017 Mozambique census.

Table A3: HWI, schooling, home, and services dimension regressions

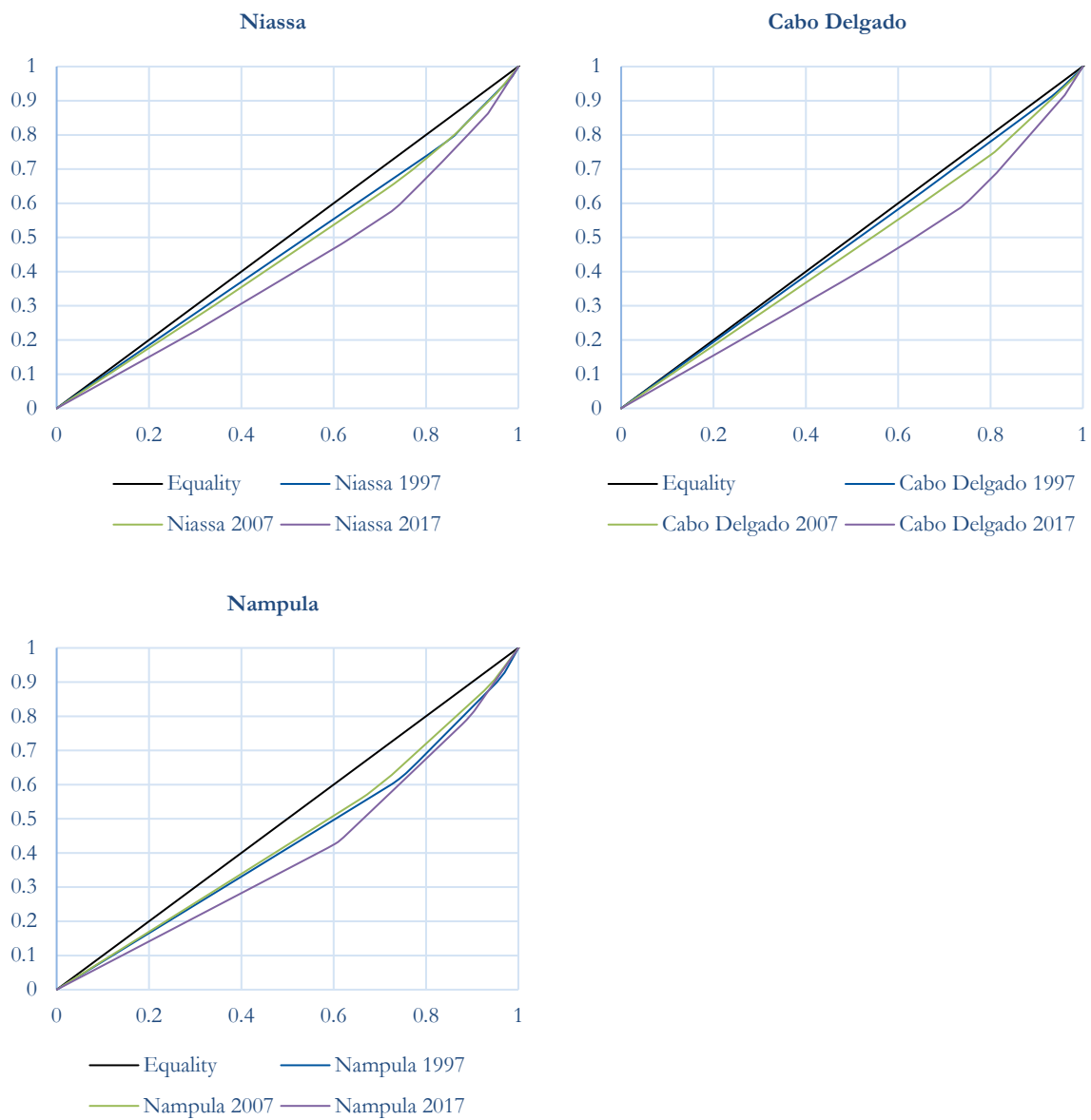|	Mean wealth index			Schooling dimension			Home dimension			Services dimension		
	1997	2007	2017	1997	2007	2017	1997	2007	2017	1997	2007	2017
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Constant	0.745***	0.919***	0.787***	1.475***	1.703***	1.787***	2.727***	3.365***	2.984***	2.869***	3.814***	2.406***
	−0.001	−0.005	−0.026	−0.002	−0.017	−0.081	−0.003	−0.025	−0.105	−0.003	−0.024	−0.122
Niassa	−0.302***	−0.415***	−0.077**	−0.330***	−0.487***	−0.087	−2.207***	−1.748***	−1.273***	−1.478***	−2.349***	−0.128
	−0.004	−0.005	−0.027	−0.012	−0.018	−0.082	−0.014	−0.026	−0.106	−0.015	−0.026	−0.124
Cabo Delgado	−0.335***	−0.365***	−0.071**	−0.340***	−0.425***	−0.102	−2.264***	−2.083***	−1.204***	−1.760***	−1.888***	−0.055
	−0.009	−0.006	−0.027	−0.028	−0.018	−0.083	−0.032	−0.027	−0.107	−0.036	−0.026	−0.125
Nampula	−0.227***	−0.360***	−0.065*	−0.311***	−0.496***	−0.131	−1.666***	−1.714***	−1.167***	−0.949***	−1.789***	0.062
	−0.001	−0.005	−0.027	−0.004	−0.017	−0.082	−0.005	−0.025	−0.105	−0.006	−0.025	−0.123
Zambézia	−0.245***	−0.403***	−0.226***	−0.282***	−0.541***	−0.123**	−1.868***	−2.181***	−1.925***	−1.132***	−1.956***	−1.312***
	−0.002	−0.005	−0.012	−0.005	−0.017	−0.037	−0.006	−0.025	−0.048	−0.006	−0.025	−0.056
Tete	−0.083***	−0.245***	0.037	−0.109***	−0.335***	−0.024	−0.780***	−1.031***	−0.276**	−0.299***	−1.263***	0.526***
	−0.003	−0.006	−0.027	−0.009	−0.018	−0.082	−0.01	−0.027	−0.106	−0.011	−0.026	−0.124
Manica	−0.170***	−0.309***	−0.028	−0.131***	−0.386***	0.018	−1.042***	−1.141***	−0.590***	−1.037***	−1.749***	−0.132
	−0.002	−0.005	−0.02	−0.007	−0.017	−0.062	−0.008	−0.026	−0.079	−0.009	−0.025	−0.093
Sofala	−0.128***	−0.277***	0.153***	−0.171***	−0.367***	0.307***	−0.490***	−1.169***	0.301***	−0.692***	−1.460***	0.658***
	−0.001	−0.005	−0.02	−0.004	−0.017	−0.06	−0.005	−0.025	−0.078	−0.005	−0.025	−0.091
Inhambane	−0.221***	−0.324***	0.027	−0.199***	−0.360***	0.041	−1.299***	−1.936***	−0.791***	−1.288***	−1.696***	0.430***
	−0.002	−0.005	−0.027	−0.007	−0.017	−0.083	−0.008	−0.026	−0.106	−0.009	−0.025	−0.124
Gaza	−0.084***	−0.230***	0.083**	−0.088***	−0.281***	0.081	−0.586***	−1.436***	−0.418***	−0.430***	−1.119***	0.771***
	−0.002	−0.005	−0.026	−0.008	−0.016	−0.079	−0.009	−0.024	−0.102	−0.01	−0.023	−0.119
Maputo Província	−0.107***	−0.061***	−0.013***	−0.126***	−0.055***	−0.036***	−0.248***	−0.152***	0.015	−0.668***	−0.424***	−0.039***
	−0.001	−0.001	−0.002	−0.004	−0.002	−0.008	−0.005	−0.004	−0.01	−0.005	−0.004	−0.011
Emakhuwa	−0.042***	−0.214***	0.023	0.016	−0.347***	−0.037	−0.185***	−0.599***	−0.082	−0.248***	−1.067***	0.353*
	−0.004	−0.007	−0.032	−0.015	−0.021	−0.1	−0.017	−0.031	−0.128	−0.019	−0.03	−0.15
Xichangana	−0.047***	−0.273***	0.021	−0.066***	−0.489***	−0.075	0.179***	−0.741***	−0.075	−0.374***	−1.258***	0.426***
	−0.005	−0.005	−0.027	−0.015	−0.017	−0.082	−0.017	−0.025	−0.105	−0.019	−0.025	−0.123
Elomwe	−0.048***	−0.224***	0.001	−0.049	−0.359***	−0.013	−0.101*	−0.615***	−0.21	−0.223***	−1.133***	0.11
	−0.012	−0.011	−0.044	−0.039	−0.035	−0.137	−0.044	−0.052	−0.176	−0.05	−0.051	−0.205
Cinyanja	0.038*	−0.184***	0.076	0.132**	−0.276***	−0.037	0.078	−0.572***	−0.359	0.131*	−0.935***	0.969**
	−0.015	−0.016	−0.075	−0.05	−0.05	−0.231	−0.057	−0.075	−0.297	−0.064	−0.073	−0.347
Cisena	−0.036***	−0.217***	0.045	−0.008	−0.338***	0.062	−0.109***	−0.617***	−0.107	−0.157***	−1.117***	0.333*
	−0.007	−0.008	−0.035	−0.024	−0.025	−0.108	−0.028	−0.037	−0.139	−0.032	−0.037	−0.163
Echuabo	−0.091***	−0.272***	0.018	−0.093***	−0.445***	−0.122	−0.302***	−0.745***	−0.08	−0.535***	−1.357***	0.514***
	−0.004	−0.006	−0.028	−0.012	−0.019	−0.086	−0.013	−0.028	−0.11	−0.015	−0.027	−0.129
Cindau	−0.084***	−0.223***	0.05	−0.097***	−0.349***	−0.014	−0.173***	−0.595***	0.001	−0.485***	−1.153***	0.533**
	−0.005	−0.007	−0.036	−0.018	−0.023	−0.111	−0.021	−0.035	−0.142	−0.023	−0.034	−0.167
Xitswa	−0.201***	−0.309***	−0.015	−0.317***	−0.512***	−0.193*	−0.494***	−1.012***	−0.104	−1.056***	−1.476***	0.371**
	−0.002	−0.006	−0.028	−0.006	−0.018	−0.086	−0.007	−0.026	−0.11	−0.008	−0.026	−0.129
Other	−0.191***	−0.270***	−0.007	−0.324***	−0.453***	−0.196*	−0.402***	−0.832***	0.113	−0.965***	−1.290***	0.454***
	−0.001	−0.005	−0.027	−0.003	−0.017	−0.083	−0.004	−0.025	−0.106	−0.004	−0.025	−0.124
Main language	−0.172***	−0.181***	0.077**	−0.341***	−0.254***	0.082	−0.574***	−0.542***	−0.031	−0.679***	−0.992***	0.570***
	−0.004	−0.005	−0.026	−0.015	−0.017	−0.081	−0.017	−0.025	−0.104	−0.019	−0.024	−0.122

	Mean wealth index			Schooling dimension			Home dimension			Services dimension		
	1997	2007	2017	1997	2007	2017	1997	2007	2017	1997	2007	2017
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Rural	−0.202***	−0.272***	0.061*	−0.226***	−0.324***	0.033	−1.181***	−1.218***	−0.069	−1.074***	−1.504***	0.554***
	−0.003	−0.005	−0.026	−0.011	−0.016	−0.08	−0.013	−0.023	−0.103	−0.014	−0.023	−0.12
Rural Emakhuwa	0.053**	0.181***	−0.094*	0.022	0.267***	−0.011	0.072	0.552***	−0.12	0.231**	0.953***	−0.872***
	−0.017	−0.012	−0.048	−0.055	−0.039	−0.147	−0.063	−0.058	−0.189	−0.072	−0.057	−0.221
Rural Xichangana	0.040***	0.315***	−0.220***	0.02	0.420***	−0.28	0.156***	0.797***	−0.208	0.310***	1.831***	−1.429***
	−0.004	−0.01	−0.052	−0.012	−0.032	−0.161	−0.013	−0.048	−0.207	−0.015	−0.047	−0.243
Rural Elomwe	0.035	0.217***	−0.099	0.084	0.312***	−0.153	−0.234	0.971***	−0.164	0.043	1.065***	−0.553
	−0.044	−0.021	−0.063	−0.145	−0.068	−0.192	−0.175	−0.102	−0.247	−0.197	−0.099	−0.289
Rural Cinyanja	−0.035	0.135***	−0.251	−0.136	0.191	−0.866	0.032	0.671***	0.125	−0.163	0.650***	−0.388
	−0.038	−0.031	−0.206	−0.125	−0.099	−0.632	−0.147	−0.148	−0.813	−0.165	−0.144	−0.951
Rural Cisena	0.009	0.157***	−0.181***	−0.054	0.238***	−0.224	−0.092	0.406***	−0.173	0.008	0.845***	−1.191***
	−0.021	−0.014	−0.049	−0.068	−0.044	−0.151	−0.079	−0.066	−0.194	−0.089	−0.064	−0.227
Rural Echuabo	0.019	0.209***	−0.086**	0.008	0.230***	−0.076	0.248***	0.894***	0.009	0.071	1.219***	−0.672***
	−0.019	−0.009	−0.032	−0.061	−0.028	−0.098	−0.07	−0.041	−0.127	−0.079	−0.04	−0.148
Rural Cindau	0.056**	0.150***	−0.066	0.079	0.246***	−0.088	−0.044	0.313***	−0.208	0.047	0.777***	−0.368
	−0.018	−0.014	−0.06	−0.058	−0.046	−0.186	−0.067	−0.068	−0.239	−0.076	−0.067	−0.279
Rural Xitswa	0.042***	0.121***	−0.126***	0.113***	0.198***	−0.149	−0.242***	−0.033	−0.271*	0.226***	0.723***	−0.796***
	−0.005	−0.006	−0.029	−0.016	−0.018	−0.09	−0.018	−0.027	−0.116	−0.02	−0.026	−0.135
Rural Other	0.014***	0.114***	−0.102***	−0.032**	0.161***	−0.128	0.012	0.117***	−0.12	0.223***	0.695***	−0.657***
	−0.004	−0.005	−0.024	−0.012	−0.015	−0.075	−0.014	−0.022	−0.097	−0.015	−0.022	−0.113

Niassa specific	Mean wealth index			Schooling dimension			Home dimension			Services dimension		
	1997	2007	2017	1997	2007	2017	1997	2007	2017	1997	2007	2017
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Rural	0.052***	0.128***	−0.386***	0.074***	0.142***	−0.450***	0.756***	0.353***	−1.341***	0.099***	0.808***	−2.291***
	−0.006	−0.006	−0.028	−0.019	−0.018	−0.085	−0.022	−0.027	−0.109	−0.025	−0.026	−0.128
Emakhuwa	0.050***	0.299***	−0.324***	0.003	0.409***	−0.442*	0.341***	0.715***	−0.883***	0.233***	1.719***	−1.838***
	−0.007	−0.011	−0.056	−0.024	−0.036	−0.173	−0.028	−0.054	−0.223	−0.031	−0.053	−0.26
Xichangana	0.081***	0.374***	0.069	0.255***	0.650***	0.255	−0.108	1.181***	0.604**	0.237**	1.728***	−0.144
	−0.019	−0.012	−0.048	−0.063	−0.039	−0.148	−0.071	−0.058	−0.19	−0.081	−0.056	−0.222
Elomwe	−0.008	0.128***	−0.075	−0.022	0.268***	−0.142	−0.175**	0.198**	0.112	−0.073	0.543***	−0.434
	−0.017	−0.015	−0.054	−0.057	−0.05	−0.165	−0.065	−0.074	−0.212	−0.073	−0.072	−0.248
Cinyanja	−0.186***	0.119***	−0.326***	−0.490***	0.107*	−0.328	−0.417***	0.219**	−0.618*	−0.606***	0.831***	−2.233***
	−0.016	−0.016	−0.076	−0.053	−0.051	−0.233	−0.06	−0.076	−0.299	−0.068	−0.074	−0.35
Cisena	−0.045	0.305***	0.011	−0.237*	0.539***	0.237	0.09	0.951***	0.123	−0.033	1.390***	−0.521
	−0.031	−0.02	−0.07	−0.104	−0.063	−0.214	−0.117	−0.093	−0.275	−0.132	−0.091	−0.322
Echuabo	0.084***	0.293***	−0.068	0.069	0.508***	0.159	0.375***	0.744***	−0.211	0.533***	1.421***	−1.003***
	−0.024	−0.015	−0.054	−0.079	−0.049	−0.165	−0.09	−0.073	−0.212	−0.102	−0.071	−0.248
Cindau	0.112**	0.326***	−0.198**	0.328*	0.508***	−0.141	0.278	1.211***	−0.53	0.157	1.625***	−1.448***
	−0.042	−0.03	−0.07	−0.139	−0.096	−0.215	−0.157	−0.146	−0.277	−0.177	−0.139	−0.324
Xitswa	0.140*	0.462***	−0.037	0.339	0.705***	0.136	0.642*	1.714***	−0.179	0.332	2.284***	−0.650*
	−0.068	−0.035	−0.06	−0.224	−0.113	−0.185	−0.253	−0.168	−0.238	−0.286	−0.165	−0.278
Other	0.022***	0.109***	−0.240***	0.005	0.094***	−0.351***	0.095***	0.429***	−0.606***	0.184***	0.709***	−1.315***
	−0.005	−0.006	−0.027	−0.016	−0.018	−0.084	−0.018	−0.027	−0.109	−0.021	−0.026	−0.127
Rural Emakhuwa	0.006	−0.166***	0.208***	−0.042	−0.337***	0.095	0.274***	−0.366***	0.941***	0.292***	−0.691***	1.525***
	−0.017	−0.013	−0.049	−0.057	−0.04	−0.15	−0.066	−0.06	−0.193	−0.075	−0.059	−0.226
Rural Xichangana	−0.054*	−0.400***	0.067	−0.195**	−0.508***	−0.182	−0.112	−1.290***	−0.21	−0.037	−2.310***	1.194**
	−0.021	−0.019	−0.082	−0.07	−0.062	−0.252	−0.08	−0.092	−0.324	−0.09	−0.09	−0.379
Rural Elomwe	−0.054	−0.211***	0.081	−0.259	−0.486***	−0.045	0.452*	−0.654***	0.281	0.128	−0.675***	0.825*
	−0.047	−0.025	−0.07	−0.154	−0.079	−0.216	−0.184	−0.118	−0.278	−0.207	−0.115	−0.325
Rural Cinyanja	0.090*	−0.127***	0.419*	0.16	−0.280**	0.878	0.261	−0.163	0.903	0.550**	−0.522***	1.691
	−0.039	−0.031	−0.206	−0.127	−0.099	−0.634	−0.149	−0.149	−0.815	−0.168	−0.145	−0.953
Rural Cisena	0.027	−0.224***	0.109	0.111	−0.365**	0.041	0.041	−0.813***	−0.144	0.23	−1.065***	1.037
	−0.045	−0.038	−0.118	−0.149	−0.123	−0.363	−0.169	−0.183	−0.467	−0.191	−0.179	−0.547
Rural Echuabo	0.032	−0.278***	0.09	0.224	−0.528***	−0.044	−0.370*	−0.813***	−0.02	−0.12	−1.199***	1.020*
	−0.039	−0.021	−0.105	−0.129	−0.066	−0.324	−0.147	−0.098	−0.416	−0.166	−0.096	−0.487
Rural Cindau	−0.092	−0.223***	0.204	−0.342	−0.308*	0.46	0.003	−0.941***	0.437	0.266	−1.192***	0.741
	−0.056	−0.047	−0.131	−0.185	−0.151	−0.403	−0.21	−0.226	−0.518	−0.237	−0.22	−0.606
Rural Xitswa	0.041	−0.224***	0.059	−0.089	−0.214	−0.258	0.115	−0.735**	0.526*	0.583	−1.458***	1.060***
	−0.076	−0.052	−0.067	−0.249	−0.166	−0.206	−0.282	−0.245	−0.265	−0.318	−0.241	−0.309
Rural Other	0.051***	−0.043***	0.220***	−0.036	−0.172***	0.275***	0.253***	0.229***	0.687***	0.502***	−0.077**	1.282***
	−0.007	−0.006	−0.026	−0.023	−0.018	−0.081	−0.026	−0.027	−0.105	−0.029	−0.026	−0.122
Main language	0	0	0	0	0	0	0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)

cont.

Cabo Delgado specific	Mean wealth index			Schooling dimension			Home dimension			Services dimension		
	1997	2007	2017	1997	2007	2017	1997	2007	2017	1997	2007	2017
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Rural	0.115***	0.071***	−0.381***	0.130***	0.086***	−0.403***	0.817***	0.283***	−1.420***	0.566***	0.401***	−2.333***
	−0.01	−0.006	−0.028	−0.032	−0.018	−0.085	−0.037	−0.027	−0.109	−0.041	−0.027	−0.128
Emakhuwa	0.052***	0.227***	−0.293***	−0.068	0.224***	−0.427*	0.414***	0.472***	−0.633**	0.400***	1.552***	−1.653***
	−0.011	−0.011	−0.056	−0.036	−0.037	−0.173	−0.04	−0.054	−0.223	−0.046	−0.053	−0.26
Xichangana	0.027	0.359***	0.004	−0.186	0.608***	0.12	0.005	0.972***	0.430*	0.737***	1.756***	−0.399*
	−0.041	−0.014	−0.042	−0.137	−0.046	−0.13	−0.154	−0.068	−0.168	−0.174	−0.067	−0.196
Elomwe	−0.095	0.277***	−0.032	−0.419	0.503***	0.027	0.638	0.612***	−0.071	−0.219	1.319***	−0.362
	−0.097	−0.027	−0.077	−0.32	−0.086	−0.237	−0.362	−0.13	−0.305	−0.408	−0.125	−0.356
Cinyanja	0.078	0.079***	−0.088	0.234	0.083	0.152	−0.541	0.021	0.179	0.26	0.552***	−1.320*
	−0.119	−0.023	−0.116	−0.392	−0.074	−0.358	−0.443	−0.111	−0.46	−0.5	−0.108	−0.538
Cisena	0.230**	0.299***	−0.026	0.623*	0.511***	−0.081	0.896**	0.980***	−0.118	0.299	1.385***	−0.019
	−0.084	−0.031	−0.075	−0.276	−0.098	−0.231	−0.312	−0.145	−0.297	−0.353	−0.142	−0.348
Echuabo	0.309***	0.398***	0.096	0.626**	0.703***	0.223	0.673**	1.124***	0.585*	1.260***	1.852***	0.206
	−0.069	−0.021	−0.06	−0.226	−0.066	−0.185	−0.255	−0.099	−0.238	−0.288	−0.096	−0.278
Cindau	0.152	0.366***	0.034	0.296	0.571***	0.329	2.043***	1.007***	−0.281	0.043	1.894***	−0.385
	−0.097	−0.028	−0.145	−0.318	−0.091	−0.446	−0.359	−0.135	−0.574	−0.406	−0.132	−0.671
Xitswa	0.392*	0.501***	0.043	1.182*	0.967***	0.508	0.032	1.330***	−0.343	0.947	2.151***	−0.723
	−0.167	−0.043	−0.118	−0.549	−0.137	−0.363	−0.62	−0.203	−0.467	−0.7	−0.199	−0.546
Other	0.053***	0.110***	−0.252***	−0.099***	0.112***	−0.192*	0.179***	0.097***	−0.852***	0.720***	0.790***	−1.755***
	−0.009	−0.006	−0.028	−0.029	−0.019	−0.085	−0.033	−0.028	−0.109	−0.037	−0.027	−0.128
Rural Emakhuwa	−0.009	−0.084***	0.154**	−0.025	−0.188***	−0.038	0.195**	0.03	0.681***	0.136	−0.374***	1.412***
	−0.019	−0.013	−0.049	−0.063	−0.04	−0.15	−0.073	−0.06	−0.193	−0.082	−0.059	−0.226
Rural Xichangana	−0.007	−0.366***	0.239*	0.238	−0.448***	0.492	−0.163	−0.905***	−0.294	−0.610***	−2.242***	1.259**
	−0.043	−0.022	−0.098	−0.143	−0.071	−0.3	−0.161	−0.105	−0.386	−0.182	−0.103	−0.452
Rural Elomwe	0.074	−0.09	0.105	0.238	0.151	−0.066	−0.151	−0.844***	0.599	0.37	−1.014***	1.010*
	−0.111	−0.051	−0.111	−0.364	−0.165	−0.341	−0.416	−0.245	−0.439	−0.47	−0.239	−0.513
Rural Cinyanja	−0.104	−0.109**	0.143	−0.309	−0.263*	0.436	0.498	−0.342*	−0.235	−0.288	−0.327*	0.417
	−0.129	−0.036	−0.245	−0.423	−0.114	−0.754	−0.48	−0.171	−0.97	−0.542	−0.166	−1.134
Rural Cisena	−0.245**	−0.204***	0.154	−0.776**	−0.293	0.235	−0.647	−0.800***	0.338	−0.045	−1.040***	0.842
	−0.091	−0.05	−0.099	−0.299	−0.16	−0.306	−0.338	−0.236	−0.394	−0.382	−0.232	−0.46
Rural Echuabo	−0.266***	−0.273***	−0.003	−0.579*	−0.349**	−0.09	−0.717*	−0.870***	−0.555	−0.955**	−1.571***	0.38
	−0.077	−0.038	−0.117	−0.252	−0.121	−0.361	−0.285	−0.18	−0.464	−0.322	−0.176	−0.543
Rural Cindau	−0.151	−0.248***	0.269	−0.364	−0.383**	0.458	−1.902***	−0.541**	1.198	0.366	−1.340***	1.147
	−0.101	−0.042	−0.208	−0.334	−0.136	−0.639	−0.378	−0.201	−0.822	−0.426	−0.198	−0.961
Rural Xitswa	−0.263	−0.273***	0.452*	−1.094	−0.638***	0.519	0.837	−0.076	1.928**	−0.179	−1.109***	2.575**
	−0.173	−0.058	−0.184	−0.57	−0.185	−0.565	−0.644	−0.274	−0.727	−0.727	−0.269	−0.85
Rural Other	0.011	−0.018**	0.254***	0.079*	−0.039*	0.187*	0.147***	0.386***	1.051***	−0.134**	−0.207***	1.723***
	−0.01	−0.006	−0.026	−0.033	−0.018	−0.082	−0.038	−0.027	−0.105	−0.042	−0.026	−0.123
Main language	0	0	0	0	0	0	0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)

cont.

Nampula specific	Mean wealth index			Schooling dimension			Home dimension			Services dimension		
	1997	2007	2017	1997	2007	2017	1997	2007	2017	1997	2007	2017
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Rural	−0.033***	0.049***	−0.357***	0.033**	0.094***	−0.311***	0.206***	0.215***	−1.381***	−0.477***	0.181***	−2.328***
	−0.004	−0.005	−0.027	−0.012	−0.016	−0.083	−0.014	−0.024	−0.106	−0.016	−0.024	−0.124
Emakhuwa	−0.01	0.219***	−0.339***	−0.080***	0.260***	−0.496**	0.066**	0.573***	−0.766***	−0.070*	1.348***	−1.896***
	−0.006	−0.011	−0.056	−0.021	−0.036	−0.172	−0.024	−0.053	−0.222	−0.027	−0.052	−0.259
Xichangana	0.169***	0.424***	0.075	0.332***	0.760***	0.287*	0.350***	1.370***	0.616***	0.792***	1.881***	−0.177
	−0.011	−0.01	−0.038	−0.037	−0.034	−0.117	−0.042	−0.05	−0.151	−0.048	−0.049	−0.177
Elomwe	0.024	0.205***	−0.056	0.101*	0.387***	−0.001	−0.343***	0.415***	−0.149	−0.003	0.938***	−0.506*
	−0.012	−0.012	−0.047	−0.041	−0.038	−0.145	−0.047	−0.056	−0.186	−0.053	−0.055	−0.217
Cinyanja	0.062**	0.282***	−0.115	0.134*	0.460***	−0.095	0.151	0.862***	0.447	0.141	1.355***	−1.056**
	−0.021	−0.02	−0.087	−0.068	−0.066	−0.266	−0.077	−0.098	−0.343	−0.087	−0.096	−0.401
Cisena	0.101***	0.330***	−0.091	0.141*	0.611***	−0.07	0.403***	0.901***	−0.034	0.401***	1.468***	−0.720**
	−0.017	−0.017	−0.048	−0.058	−0.053	−0.148	−0.066	−0.079	−0.19	−0.074	−0.078	−0.222
Echuabo	0.144***	0.298***	0.018	0.263***	0.542***	0.208*	0.293***	0.758***	0.166	0.644***	1.375***	−0.393*
	−0.008	−0.009	−0.033	−0.027	−0.027	−0.102	−0.03	−0.041	−0.131	−0.034	−0.04	−0.153
Cindau	0.186***	0.325***	0.076	0.180**	0.439***	0.267	0.838***	1.222***	0.546*	1.072***	1.743***	−0.092
	−0.02	−0.018	−0.07	−0.067	−0.057	−0.215	−0.075	−0.084	−0.276	−0.085	−0.082	−0.323
Xitswa	0.378***	0.457***	−0.001	0.703***	0.805***	0.037	1.134***	1.706***	0.287	1.636***	1.986***	−0.196
	−0.026	−0.022	−0.06	−0.087	−0.071	−0.184	−0.098	−0.106	−0.237	−0.111	−0.104	−0.277
Other	0.037***	0.158***	−0.157***	0.011	0.196***	−0.16	0.173***	0.484***	−0.350**	0.286***	0.927***	−1.051***
	−0.002	−0.005	−0.027	−0.007	−0.018	−0.084	−0.008	−0.026	−0.108	−0.009	−0.026	−0.126
Rural Emakhuwa	0.067***	−0.077***	0.171***	0.047	−0.199***	−0.061	0.560***	−0.082	0.804***	0.593***	−0.240***	1.599***
	−0.017	−0.012	−0.048	−0.055	−0.039	−0.149	−0.064	−0.058	−0.191	−0.072	−0.057	−0.223
Rural Xichangana	−0.120***	−0.344***	0.148	−0.153*	−0.290**	−0.309	−0.595***	−0.915***	−0.701	−0.669***	−2.399***	2.486**
	−0.023	−0.028	−0.207	−0.076	−0.09	−0.637	−0.086	−0.134	−0.82	−0.097	−0.13	−0.959
Rural Elomwe	−0.015	−0.207***	0.071	−0.166	−0.322***	0.003	0.683***	−0.876***	0.346	0.219	−0.979***	0.588
	−0.045	−0.023	−0.072	−0.147	−0.072	−0.22	−0.177	−0.107	−0.283	−0.2	−0.105	−0.331
Rural Cinyanja	−0.122*	−0.153***	0.353	−0.385*	−0.091	0.954	−0.234	−1.065***	0.087	−0.049	−0.945***	1.114
	−0.049	−0.041	−0.239	−0.163	−0.132	−0.736	−0.188	−0.197	−0.947	−0.212	−0.193	−1.108
Rural Cisena	−0.129***	−0.212***	0.132	−0.318**	−0.438***	0.003	−0.228	−0.607***	0.097	−0.188	−0.824***	1.284***
	−0.033	−0.033	−0.074	−0.109	−0.104	−0.228	−0.124	−0.155	−0.293	−0.14	−0.152	−0.343
Rural Echuabo	0.055	−0.191***	0.125	0.113	−0.160*	0.237	0.349**	−0.868***	0.163	0.169	−1.217***	0.607
	−0.032	−0.02	−0.079	−0.104	−0.063	−0.244	−0.118	−0.094	−0.314	−0.133	−0.092	−0.368
Rural Cindau	−0.186***	−0.237***	0	−0.163	−0.313***	0	−0.708***	−1.030***	0	−0.878***	−1.238***	0
	−0.039	−0.029	(.)	−0.13	−0.092	(.)	−0.148	−0.136	(.)	−0.167	−0.133	(.)
Rural Xitswa	−0.217***	−0.223***	0	−0.469**	−0.412**	0	−0.407*	−0.371	0	−0.867***	−1.045***	0
	−0.053	−0.045	(.)	−0.176	−0.143	(.)	−0.199	−0.221	(.)	−0.224	−0.208	(.)
Rural Other	0.079***	−0.024***	0.131***	0.181***	−0.023	0.078	0.168***	0.054*	0.396***	0.275***	−0.204***	0.983***
	−0.004	−0.005	−0.026	−0.014	−0.016	−0.08	−0.016	−0.024	−0.103	−0.018	−0.024	−0.121
Main language	0	0	0	0	0	0	0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)
												cont.

Zambézia specific	Mean wealth index			Schooling dimension			Home dimension			Services dimension		
	1997	2007	2017	1997	2007	2017	1997	2007	2017	1997	2007	2017
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Rural	−0.027***	0.104***	−0.154***	−0.064***	0.136***	−0.316***	0.481***	0.865***	−0.256***	−0.259***	0.411***	−0.660***
	−0.004	−0.005	−0.01	−0.013	−0.016	−0.032	−0.014	−0.024	−0.041	−0.016	−0.024	−0.048
Emakhuwa	−0.089***	0.198***	0.041	−0.282***	0.322***	−0.077	−0.374***	0.492***	0.307**	−0.216***	1.012***	0.503***
	−0.005	−0.008	−0.029	−0.018	−0.025	−0.089	−0.021	−0.038	−0.114	−0.023	−0.037	−0.133
Xichangana	0.137***	0.430***	0.224***	0.316***	0.770***	0.212	0.093	1.539***	1.302***	0.551***	1.866***	1.280***
	−0.015	−0.012	−0.036	−0.049	−0.039	−0.11	−0.056	−0.058	−0.142	−0.063	−0.057	−0.166
Elomwe	−0.024	0.233***	−0.137***	−0.014	0.337***	−0.512***	0.034	1.113***	0.161	−0.318***	1.111***	−0.147
	−0.013	−0.014	−0.038	−0.042	−0.046	−0.116	−0.048	−0.068	−0.15	−0.054	−0.067	−0.175
Cinyanja	−0.090***	0.196***	−0.047	−0.211**	0.318***	−0.172	−0.232**	0.831***	0.785*	−0.413***	0.867***	−0.305
	−0.023	−0.019	−0.079	−0.077	−0.062	−0.244	−0.087	−0.093	−0.313	−0.099	−0.09	−0.366
Cisena	−0.164***	0.084***	−0.099***	−0.347***	0.078**	−0.420***	−0.254***	0.315***	−0.06	−0.832***	0.536***	0.084
	−0.008	−0.008	−0.029	−0.026	−0.027	−0.089	−0.03	−0.039	−0.115	−0.034	−0.039	−0.134
Echuabo	−0.047***	0.157***	−0.041**	−0.139***	0.244***	−0.227***	−0.299***	0.04	−0.046	−0.069***	0.951***	0.170*
	−0.004	−0.006	−0.015	−0.013	−0.019	−0.048	−0.015	−0.028	−0.061	−0.017	−0.028	−0.072
Cindau	0.095***	0.360***	0.038	0.176*	0.567***	−0.274	0.228**	1.213***	0.753***	0.404***	1.774***	0.810**
	−0.022	−0.021	−0.057	−0.074	−0.067	−0.174	−0.084	−0.099	−0.224	−0.095	−0.097	−0.262
Xitswa	0.249***	0.472***	0.143***	0.410**	0.804***	0.157	0.850***	1.646***	0.812***	1.176***	2.164***	0.767***
	−0.045	−0.025	−0.034	−0.147	−0.081	−0.104	−0.166	−0.12	−0.134	−0.187	−0.118	−0.156
Other	0.002	0.135***	−0.059***	0.020**	0.229***	−0.189***	−0.206***	0.617***	−0.031	0.034***	0.568***	−0.109
	−0.002	−0.005	−0.012	−0.007	−0.018	−0.037	−0.008	−0.026	−0.048	−0.009	−0.026	−0.056
Rural Emakhuwa	−0.003	−0.254***	−0.185***	0	−0.511***	−0.441**	0.362***	−0.872***	−0.547**	0.073	−0.967***	−0.570**
	−0.017	−0.013	−0.046	−0.056	−0.042	−0.141	−0.065	−0.062	−0.181	−0.073	−0.061	−0.212
Rural Xichangana	−0.101***	−0.374***	−0.042	−0.154*	−0.464***	−0.062	−0.459***	−1.570***	−0.926***	−0.477***	−2.060***	0.04
	−0.022	−0.021	−0.062	−0.071	−0.068	−0.19	−0.081	−0.101	−0.245	−0.091	−0.099	−0.286
Rural Elomwe	0.127**	−0.111***	−0.077	0.089	−0.253***	0.242	0.776***	−0.889***	−0.670**	0.965***	−0.181	−1.152***
	−0.044	−0.021	−0.064	−0.145	−0.069	−0.196	−0.175	−0.102	−0.252	−0.198	−0.1	−0.295
Rural Cinyanja	0.006	−0.247***	0.058	−0.113	−0.566***	0.493	0.031	−0.885***	−0.54	0.478**	−0.764***	−0.475
	−0.042	−0.033	−0.207	−0.139	−0.105	−0.637	−0.161	−0.157	−0.819	−0.182	−0.153	−0.958
Rural Cisena	0.089***	−0.117***	0.073	0.067	−0.293***	0.045	0.316***	−0.640***	0.001	0.872***	−0.231***	0.611**
	−0.021	−0.014	−0.045	−0.069	−0.045	−0.138	−0.08	−0.067	−0.177	−0.09	−0.066	−0.207
Rural Echuabo	0.050**	−0.155***	−0.03	0.006	−0.206***	0.072	0.235***	−0.770***	−0.255**	0.433***	−0.776***	−0.399***
	−0.019	−0.009	−0.022	−0.062	−0.028	−0.067	−0.07	−0.042	−0.086	−0.079	−0.041	−0.101
Rural Cindau	−0.061	−0.243***	−0.106	−0.181	−0.399***	0.197	0.087	−1.174***	−0.879*	0.116	−1.045***	−1.264**
	−0.035	−0.033	−0.097	−0.114	−0.107	−0.299	−0.13	−0.158	−0.385	−0.147	−0.156	−0.45
Rural Xitswa	−0.135**	−0.232***	−0.171***	−0.394*	−0.288	−0.411***	−0.13	−0.726**	−0.552***	−0.321	−1.352***	−0.500**
	−0.052	−0.047	−0.037	−0.17	−0.151	−0.114	−0.192	−0.224	−0.146	−0.217	−0.22	−0.171
Rural Other	0.091***	−0.035***	0	0.087***	−0.143***	0	0.466***	−0.204***	0	0.536***	0.077**	0
	−0.004	−0.005	(.)	−0.014	−0.016	(.)	−0.016	−0.024	(.)	−0.018	−0.023	(.)
Main language	0	0	0.074***	0	0	−0.096*	0	0	0.674***	0	0	0.751***
	(.)	(.)	−0.012	(.)	(.)	−0.038	(.)	(.)	−0.049	(.)	(.)	−0.057
												cont.

Tete specific	Mean wealth index			Schooling dimension			Home dimension			Services dimension		
	1997	2007	2017	1997	2007	2017	1997	2007	2017	1997	2007	2017
	b/se	*b/se*	*b/se*	*b/se*	*b/se*	*b/se*	*b/se*	*b/se*	*b/se*	*b/se*	*b/se*	*b/se*
Rural	−0.115***	−0.019***	−0.297***	−0.102***	−0.031	−0.262**	−0.412***	−0.125***	−1.301***	−0.759***	−0.075**	−1.882***
	−0.006	*−0.006*	*−0.03*	*−0.019*	*−0.028*	*−0.092*	*−0.021*	*−0.028*	*−0.118*	*−0.024*	*−0.027*	*−0.138*
Emakhuwa	−0.095***	0.144***	−0.025	−0.117**	0.309***	0.052	−0.648***	0.225***	−0.071	−0.549***	0.594***	−0.359
	−0.013	*−0.012*	*−0.05*	*−0.044*	*−0.037*	*−0.155*	*−0.051*	*−0.055*	*−0.199*	*−0.057*	*−0.054*	*−0.233*
Xichangana	0.029*	0.301***	−0.014	0.084	0.574***	0.005	−0.342***	0.839***	0.238	0.225***	1.303***	−0.23
	−0.014	*−0.012*	*−0.042*	*−0.047*	*−0.038*	*−0.128*	*−0.053*	*−0.057*	*−0.165*	*−0.06*	*−0.055*	*−0.193*
Elomwe	−0.130***	0.176***	−0.169*	−0.097	0.388***	−0.375	−1.230***	0.488***	−0.249	−0.680***	0.620***	−0.667
	−0.029	*−0.025*	*−0.083*	*−0.094*	*−0.081*	*−0.256*	*−0.109*	*−0.119*	*−0.329*	*−0.123*	*−0.117*	*−0.385*
Cinyanja	−0.445***	−0.007	−0.268***	−0.789***	−0.001	−0.354	−1.779***	−0.082	−0.461	−2.008***	−0.063	−1.644***
	−0.015	*−0.016*	*−0.076*	*−0.051*	*−0.051*	*−0.233*	*−0.058*	*−0.077*	*−0.3*	*−0.066*	*−0.075*	*−0.35*
Cisena	−0.232***	0.018*	−0.162***	−0.397***	0.063*	−0.353**	−1.136***	−0.150***	−0.094	−1.090***	0.073	−0.710***
	−0.009	*−0.009*	*−0.037*	*−0.028*	*−0.028*	*−0.113*	*−0.033*	*−0.041*	*−0.146*	*−0.037*	*−0.04*	*−0.171*
Echuabo	−0.018	0.149***	−0.048	0.067*	0.327***	−0.001	−0.537***	−0.007	0.043	−0.091*	0.676***	−0.495**
	−0.01	*−0.009*	*−0.038*	*−0.034*	*−0.03*	*−0.117*	*−0.039*	*−0.044*	*−0.15*	*−0.044*	*−0.043*	*−0.175*
Cindau	−0.026*	0.160***	−0.018	0.038	0.220***	0.085	−0.227***	0.468***	0.082	−0.09	0.896***	−0.424
	−0.013	*−0.011*	*−0.054*	*−0.043*	*−0.037*	*−0.167*	*−0.051*	*−0.054*	*−0.215*	*−0.058*	*−0.053*	*−0.251*
Xitswa	0.135***	0.300***	−0.018	0.125*	0.569***	0.031	0.463***	1.057***	0.151	0.960***	1.228***	−0.304
	−0.017	*−0.021*	*−0.041*	*−0.056*	*−0.067*	*−0.126*	*−0.065*	*−0.1*	*−0.161*	*−0.073*	*−0.098*	*−0.189*
Other	0.090***	0.075***	−0.115***	0.218***	0.066***	−0.203***	−0.185***	0.174***	−0.443***	0.414***	0.531***	−0.494***
	−0.005	*−0.004*	*−0.018*	*−0.018*	*−0.011*	*−0.057*	*−0.02*	*−0.017*	*−0.073*	*−0.022*	*−0.016*	*−0.085*
Rural Emakhuwa	0.099***	−0.027	0.072	0.085	0.012	0.033	0.799***	−0.065	−0.208	0.689***	−0.279**	0.702
	−0.026	*−0.019*	*−0.098*	*−0.084*	*−0.061*	*−0.301*	*−0.097*	*−0.091*	*−0.387*	*−0.109*	*−0.089*	*−0.453*
Rural Xichangana	0.01	−0.264***	0.349*	0.027	−0.276***	0.317	0.142	−0.840***	0.206	−0.003	−1.674***	2.628***
	−0.022	*−0.023*	*−0.154*	*−0.073*	*−0.074*	*−0.473*	*−0.084*	*−0.109*	*−0.609*	*−0.094*	*−0.107*	*−0.712*
Rural Elomwe	0.120*	−0.189***	−0.221	0.045	−0.277*	−0.992	1.416***	−1.118***	−0.716	0.715**	−0.825***	0.505
	−0.057	*−0.038*	*−0.22*	*−0.187*	*−0.123*	*−0.677*	*−0.22*	*−0.183*	*−0.871*	*−0.249*	*−0.179*	*−1.018*
Rural Cinyanja	0.286***	−0.046	0.18	0.335**	−0.276**	0.36	1.386***	0.005	−0.112	1.709***	0.229	0.934
	−0.038	*−0.033*	*−0.212*	*−0.127*	*−0.105*	*−0.653*	*−0.148*	*−0.156*	*−0.84*	*−0.167*	*−0.152*	*−0.982*
Rural Cisena	0.107***	−0.052***	0.066	−0.003	−0.288***	−0.055	1.017***	−0.01	−0.419*	0.989***	0.199**	0.942***
	−0.021	*−0.015*	*−0.053*	*−0.071*	*−0.047*	*−0.162*	*−0.082*	*−0.069*	*−0.208*	*−0.092*	*−0.068*	*−0.243*
Rural Echuabo	0.074**	−0.155***	0.128	−0.028	−0.343***	0.666	0.479***	−0.575***	−1.311	0.553***	−0.495***	0.049
	−0.026	*−0.012*	*−0.203*	*−0.086*	*−0.037*	*−0.625*	*−0.098*	*−0.055*	*−0.804*	*−0.111*	*−0.054*	*−0.94*
Rural Cindau	−0.112***	−0.169***	−0.173	−0.510***	−0.344***	−0.641*	0.163	−0.663***	0.287	0.183	−0.614***	−0.221
	−0.022	*−0.017*	*−0.102*	*−0.072*	*−0.055*	*−0.314*	*−0.084*	*−0.081*	*−0.404*	*−0.095*	*−0.08*	*−0.472*
Rural Xitswa	0.095*	0.076	−0.153*	0.233	0.305*	−0.403	0.814***	0.397*	−0.569	0.134	−0.113	−0.331
	−0.041	*−0.042*	*−0.074*	*−0.134*	*−0.133*	*−0.229*	*−0.157*	*−0.201*	*−0.294*	*−0.178*	*−0.194*	*−0.344*
Rural Other	0.107***	0	0	0.040*	0	0	0.852***	0	0	0.689***	0	0
	−0.006	*(.)*	*(.)*	*−0.02*	*(.)*	*(.)*	*−0.022*	*(.)*	*(.)*	*−0.025*	*(.)*	*(.)*
Main language	0	0.177***	−0.058	0	0.296***	0.086	0	0.302***	0.272	0	0.932***	−0.883***
	(.)	*−0.01*	*−0.052*	*(.)*	*−0.033*	*−0.161*	*(.)*	*−0.049*	*−0.207*	*(.)*	*−0.048*	*−0.242*

cont.

Manica specific	Mean wealth index			Schooling dimension			Home dimension			Services dimension		
	1997	2007	2017	1997	2007	2017	1997	2007	2017	1997	2007	2017
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Rural	0.006	0.065***	−0.251***	−0.066***	0.094***	−0.323***	0.078***	−0.093***	−1.088***	0.226***	0.443***	−1.343***
	−0.006	−0.006	−0.01	−0.019	−0.019	−0.032	−0.022	−0.027	−0.041	−0.025	−0.027	−0.048
Emakhuwa	−0.101***	0.056***	−0.194***	−0.096**	0.090***	−0.506***	−0.794***	−0.171***	−0.430**	−0.606***	0.391***	−0.532**
	−0.009	−0.007	−0.041	−0.03	−0.023	−0.127	−0.035	−0.034	−0.163	−0.039	−0.033	−0.19
Xichangana	−0.063***	0.294***	0.027	−0.051	0.586***	0.04	−0.897***	0.700***	0.143	−0.157**	1.243***	0.127
	−0.011	−0.01	−0.034	−0.037	−0.032	−0.105	−0.042	−0.048	−0.135	−0.048	−0.047	−0.158
Elomwe	−0.132***	0.085***	−0.022	−0.118*	0.168***	−0.11	−0.984***	−0.021	−0.047	−0.805***	0.437***	0.07
	−0.016	−0.015	−0.059	−0.051	−0.048	−0.181	−0.059	−0.072	−0.233	−0.066	−0.071	−0.272
Cinyanja	−0.160***	0.108***	0.116	−0.309***	0.166*	0.232	−0.745***	0.207*	0.965	−0.704***	0.577***	0.257
	−0.022	−0.02	−0.158	−0.073	−0.065	−0.487	−0.083	−0.097	−0.626	−0.094	−0.094	−0.732
Cisena	−0.209***	0.055***	−0.123***	−0.427***	0.087***	−0.346***	−0.987***	−0.057	−0.428***	−0.842***	0.347***	−0.224
	−0.008	−0.008	−0.031	−0.026	−0.026	−0.097	−0.03	−0.039	−0.124	−0.034	−0.038	−0.145
Echuabo	−0.061***	0.153***	−0.041	−0.006	0.297***	0.014	−0.793***	0.102**	−0.418***	−0.371***	0.756***	−0.307*
	−0.006	−0.007	−0.028	−0.021	−0.023	−0.085	−0.024	−0.034	−0.11	−0.027	−0.033	−0.128
Cindau	−0.176***	0.114***	−0.104**	−0.392***	0.175***	−0.209*	−1.008***	0.197***	−0.322*	−0.502***	0.634***	−0.412**
	−0.006	−0.008	−0.034	−0.02	−0.024	−0.103	−0.023	−0.036	−0.133	−0.026	−0.035	−0.155
Xitswa	0.045***	0.252***	−0.028	0.142***	0.428***	−0.023	−0.350***	0.623***	−0.216	0.204***	1.241***	−0.146
	−0.007	−0.009	−0.033	−0.024	−0.03	−0.1	−0.027	−0.044	−0.129	−0.031	−0.043	−0.15
Other	0.026***	0.067***	−0.047*	−0.008	0.099***	−0.017	−0.065**	0.389***	−0.300***	0.278***	0.292***	−0.333***
	−0.006	−0.004	−0.02	−0.019	−0.012	−0.063	−0.022	−0.018	−0.08	−0.025	−0.017	−0.094
Rural Emakhuwa	0.044*	−0.144***	0.284*	0.068	−0.312***	0.289	0.549***	−0.211***	1.647***	0.245**	−0.585***	1.565**
	−0.022	−0.013	−0.112	−0.072	−0.041	−0.344	−0.083	−0.061	−0.442	−0.094	−0.06	−0.517
Rural Xichangana	−0.136***	−0.426***	−0.068	−0.468***	−0.781***	−0.315*	0.052	−1.540***	−0.433*	−0.278***	−1.793***	0.251
	−0.012	−0.014	−0.047	−0.04	−0.044	−0.144	−0.046	−0.065	−0.186	−0.052	−0.064	−0.217
Rural Elomwe	0.112*	−0.086*	0.127	0.135	−0.019	0.262	1.016***	−0.694***	0.686	0.599**	−0.580***	0.387
	−0.049	−0.034	−0.158	−0.16	−0.108	−0.485	−0.19	−0.161	−0.623	−0.215	−0.157	−0.729
Rural Cinyanja	0.091*	−0.109**	−0.134	0.232	−0.188	0.656	0.276	−0.691***	−1.967	0.379	−0.394*	−2.324
	−0.046	−0.036	−0.285	−0.152	−0.116	−0.876	−0.173	−0.176	−1.127	−0.199	−0.169	−1.318
Rural Cisena	0.052*	−0.081***	0.077	0.049	−0.227***	0.074	0.676***	−0.276***	0.009	0.411***	−0.158*	0.578**
	−0.021	−0.014	−0.045	−0.07	−0.046	−0.137	−0.081	−0.068	−0.176	−0.092	−0.067	−0.206
Rural Echuabo	−0.048*	−0.078***	0.021	−0.371***	0.004	0.17	0.298***	−0.431***	−0.081	0.347***	−0.639***	−0.187
	−0.02	−0.014	−0.085	−0.066	−0.045	−0.263	−0.075	−0.066	−0.338	−0.085	−0.065	−0.396
Rural Cindau	0.074***	−0.204***	−0.191**	−0.041	−0.507***	−0.336	1.319***	−0.267**	−0.19	0.709***	−0.680***	−1.008***
	−0.021	−0.018	−0.065	−0.069	−0.057	−0.199	−0.08	−0.084	−0.256	−0.09	−0.083	−0.299
Rural Xitswa	0.012	−0.106***	0.043	−0.112*	−0.155***	0.118	0.770***	0.086	0.356	0.129*	−0.706***	0.018
	−0.013	−0.013	−0.059	−0.044	−0.041	−0.182	−0.05	−0.061	−0.234	−0.057	−0.06	−0.273
Rural Other	0	0	0	0	0	0	0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)
Main language	0.108***	0.227***	−0.031	0.276***	0.372***	−0.109	−0.04	0.329***	0.035	0.424***	1.232***	−0.052
	−0.006	−0.01	−0.02	−0.019	−0.033	−0.062	−0.021	−0.049	−0.08	−0.024	−0.048	−0.094
												cont.

Sofala specific	Mean wealth index			Schooling dimension			Home dimension			Services dimension		
	1997	2007	2017	1997	2007	2017	1997	2007	2017	1997	2007	2017
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Rural	−0.037***	0.032***	−0.333***	−0.019	0.053**	−0.491***	−0.467***	−0.283***	−1.731***	−0.160***	0.277***	−1.528***
	−0.005	−0.005	−0.015	−0.016	−0.017	−0.045	−0.019	−0.026	−0.058	−0.021	−0.025	−0.068
Emakhuwa	−0.075***	0.145***	−0.201***	−0.088***	0.283***	−0.419***	−0.502***	0.099**	−0.637***	−0.439***	0.703***	−0.754***
	−0.007	−0.008	−0.035	−0.022	−0.026	−0.107	−0.025	−0.038	−0.138	−0.029	−0.037	−0.161
Xichangana	−0.01	0.299***	−0.161***	0.048	0.555***	−0.314***	−0.536***	0.758***	−0.437***	0.052	1.351***	−0.683***
	−0.011	−0.009	−0.029	−0.035	−0.029	−0.089	−0.04	−0.043	−0.115	−0.046	−0.042	−0.134
Elomwe	−0.130***	0.054***	−0.253***	−0.097*	0.123**	−0.661***	−1.033***	−0.483***	−0.855***	−0.821***	0.395***	−0.594**
	−0.014	−0.013	−0.049	−0.047	−0.04	−0.152	−0.053	−0.06	−0.196	−0.06	−0.058	−0.229
Cinyanja	−0.043*	0.109***	−0.289**	−0.086	0.176**	−0.474	−0.184*	0.286**	−0.009	−0.236**	0.546***	−1.699***
	−0.021	−0.019	−0.093	−0.068	−0.062	−0.285	−0.078	−0.093	−0.367	−0.088	−0.09	−0.429
Cisena	−0.049***	0.200***	−0.276***	−0.055	0.306***	−0.563***	−0.453***	0.006	−1.059***	−0.355***	1.227***	−1.004***
	−0.009	−0.012	−0.031	−0.029	−0.039	−0.094	−0.033	−0.057	−0.121	−0.037	−0.056	−0.142
Echuabo	−0.075***	0.139***	−0.253***	−0.073***	0.281***	−0.418***	−0.412***	0.026	−0.996***	−0.474***	0.680***	−1.155***
	−0.004	−0.006	−0.022	−0.014	−0.02	−0.069	−0.016	−0.029	−0.088	−0.018	−0.029	−0.103
Cindau	−0.132***	0.085***	−0.249***	−0.274***	0.142***	−0.474***	−0.559***	−0.174***	−0.902***	−0.509***	0.547***	−1.002***
	−0.006	−0.007	−0.032	−0.019	−0.024	−0.097	−0.021	−0.035	−0.125	−0.024	−0.035	−0.146
Xitswa	0.066***	0.255***	−0.124***	0.133***	0.427***	−0.198*	0.042***	0.685***	−0.441***	0.302***	1.252***	−0.602***
	−0.003	−0.006	−0.026	−0.01	−0.02	−0.079	−0.012	−0.03	−0.102	−0.013	−0.03	−0.119
Other	0.071***	0.209***	−0.190***	0.189***	0.368***	−0.298***	−0.191***	0.459***	−0.721***	0.322***	1.020***	−0.920***
	−0.002	−0.006	−0.019	−0.008	−0.018	−0.059	−0.009	−0.027	−0.076	−0.01	−0.026	−0.088
Rural Emakhuwa	0	−0.133***	−0.078	−0.036	−0.166***	−0.228	0.223**	−0.277***	−0.469	0.162	−0.825***	−0.052
	−0.02	−0.015	−0.068	−0.066	−0.048	−0.209	−0.076	−0.071	−0.269	−0.085	−0.07	−0.314
Rural Xichangana	−0.099***	−0.354***	0.281***	−0.230***	−0.454***	0.535*	−0.144*	−1.021***	0.235	−0.467***	−2.066***	1.396***
	−0.016	−0.017	−0.074	−0.052	−0.055	−0.228	−0.06	−0.082	−0.293	−0.067	−0.08	−0.342
Rural Elomwe	0.078	−0.114***	0.134	−0.113	−0.237**	0.392	1.070***	−0.048	0.645*	0.885***	−0.536***	0.146
	−0.045	−0.023	−0.079	−0.15	−0.073	−0.242	−0.18	−0.109	−0.312	−0.203	−0.107	−0.365
Rural Cinyanja	−0.033	−0.080*	0.247	−0.13	−0.202	0.741	−0.065	−0.206	0.258	0.124	−0.235	0.528
	−0.045	−0.036	−0.254	−0.148	−0.114	−0.783	−0.171	−0.17	−1.007	−0.193	−0.166	−1.178
Rural Cisena	0.059**	−0.098***	0.242***	−0.014	−0.299***	0.419*	0.705***	0.230***	0.904***	0.647***	−0.312***	1.066***
	−0.021	−0.014	−0.056	−0.069	−0.045	−0.172	−0.08	−0.067	−0.221	−0.09	−0.065	−0.259
Rural Echuabo	0.130***	−0.099***	0.091*	0.155*	−0.069*	0.213	0.263***	−0.549***	0.296*	0.850***	−0.628***	0.277
	−0.02	−0.01	−0.036	−0.065	−0.031	−0.111	−0.074	−0.046	−0.143	−0.084	−0.045	−0.167
Rural Cindau	−0.034	−0.148***	−0.047	−0.208***	−0.365***	−0.071	0.297***	−0.042	0.101	0.424***	−0.550***	−0.324
	−0.018	−0.015	−0.057	−0.059	−0.047	−0.174	−0.069	−0.069	−0.224	−0.078	−0.068	−0.262
Rural Xitswa	0.005	−0.116***	0.213***	−0.109***	−0.175***	0.467**	0.407***	−0.005	0.832***	0.189***	−0.722***	0.686**
	−0.009	−0.008	−0.055	−0.028	−0.027	−0.17	−0.032	−0.04	−0.219	−0.036	−0.04	−0.256
Rural Other	−0.012*	−0.112***	0	−0.038*	−0.167***	0	0.137***	−0.152***	0	−0.096***	−0.648***	0
	−0.006	−0.006	(.)	−0.019	−0.019	(.)	−0.022	−0.027	(.)	−0.024	−0.027	(.)
Main language	0	0	−0.197***	0	0	−0.415***	0	0	−0.546***	0	0	−0.747***
	(.)	(.)	−0.02	(.)	(.)	−0.06	(.)	(.)	−0.078	(.)	(.)	−0.091
												cont.

Inhambane specific	Mean wealth index			Schooling dimension			Home dimension			Services dimension		
	1997	2007	2017	1997	2007	2017	1997	2007	2017	1997	2007	2017
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Rural	−0.068***	0.029***	−0.285***	−0.248***	−0.045**	−0.320**	0.193***	0.454***	−0.547***	−0.118***	0.254***	−1.869***
	−0.004	−0.005	−0.032	−0.013	−0.017	−0.1	−0.015	−0.025	−0.129	−0.017	−0.024	−0.15
Emakhuwa	0.039	0.252***	−0.059	0.123	0.483***	−0.013	−0.166	0.572***	−0.444	0.014	1.129***	−0.412
	−0.023	−0.018	−0.074	−0.077	−0.057	−0.227	−0.088	−0.085	−0.292	−0.099	−0.082	−0.342
Xichangana	−0.057***	0.217***	−0.088*	−0.118***	0.425***	−0.014	−0.634***	0.442***	−0.133	−0.05	0.962***	−0.799***
	−0.009	−0.008	−0.036	−0.031	−0.026	−0.111	−0.035	−0.039	−0.143	−0.04	−0.038	−0.167
Elomwe	−0.276	0.240***	−0.183	−1.227*	0.349	−0.875	−1.327*	0.853**	1.298*	0.642	1.237***	−0.08
	−0.167	−0.056	−0.157	−0.549	−0.179	−0.482	−0.621	−0.265	−0.62	−0.701	−0.26	−0.725
Cinyanja	−0.095	0.291***	0	−0.074	0.504*	0	−0.506	0.714*	0	−0.712*	1.388***	0
	−0.07	−0.064	(.)	−0.229	−0.205	(.)	−0.259	−0.303	(.)	−0.293	−0.298	(.)
Cisena	0.068*	0.189***	−0.029	0.182*	0.366***	−0.091	0.04	0.402***	0.314	0.115	0.842***	−0.17
	−0.027	−0.017	−0.096	−0.09	−0.054	−0.294	−0.103	−0.08	−0.378	−0.117	−0.079	−0.442
Echuabo	0.149***	0.202***	−0.029	0.293***	0.358***	0.094	0.175	0.587***	−0.214	0.655***	0.924***	−0.451
	−0.027	−0.02	−0.069	−0.088	−0.066	−0.212	−0.099	−0.097	−0.272	−0.112	−0.095	−0.319
Cindau	−0.128***	0.078***	−0.069	−0.316***	0.115***	−0.147	−0.677***	0.164**	0.139	−0.322***	0.434***	−0.37
	−0.011	−0.011	−0.089	−0.037	−0.034	−0.273	−0.042	−0.051	−0.351	−0.048	−0.05	−0.411
Xitswa	0.027***	0.155***	−0.121***	−0.013	0.269***	−0.061	−0.235***	0.423***	−0.302**	0.379***	0.741***	−0.958***
	−0.003	−0.006	−0.029	−0.01	−0.019	−0.088	−0.011	−0.028	−0.114	−0.012	−0.027	−0.133
Other	0.199***	0.164***	0.032	0.363***	0.310***	0.173*	0.478***	0.731***	0.069	0.917***	0.623***	−0.133
	−0.004	−0.003	−0.023	−0.013	−0.009	−0.07	−0.015	−0.013	−0.091	−0.017	−0.013	−0.106
Rural Emakhuwa	0.025	−0.149***	0	0.121	−0.168	0	0.096	−0.376*	0	0.129	−0.952***	0
	−0.04	−0.032	(.)	−0.131	−0.104	(.)	−0.15	−0.154	(.)	−0.169	−0.151	(.)
Rural Xichangana	0.025**	−0.282***	0.240**	0.037	−0.424***	0.367	0.102**	−0.779***	−0.084	0.122**	−1.495***	1.511***
	−0.009	−0.012	−0.082	−0.03	−0.039	−0.252	−0.034	−0.058	−0.324	−0.038	−0.057	−0.379
Rural Elomwe	0.535**	−0.052	0	1.891**	0.28	0	1.972**	−1.206**	0	0.149	−0.815*	0
	−0.191	−0.08	(.)	−0.63	−0.257	(.)	−0.714	−0.38	(.)	−0.806	−0.374	(.)
Rural Cinyanja	0.076	−0.265***	0	−0.036	−0.297	0	0.126	−1.383***	0	0.955**	−1.447***	0
	−0.083	−0.078	(.)	−0.273	−0.25	(.)	−0.31	−0.37	(.)	−0.35	−0.363	(.)
Rural Cisena	0.052	−0.066*	−0.425	0.047	−0.024	−1.289	0.414**	−0.424**	−1.61	0.468**	−0.465***	−0.495
	−0.04	−0.028	−0.224	−0.13	−0.089	−0.688	−0.149	−0.133	−0.885	−0.168	−0.13	−1.035
Rural Echuabo	0.017	−0.039	0.473*	0.018	0.193	0.563	−0.02	−0.746***	0.708	0.178	−0.620***	3.087**
	−0.042	−0.037	−0.211	−0.139	−0.119	−0.651	−0.158	−0.177	−0.837	−0.178	−0.174	−0.979
Rural Cindau	0.114***	−0.047**	−0.123	0.188**	−0.072	−0.291	0.700***	−0.195*	−0.788	0.765***	−0.229**	−0.238
	−0.02	−0.017	−0.11	−0.067	−0.053	−0.339	−0.077	−0.079	−0.436	−0.087	−0.077	−0.51
Rural Xitswa	0.300***	0.069***	0.311***	0.491***	0.079*	0.352	1.461***	0.745***	0.732**	1.287***	0.252***	1.989***
	−0.009	−0.011	−0.065	−0.029	−0.034	−0.201	−0.033	−0.05	−0.258	−0.038	−0.049	−0.302
Rural Other	0	0	0	0	0	0	0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)
Main language	0	0.135***	−0.235***	0	0.157***	−0.3	0	0.262***	−0.223	0	0.866***	−1.528***
	(.)	−0.01	−0.054	(.)	−0.032	−0.166	(.)	−0.047	−0.214	(.)	−0.046	−0.25
												cont.

Gaza specific	Mean wealth index			Schooling dimension			Home dimension			Services dimension		
	1997	2007	2017	1997	2007	2017	1997	2007	2017	1997	2007	2017
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Rural	−0.174***	−0.009*	−0.212***	−0.292***	−0.005	−0.197***	−0.286***	0.351***	−0.361***	−0.912***	−0.199***	−1.507***
	−0.004	−0.004	−0.018	−0.014	−0.014	−0.055	−0.016	−0.021	−0.071	−0.018	−0.021	−0.083
Emakhuwa	−0.017	0.192***	−0.227*	−0.059	0.297***	−0.631*	−0.195*	0.459***	0.116	−0.116	1.027***	−0.73
	−0.021	−0.017	−0.094	−0.069	−0.054	−0.29	−0.078	−0.08	−0.373	−0.088	−0.079	−0.436
Xichangana	−0.059***	0.262***	−0.247***	−0.089***	0.382***	−0.361*	−0.532***	0.627***	−0.327	−0.192***	1.455***	−1.464***
	−0.003	−0.01	−0.052	−0.008	−0.032	−0.16	−0.01	−0.048	−0.205	−0.011	−0.047	−0.24
Elomwe	−0.012	0.168**	−0.075	0.091	0.187	−0.105	−0.326	0.811**	0.143	−0.359	0.939***	−0.537
	−0.064	−0.059	−0.109	−0.211	−0.189	−0.334	−0.238	−0.28	−0.429	−0.269	−0.275	−0.502
Cinyanja	−0.015	0.163**	0	0.027	0.298	0	−0.401*	0.532*	0	−0.207	0.685**	0
	−0.052	−0.057	(.)	−0.173	−0.182	(.)	−0.195	−0.27	(.)	−0.221	−0.265	(.)
Cisena	−0.022	0.159***	−0.109	0.06	0.221**	−0.13	−0.447***	0.369***	−0.159	−0.380***	0.915***	−0.710*
	−0.027	−0.021	−0.072	−0.089	−0.068	−0.221	−0.101	−0.1	−0.284	−0.114	−0.099	−0.332
Echuabo	0.045*	0.197***	−0.05	0.166**	0.300***	−0.079	−0.262***	0.480***	0.037	0.073	1.056***	−0.31
	−0.019	−0.014	−0.051	−0.061	−0.044	−0.157	−0.069	−0.065	−0.202	−0.078	−0.064	−0.237
Cindau	−0.019	0.180***	−0.082	−0.117	0.270***	−0.14	−0.244**	0.484***	−0.139	0.115	0.966***	−0.424
	−0.023	−0.021	−0.083	−0.075	−0.068	−0.255	−0.084	−0.102	−0.328	−0.095	−0.099	−0.384
Xitswa	0.048***	0.205***	−0.095*	0.074*	0.359***	−0.03	−0.246***	0.475***	−0.301	0.386***	0.992***	−0.774***
	−0.01	−0.011	−0.045	−0.032	−0.035	−0.138	−0.036	−0.052	−0.177	−0.041	−0.051	−0.207
Other	0.027***	0.166***	−0.085***	0.090***	0.242***	−0.06	−0.207***	0.464***	−0.180*	0.154***	0.903***	−0.640***
	−0.004	−0.004	−0.022	−0.013	−0.012	−0.069	−0.015	−0.018	−0.089	−0.017	−0.018	−0.104
Rural Emakhuwa	0.120***	−0.013	0.389*	0.403***	0.037	0.975*	0.654***	−0.167	−0.716	0.476**	−0.169	1.692*
	−0.034	−0.031	−0.151	−0.111	−0.098	−0.466	−0.133	−0.145	−0.599	−0.15	−0.143	−0.701
Rural Xichangana	0.220***	−0.153***	0.207***	0.323***	−0.229***	0.178	0.713***	−0.473***	0.257	1.155***	−0.798***	1.543***
	−0.005	−0.009	−0.041	−0.015	−0.03	−0.127	−0.017	−0.045	−0.164	−0.019	−0.044	−0.191
Rural Elomwe	0.088	−0.111	0	0.149	−0.089	0	0.321	−1.371***	0	1.419**	−0.433	0
	−0.099	−0.087	(.)	−0.327	−0.28	(.)	−0.462	−0.415	(.)	−0.521	−0.407	(.)
Rural Cinyanja	0.186*	−0.182	0	0.382	−0.505	0	0.798**	−1.692***	0	0.785*	0.009	0
	−0.081	−0.096	(.)	−0.265	−0.309	(.)	−0.302	−0.49	(.)	−0.341	−0.449	(.)
Rural Cisena	0.114**	0.024	0.291	0.206	0.182	0.588	0.671***	−0.483**	0.303	0.893***	−0.056	1.344
	−0.042	−0.036	−0.16	−0.138	−0.115	−0.493	−0.165	−0.17	−0.634	−0.186	−0.167	−0.742
Rural Echuabo	0.172***	0.001	0.148	0.315*	0.151	−0.427	1.072***	−0.2	0.898	1.010***	−0.289*	2.244*
	−0.037	−0.026	−0.205	−0.123	−0.084	−0.63	−0.152	−0.125	−0.81	−0.172	−0.122	−0.948
Rural Cindau	0.106**	−0.053	0	0.234*	−0.107	0	0.341**	−0.331*	0	0.786***	−0.158	0
	−0.033	−0.033	(.)	−0.109	−0.104	(.)	−0.126	−0.155	(.)	−0.142	−0.152	(.)
Rural Xitswa	0.176***	−0.026*	0.038	0.275***	−0.016	0.028	0.913***	0.046	−0.299	0.775***	−0.237***	0.415
	−0.014	−0.013	−0.058	−0.047	−0.042	−0.178	−0.053	−0.062	−0.229	−0.06	−0.061	−0.268
Rural Other	0.186***	0	0	0.315***	0	0	0.635***	0	0	0.829***	0	0
	−0.006	(.)	(.)	−0.02	(.)	(.)	−0.022	(.)	(.)	−0.025	(.)	(.)
Main language	0	0	0	0	0	0	0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)

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Maputo Província specific	Mean wealth index			Schooling dimension			Home dimension			Services dimension		
	1997	2007	2017	1997	2007	2017	1997	2007	2017	1997	2007	2017
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Emakhuwa	−0.024**	0.003	0.013	0.039	0.061**	−0.008	−0.241***	−0.240***	0.031	−0.142***	−0.041	0.143
	−0.009	−0.007	−0.028	−0.028	−0.022	−0.086	−0.033	−0.032	−0.11	−0.038	−0.031	−0.129
Xichangana	0.029***	−0.040***	−0.012*	0.019***	−0.007	−0.01	−0.183***	−0.431***	−0.03	0.303***	−0.235***	−0.081***
	−0.002	−0.001	−0.005	−0.006	−0.004	−0.014	−0.006	−0.006	−0.019	−0.007	−0.006	−0.022
Elomwe	0.01	−0.008	0.009	0.078	0.038	−0.091	−0.163*	−0.327***	0.182	0.186*	−0.064	0.258
	−0.021	−0.015	−0.049	−0.07	−0.048	−0.152	−0.083	−0.071	−0.195	−0.093	−0.07	−0.228
Cinyanja	−0.003	−0.012	−0.01	0.045	0.006	0.12	−0.152	−0.184	0.305	0.019	−0.089	−0.502
	−0.03	−0.023	−0.084	−0.1	−0.075	−0.26	−0.117	−0.112	−0.334	−0.132	−0.109	−0.39
Cisena	−0.002	−0.009	0.018	0.064	0.031	−0.028	−0.177***	−0.181***	0.007	0.01	−0.114**	0.249
	−0.013	−0.009	−0.032	−0.042	−0.028	−0.099	−0.049	−0.042	−0.128	−0.055	−0.041	−0.15
Echuabo	0.066***	0.019***	−0.009	0.176***	0.093***	0.015	−0.091***	−0.128***	−0.039	0.250***	−0.003	−0.11
	−0.007	−0.004	−0.013	−0.024	−0.014	−0.04	−0.027	−0.021	−0.051	−0.031	−0.02	−0.06
Cindau	−0.017	0.008	−0.043	0.023	0.019	−0.07	−0.203***	−0.152***	0.001	0.134**	0.08	−0.253
	−0.01	−0.009	−0.037	−0.035	−0.029	−0.114	−0.041	−0.042	−0.147	−0.047	−0.042	−0.172
Xitswa	0.043***	0.007*	0.002	0.033***	0.042***	0.04	−0.092***	−0.062***	−0.031	0.369***	−0.019	−0.075
	−0.003	−0.003	−0.011	−0.01	−0.008	−0.034	−0.011	−0.012	−0.044	−0.012	−0.012	−0.052
Other	0.040***	−0.005**	0.006	0.040***	0.029***	0.054*	−0.019**	−0.101***	0.041	0.295***	−0.091***	−0.090**
	−0.002	−0.002	−0.007	−0.006	−0.005	−0.022	−0.006	−0.007	−0.028	−0.007	−0.007	−0.033
Main language	0	0	0	0	0	0	0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)
R-squared	36%	38%	55%	11%	14%	26%	55%	43%	63%	39%	36%	53%
N	3,592,104	4,338,156	349,771	3,592,104	4,338,156	349,771	3,585,351	4,334,798	349,771	3,584,933	4,338,156	349,771

Note: *b/se*, beta estimate/standard error; *p*<0.05, **p*<0.01, ***p*<0.001.

Source: authors' calculation using censuses data.