Absolute or relative: perceptions of inequality among young adults in Mozambique

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Abstract: Different concepts of inequality lead to different positions in discussions about whether economic growth leads to increasing inequality. This study investigates how over 1,100 young adults in Mozambique perceive inequality and whether their perceptions are based on relative or absolute terms. It follows the line of work which examines attitudes (perceptions and preferences) towards different distributional axioms, and focuses on scale and translation invariance. Most of our respondents believe that inequality in their neighbourhood is too high and that circumstances beyond their control explain why some people are poor. We conclude that, while some respondents think in absolute terms, many do not agree with either the scale-invariance or the translation-invariance axioms, and there is great variation depending on the scenario presented to the respondents. We find some correlation between their way of thinking and gender, but no clear link with level of education and type of employment.

Key words: inequality, perceptions, absolute, relative, distributional axioms

JEL classification: D3, D6, I3

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# 1	Introduction

Statements about inequality and comparisons about inequality in different contexts, places, or points in time are pervasive among development economists and in the policy debate. They serve as a benchmark against which to assess economic performance and frequently feature in the development discourse, be it in the media, in political speech, or in academia. Importantly, they are linked with discussions around the fairness of distribution decisions and preferences for redistribution, and therefore they frequently serve as a basis for policy, namely in terms of taxation and redistributive policies.

Underlying these comparisons is the assumption that there is agreement on both how inequality is defined and how it is measured. However, this consensus is called into question when it comes to the criteria used to construct measures of inequality. While the most frequently used measures imply thinking about inequality in relative terms, it has been shown that some individuals perceive inequality in absolute terms. Thinking in relative terms implies agreement with the scale-invariance axiom whereby, if all incomes are increased in the same proportion, then inequality remains the same. In contrast, thinking about inequality in absolute terms implies agreeing with the translation-invariance axiom, which postulates that inequality remains unchanged if all incomes are increased by a fixed amount.

An example should help to distinguish between the two concepts. Consider an imaginary land where the poorest individual has an income of 500 monetary units and the richest individual earns 1,000. Tripling the income of all individuals means that the poorest now has an income of 1,500, while the richest now earns 3,000. In relative terms the ratio between the two incomes has not changed: the richest individual still earns twice as much as the poor. However, in absolute terms, the different between the income of the richest and the poorest has increased threefold, from 500 to 1,500 units (see further discussion and illustrations in Niño-Zarazúa et al. 2017 and Ravallion 2004, 2014).

Most of the empirical evidence on global inequality trends tends to focus on relative measures, although there are some prominent exceptions. For instance Atkinson and Brandolini (2010) argued for the need to consider both absolute and relative differences at a global level, and Ravallion (2004, 2014, 2018) shed light on the differences obtained when considering different measures.[1] However, evidence suggests that this preference for relative thinking may not be consensual.

Surveys which tested agreement with the distributional axioms that underly inequality measures of different groups of mostly students did not find overwhelming support for some of the core assumptions. Amiel and Cowell's (1992, 1999) pioneering studies reported that only 37 per cent of respondents (students from colleges and universities in Germany, England, Israel, and the United States of America) supported the scale-invariance axiom, whereas the translation-invariance axiom was supported by only 17 per cent. Their interpretation of these findings pointed to a 'composite view' whereby inequality judgements should follow one principle or the other, or a combination of the two. Using similar questionnaires but adding a political dimension to the analysis, Ballano and Ruiz-Castillo (1993) found similar results using a sample of Spanish

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[1] See also Niño-Zarazúa et al. (2017), who found contrasting results for the trend in global inequality over the period from 1975 to 2010, as well as Gradín (2021) and Ferreira et al. (2022) for a review.

respondents from different backgrounds: 30 per cent of respondents supported scale invariance and 19 per cent supported translation invariance. Harrison and Seidl (1994) complemented these two studies by providing evidence from a sample of over 1,700 students from five German universities. In line with these studies, they found a surprisingly low level of support (39 per cent) for the scale-invariance axiom. However, in their study, 31 per cent of respondents supported the translation-invariance axiom, even though over 50 per cent considered that an increase in incomes by a fixed amount resulted in a more equal distribution. Some twenty years later Ravallion (2014, 2018) started to survey his own students at Georgetown and, in repeated exercises, found that there was a roughly equal division between those who thought in absolute and relative terms or that a little over a half thought about inequality in absolute terms.

As alluded to above, this has important repercussions. The differences in the value judgements that underlie the choice between absolute and relative measures have implications for the sides taken in important debates, such as those about the effects of globalization (Milanovic 2016; Ravallion 2004, 2014, 2018). They can therefore influence the setting of global development agendas and goals (Niño-Zarazúa et al. 2017).

This study builds on the aforementioned small strand of literature and investigates how a sample of young adults in Mozambique perceive inequality, based on the latest round of data collected under the MUVA Urban Youth Survey conducted in Beira and Maputo in Mozambique. Inequality in the distribution of consumption in Mozambique has been growing, particularly due to the high concentration of consumption in urban areas. Recent studies have described the growth of inequality in the period after Mozambique's independence as the result of the emergence of a fraction of the population with a high level of education who work in a still small but expanding private sector (in Maputo and other urban areas). Such factors explain how the verified growth has disproportionately benefited the richest (Gradín and Tarp 2019). Gradín (2020) corroborated this argument, showing that the growing trend in inequality was, in large part, the result of the contribution of the richest groups of the population, namely residents of Maputo and other urban areas who were highly qualified or at the top of the consumption distribution.

Nonetheless, a recent review of the inequality trends in Mozambique by Barletta et al. (2022) showed that inequality is now also increasing in rural areas and central/northern provinces. This is occurring in a country hit by multiple crises since 2015 (weakening global and regional economic performance, a debt crisis, a series of weather shocks, insurgency in the northern province of Cabo Delgado, and the COVID-19 pandemic) which have brought about a reduction in consumption levels across the whole distribution. However, Barletta et al. (2022) argued that the decrease was proportionally higher for those at the bottom of the consumption distribution, while better-off people suffered relatively less from the shocks.

In light of these trends this study starts by reporting participants' answers to questions about their perceptions of the level of inequality around them and the reasons behind it. It then examines whether their perceptions are based on their thinking about inequality in relative or absolute terms by surveying individual agreement with distributional axioms, including scale and translation invariance. In doing so this study makes several contributions. First, it updates earlier studies which used similar questions to probe individuals' agreement with distributional axioms and offers new insights into the literature on perceptions of inequality. Unlike these earlier studies—and this is the second contribution—this study reports data from a more varied group of young people who have not been exposed to inequality teaching and who live in a non-WEIRD (Western, educated, industrialized, rich, and democratic) country which is experiencing increasing levels of inequality. Finally, it complements existing knowledge about inequality in Mozambique by offering a different

perspective to the standard analysis based on household surveys and focusing on how individuals think about inequality and how it is measured.

The remainder of the study is organized as follows. Section 2 describes the data and methods. Section 3 describes the respondents' perceptions of inequality, while Section 4 focuses on the questions used to probe whether they think about inequality in relative or absolute terms. Section 5 concludes.

2   Data and methods

Our data comes from the latest round of the MUVA Urban Youth Survey conducted in the cities of Beira and Maputo in Mozambique, which included, among others,[2] a module on inequality with different questions to elicit respondents' views and perceptions. A total of 1,193 individuals aged between 15 and 33 years answered this module.[3] Close to 56 per cent of the respondents were female and 54 per cent lived in Beira, while 46 per cent lived in Maputo. Regarding education levels, 29 respondents had not completed any grade of primary school. Considering the different levels of education, Table 1 shows that the highest grade achieved by almost 14 per cent of respondents (who answered this question) was between 1st and 7th grade (inclusive). About 37 per cent had completed all or some years of the first cycle of secondary school (8th to 10th grades), while 38 per cent had completed either 11th grade or both 11th and 12th grades. Only about 9 per cent had completed some years of education above 12th grade. Approximately 67 per cent of respondents indicated that they currently had a job.[4]

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[2] The full questionnaire included questions on: education; employment; expenses, savings, and credit; fertility; time use; social life; and social norms and decision-making.

[3] The baseline survey of the MUVA Urban Youth Survey is representative of the urban youth population in Beira and poorer areas of Maputo. Whereas, in Section 3 of this study, we use the non-weighted data collected for the third round, the results in Section 4 are obtained using sampling weights (see footnote 7 for details).

[4] Whereas Amiel and Cowell (1992) and Harrison and Seidl (1994) draw on student samples, Ballano and Ruiz-Castillo (1993) include professors of economics and individuals working at a trade union in addition to students. The first study justified its sample selection based on the fact that undergraduate students are used to solving numeric problems and think logically, and that choosing students allowed them to achieve high participation levels. While we recognize that most of the respondents in this study have lower levels of numeracy and may therefore be more prone to arithmetical or logical mistakes, we believe that it is still relevant to survey young people who have not been exposed to more advanced training in economics and, in particular, in inequality (measurement).

Table 1: Summary of descriptive statistics of the sample

Variable	Categories	N	%	Min.	Max.	Mean	SD
Age		1,193		15	33	22.4	3.1
City	*Total*	1,193					
	Beira	639	53.6				
	Maputo	554	46.4				
Gender	*Total*	1,193		0	1	0.6	0.5
	Male	529	44.3				
	Female	664	55.7				
Education	*Total*	1,172		0	4	2.4	0.9
	Cat. 0: Below 1st grade	29	2.5				
	Cat. 1: 1st–7th grade	160	13.6				
	Cat. 2: 8th–10th grade	429	36.6				
	Cat. 3: 11th–12th grade	446	38.0				
	Cat. 4: Above 12th grade	108	9.2				
Currently has a job		1,193		0	1	0.7	0.5

Source: authors' elaboration.

The module on inequality first included a set of questions on views about inequality. Respondents were asked whether they agreed with different statements about income gaps in their neighbourhood and what their opinions were on why some people are poor in Mozambique. We present the answers to selected questions on this part of the module in Section 3.

The second part of the module aimed to infer whether respondents thought about inequality in relative or absolute terms. With this goal in mind respondents were asked to consider different scenarios comparing income distributions in two villages (e.g., Village A (MT1,000; MT10,000); Village B (MT2,000; MT20,000)),[5] each with two (and later three) households, and to choose which village they considered to be the most equal. The respondents were presented with a total of eight scenarios, four in villages with two households and another group of four in villages with three households (the translated questions are listed in Appendix A). Based on their answers we can infer their preferences for relative or absolute measures of inequality.[6] In Section 4 we explain the underlying assumptions behind different answers and present the main conclusions. We first consider simple tabulations of the main answers, and later we turn to correlation analysis using the demographic characteristics of the respondents, including gender, education level, and employment. To compute the results, in Section 4, we use sampling weights,[7] which allow us to make claims about the young urban population in Beira and Maputo.

[5] MT is used throughout the study to represent Meticais, the currency used in Mozambique.

[6] While Amiel and Cowell (1992, 1999) included both numeric and verbal questions to evaluate agreement with different axioms, in this study we consider only numeric questions.

[7] The sampling weights used in the analysis are computed using one of the standard methods for the computation of attrition weight in longitudinal surveys (Deng et al. 2013, among others). It involves taking the cross-sectional weights from the first wave which were drawn from the database and computed to be representative of the urban youth population in Beira and poorer areas of Maputo (Bischler et al. 2018). We then computed a set of weights to adjust for attrition between the waves and combined them with the initial set of weights. The attrition weight component was computed by using a probit regression, modelled with the response to the wave as the outcome variable (0=no; 1=yes). The probability of being interviewed, based on a series of observable individual and household characteristics

3   Perceptions of inequality

In this section we focus on the first block of questions on respondents' views about inequality.[8] The first question asked participants about their perceptions of the level of inequality in their neighbourhood. The answers are presented in Figure 1. While close to 63 per cent of the respondents agreed or completely agreed with the statement that income disparities in their neighbourhood were too large, just under 30 per cent indicated that they disagreed and 6 per cent stated that they strongly disagreed. When we split the answers according to city, we concluded that the patterns were similar and that there was general agreement with the statement, with a greater tendency for strong agreement in Beira compared to Maputo (Figure 2). The numbers of respondents who disagreed or strongly disagreed with the statement were similar in both cities.

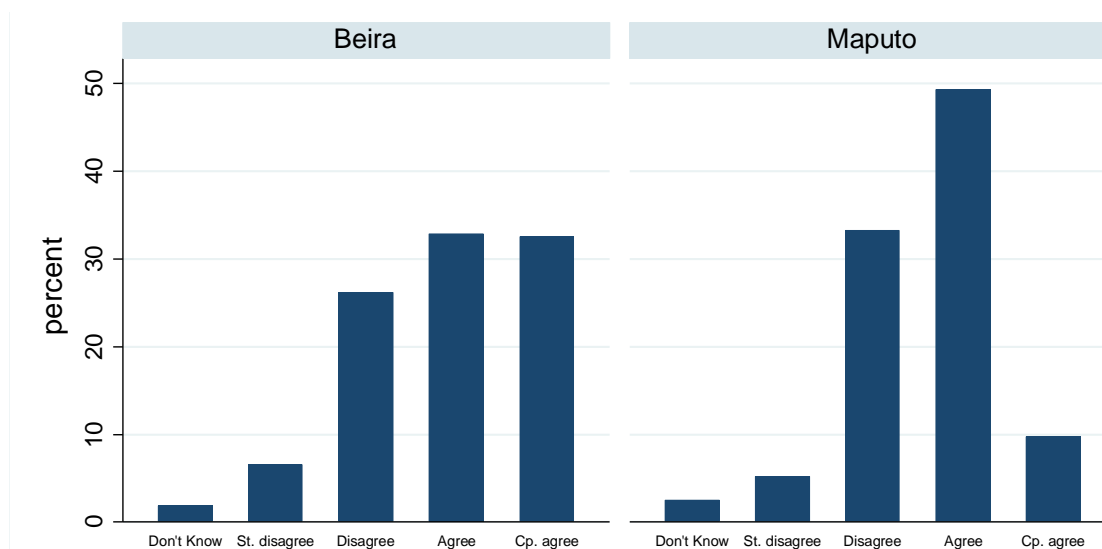Figure 1: Perceptions of income disparities in the neighbourhood
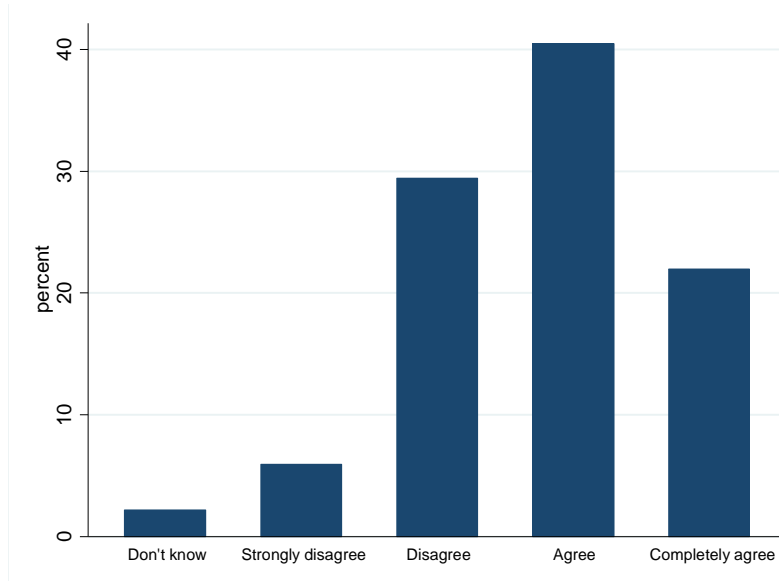
Note: frequency of answers to the question: 'Please indicate your attitude toward the following statement: "The income disparities in my commune today are too large"'.

Source: authors' elaboration.

(city, neighbourhood, age, gender, education, marital status, children, mobile phone ownership, and computer use) was then computed and predicted for the whole sample. The attrition weight was subsequently computed as the inverse of this predicted probability.

[8] The results in this section refer to the sample of individuals in the study, but the descriptives using sampling weights, which are presented in Figures B1 to B6 in Appendix B, show no noticeable differences.

Figure 2: Perceptions of income disparities in the neighbourhood, Beira and Maputo

Respondents were also asked why they thought some people were poor in Mozambique. In responding they were given two options to choose from: 1) that people are poor because they are lazy and do not make an effort, and 2) that people are poor due to circumstances outside of their control. The answers are illustrated in Figure 3. Close to 78 per cent of the respondents thought that people were poor due to circumstances outside their control, whereas only 22 per cent thought that it was because they were lazy and made no effort. Similar splits are observed when considering the city where the respondents lived, although there is a slightly smaller difference in the frequency of answers between the two options in Maputo. In Beira 19 per cent of the respondents answered 'laziness or no effort' and 81 per cent answered 'circumstances outside of their control', whereas the split is 75 per cent and 25 per cent, respectively, in the case of the Maputo subsample.

Figure 3: Reason why people are poor
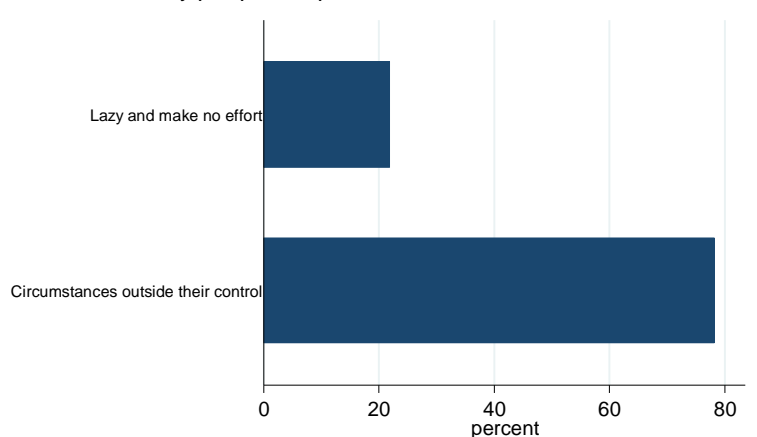
Other questions tapped into the respondents' perceptions of their position in society in terms of income. The answers to the question 'How does your household income compare with other households in your neighbourhood?' are portrayed in Figure 4. Most respondents (56 per cent) perceived their income to be similar to the average in their neighbourhood, whereas just under 30 per cent perceived their income to be below average, and 11 per cent perceived it to be much below average. Only less than 4 per cent thought their income was above or much above the neighbourhood's average. Splitting the answers by city revealed very similar patterns.

Figure 4: Perceived position in terms of income
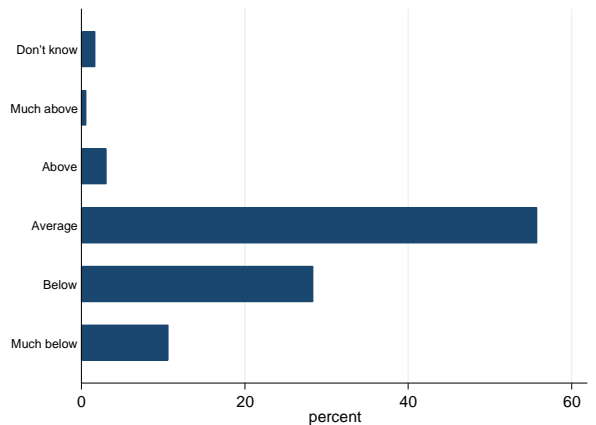
Note: answers to the question: 'How does your household income compare with other households in your neighbourhood?'.

Source: authors' elaboration.

Next, we probed the effects of experienced inequality at the local level by asking respondents how often they had contact with people who were a lot poorer—or a lot richer—than they were (Figure 5). Given the focus at the local level, we considered the answers of participants from Maputo and Beira separately. Figure 5, panel a) shows that close to 60 per cent of the respondents in both subsamples—9 per cent in Beira and 64 per cent in Maputo—indicated that they had daily contact with people who were a lot poorer than they were.

Figure 5: Perceived contact with people
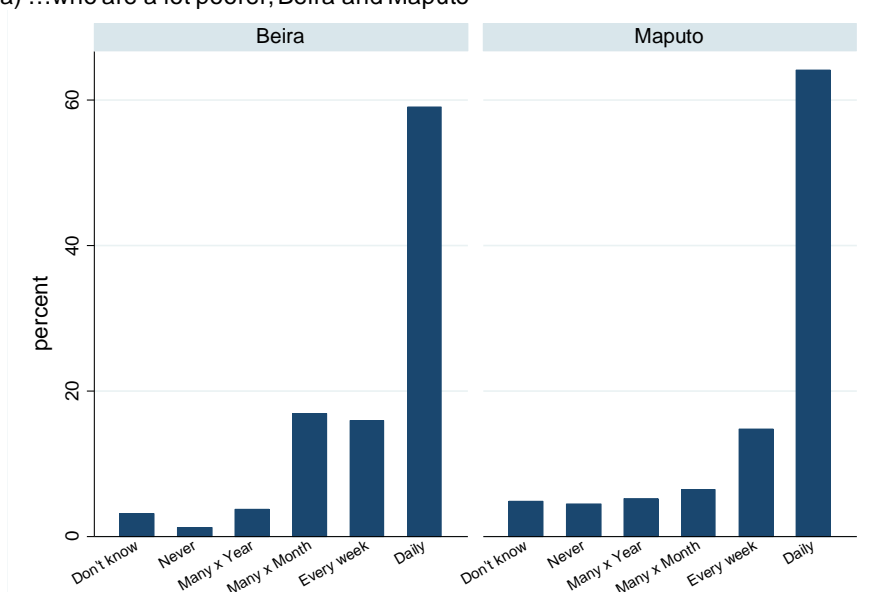
a) ...who are a lot poorer, Beira and Maputo

b) …who are a lot richer, Beira and Maputo
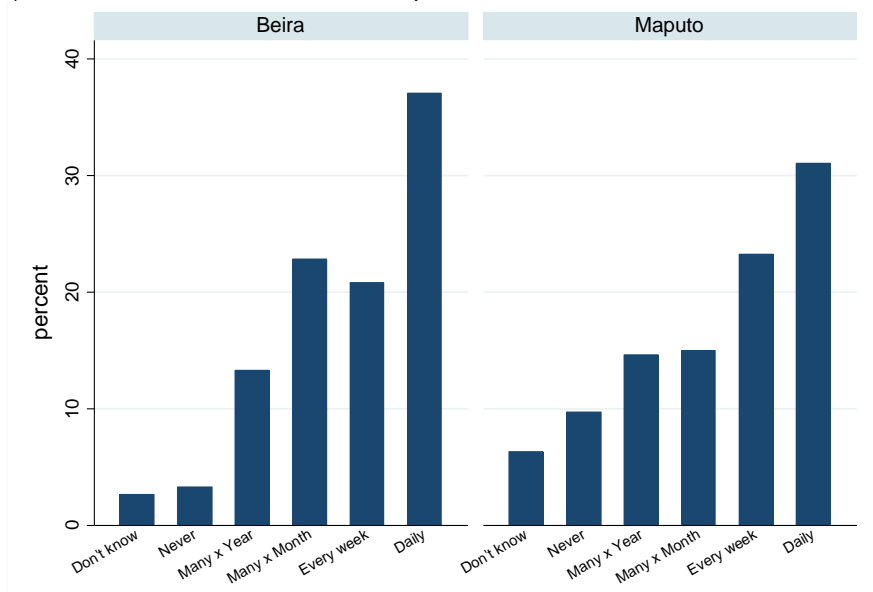
Note: answers to the questions: 'How often do you have any contact with people who are a lot poorer than you? This might be in the street, on public transport, in shops, in your neighbourhood, or at your workplace'; and 'How often do you have any contact with people who are a lot richer than you? This might be in the street, on public transport, in shops, in your neighbourhood, or at your workplace'.

Source: authors' elaboration.

Turning to contact with people who were a lot richer, Figure 5, panel b) shows a more diverse distribution in the answers. In the subsample for Beira less than 40 per cent of respondents indicated that they had daily contact, followed by contact many times a month and every week (both over 20 per cent). Among the respondents from Maputo a little over half had contact daily or every week. Close to 10 per cent indicated that they never had contact with people who were a lot richer, in contrast to only 3 per cent in Beira.

We combined the answers to both questions to create a rough typology of how participants perceived the level of income disparities around them. We created four categories:

- 'Poorer' if the participant indicated that they had frequent contact (daily or every week) with people who were a lot poorer;

- 'Richer' if the participant indicated that they had frequent contact (daily or every week) with people who were a lot richer;

- 'Diverse' if the participant indicated that they had frequent contact (daily or every week) with people who were a lot poorer and with people who were a lot richer; and

- 'Similar' if the participant indicated that they did not have frequent contact (never or several times a year) either with people who were a lot poorer or with people who were a lot richer.

The results are presented in Figure 6 and show that more than half of the respondents indicated that they had frequent contact both with people who were a lot poorer and with people who were

a lot richer than they were ('diverse' category). This suggests that they did perceive big differences in the income positions of those around them and that they encountered these disparities on a frequent basis. In contrast only 3 per cent rarely or never had contact with people who had an income level that was much higher or much lower than theirs. Moreover, around a third of the respondents had frequent contact with people who were a lot poorer, whereas merely 11 per cent indicated that they had frequent contact with people who were a lot richer.

Similar patterns are observed when the sample is split between respondents in Beira and Maputo, although in Maputo the 'richer' category is lower, at 7 per cent, and the 'similar' category is higher, at 5 per cent. In contrast, in Beira, the 'richer' category is higher, at 14 per cent, while only 1 per cent of the combined answers fall under the 'similar' category.

Figure 6: Contact with people with different income levels

Note: combined answers to the questions: 'How often do you have any contact with people who are a lot poorer than you? This might be in the street, on public transport, in shops, in your neighbourhood, or at your workplace'; and 'How often do you have any contact with people who are a lot richer than you? This might be in the street, on public transport, in shops, in your neighbourhood, or at your workplace'. 'Poorer' indicates the frequency of respondents who had frequent contact (daily or every week) with people who were a lot poorer. 'Richer' indicates the frequency of respondents who had frequent contact (daily or every week) with people who were a lot richer. 'Diverse' indicates the frequency of respondents who had frequent contact (daily or every week) with people who were a lot poorer and with people who were a lot richer. 'Similar' indicates the frequency of respondents who did not have frequent contact (never or several times a year) either with people who were a lot poorer or with people who were a lot richer.

Source: authors' elaboration.

4   Thinking about inequality in relative or absolute terms

In this section we discuss the main conclusions from the questions asking participants to compare different villages in order to infer whether they thought about inequality in relative or absolute terms. The results presented consider the sampling weights (see footnote 7 for more details) and are thus representative of the urban youth population in Beira and poorer areas of Maputo. At the core of these questions lie two different assumptions between relative and absolute measures of inequality. We briefly summarize them in the next paragraphs, before discussing the results.

4.1 Scale and translation invariance

To make comparisons between different income distributions, several measures of inequality, which are built on different criteria, have been proposed. Two such criteria, also known as axioms,[9] are scale invariance and translation invariance. The main idea behind scale invariance is that, if we multiply the income of every individual in any set of income distributions by a scalar, the ranking of distributions remains the same. Similarly, the translation-invariance assumption is satisfied if, when we add a scalar to each individual income, the ranking of distributions remains unchanged.[10]

Following Amiel and Cowell (1992: 8) we can express these two assumptions formally by:

Scale invariance. For all $x \in X$ and positive scalars a, $ax \sim x$.

Translation invariance. For any $x \in X$ and scalar b such that $x + b1 \in X$, $x + b\mathbf{1} \sim x$.

x is used to represent a vector of incomes, X is the set of all possible income vectors, $\mathbf{1}$ is a vector of ones, whereas $\sim$ denotes inequality equivalence. The survey included a series of questions to test participants' agreement with each of these assumptions, and we describe the results below.

4.2 Results

We start by considering simple tabulations of the answers to the questions which tested agreement with scale and translation invariance. Specifically, we asked respondents to identify which village they thought was more equal in different scenarios. Although they were comparing different villages, we can also consider their answers in terms of income transformations. We consider these scenarios in different groups.

Starting with scenarios which supposed that there were two villages, each with only two households, scenarios 1a) and 1b) were presented as follows:

a) Village A: (MT1,000; MT10,000).   Village B: (MT2,000; MT20,000).

b) Village A: (MT1,000; MT10,000).   Village B: (MT3,000; MT12,000).

Table 2 considers the answers to the two scenarios simultaneously, highlighting with * and ** the number of respondents who believed in scale invariance (underlying relative measures) and translation invariance (underlying absolute measures), respectively.

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[9] See, for instance, Cowell (2016).

[10] Amiel and Cowell (1999: 71) highlighted how these two concepts should be distinguished from the more strict concepts of scale and translation independence, which require that the measured level of inequality also remains unchanged.

Table 2: Cross-tabulation of the answers to scenarios 1a) and 1b) (two households)

		Scenario 1b) Add MT2,000 (%)			
		A is more equal	B is more equal (= relative)	Same (= absolute)	Total
Scenario 1a) Double income (%)	A is more equal (= absolute)	10.2	24.9	3.9**	38.9
	B is more equal	5.9	34.1	1.9	41.9
	Same (= relative)	3.3	10.9*	4.9	19.2
Total		19.4	69.9	10.7	100

Note: all values are in percentages. Does not include those who chose the option 'I do not know': 21 and 16 in scenarios 1a) and 1b), respectively. Percentages are calculated out of 1,161 responses and using sampling weights.

Source: authors' elaboration.

Considering the scale-invariance axiom first, agreement with this assumption required respondents to have indicated that inequality (or equality) was the same between the two villages in question a) and that inequality was lower in Village B in question b) (i.e. that B was more equal). The simultaneous choice of these options is marked with an * in Table 1. The results suggest that only about 11 per cent of those who responded to both questions thought about inequality in relative terms. Turning to the translation-invariance axiom, those agreeing with this assumption should have answered that inequality was higher in Village B in question a) (i.e. that A was more equal) and that inequality (or equality) was the same in the two villages in scenario b). The ** in Table 1 highlight that only 4 per cent of the respondents who answered both questions thought about inequality in absolute terms.

An intermediate position would be to consider that inequality goes up when incomes are doubled and goes down when a fixed amount is added (as suggested in Ballano and Ruiz-Castillo 1993), and this was the second most-selected combination by participants (24.9 per cent). However, the most common combination selected was that both doubling the income and adding MT2,000 leads to a more equal distribution. One possible interpretation is that respondents considered any increase in income as inequality decreasing, but the design of the questionnaire did not allow us to test for this hypothesis.

We now reflect on the results of the responses to the two questions separately, i.e. we relax the requirement that participants gave consistent replies to both scenarios according to each of the axioms. Looking at the left column in Table 3 (scenario 1a)), only around 19 per cent of the respondents agreed with the scale-invariance assumption that inequality remains the same if the incomes of all individuals are doubled, while close to 39 per cent thought that inequality increases. Surprisingly, an even bigger share (around 42 per cent) thought that when the incomes of both households are doubled, inequality decreases.

Table 3: Tabulation of the answers considering scenarios 1a) and 1b) (two households) separately

Scenario 1a) Double income (%)		Scenario 1b) Add MT2,000 (%)	
A is more equal (= absolute)	39.1	A is more equal	19.3
B is more equal	41.6	B is more equal (= relative)	70.1
Same (= relative)	19.3	Same (= absolute)	10.6
Total responses	1,171	Total responses	1,176

Note: does not consider those who chose the option 'I do not know': 21 and 16 in scenarios 1a) and 1b), respectively. Percentages obtained using sampling weights.

Source: authors' elaboration.

The results from question 1b), in the right-hand columns of Table 3, indicate that only a small fraction (almost 11 per cent) of respondents agreed with the translation-invariance axiom that adding a fixed amount to incomes leaves inequality unchanged. In contrast 70 per cent selected B as the more equal village, which is consistent with thinking according to the scale-invariance axiom. Finally, a little over 19 per cent indicated that Village A was more equal than Village B.

Did the results change when we asked participants to consider two villages with three households (scenario 2) instead? The results corresponding to the following two scenarios are presented in Table 4:

a) Village A: (MT1,000; MT5,000; MT10,000).   Village B: (MT2,000; MT10,000; MT20,000).

b) Village A: (MT1,000; MT5,000; MT10,000).   Village B: (MT3,000; MT7,000; MT12,000).

Table 4: Cross-tabulation of the answers to scenarios 2a) and 2b) (three households)

		Scenario 2b) Add MT2,000 (%)			
		A is more equal	B is more equal (= relative)	Same (= absolute)	Total (count)
Scenario 2a) Double income (%)	A is more equal (= absolute)	8.3	17.7	7.5**	33.5
	B is more equal	6.9	38.2	3.8	48.9
	Same (= relative)	2.7	11.7*	3.3	17.6
Total		17.8	67.6	14.6	100

Note: all values are in percentages. Does not include those who chose the option 'I do not know': 27 and 23 in scenarios 2a) and 2b), respectively. Percentages are calculated out of 1,149 responses and using sampling weights.

Source: authors' elaboration.

We start again by considering the answers to the two scenarios simultaneously. Similarly to scenarios 1a) and 1b), respondents who agreed with the scale-invariance axiom would answer that inequality (or equality) stays the same when incomes are double and that inequality decreases (i.e. B is more equal) when MT2,000 are added to all incomes. Only about 12 per cent of the participants who answered both questions selected these options simultaneously. On the other hand an even smaller number—close to 8 per cent of those who answered both questions—selected the options that indicate agreement with the translation-invariance axiom: specifically, that inequality increases (i.e. A is more equal) when the incomes of all households are doubled and that inequality (or equality) remains the same when MT2,000 are added to all incomes. In line with the answers to scenarios 1a) and 1b), 38 per cent thought that inequality decreases in both scenarios, and the 'intermediate' position between scale and translation invariance comes second, with a much lower 18 per cent of responses.

Table 5 represents the answers when considering scenarios 2a) and 2b) separately. Looking at scenario 2a) on the left, a greater number of responses suggest agreement with the absolute view than with the relative view: roughly 34 per cent against 18 per cent. However, most of the respondents indicated they thought that inequality decreases (i.e. B is more equal) when all households see their incomes doubled.

Table 5: Tabulation of answers considering scenarios 2a) and 2b) (three households) separately

Scenario 2a) Double income (%)		Scenario 2b) Add MT2,000 (%)	
A is more equal *(= absolute)*	33.7	A is more equal	18.3
B is more equal	48.5	B is more equal *(= relative)*	66.9
Same *(= relative)*	17.8	Same *(= absolute)*	14.8
Total of responses	*1,165*	*Total of responses*	*1,169*

Note: does not consider those who chose the option 'I do not know': 27 and 23 in scenarios 2a) and 2b), respectively. Percentages obtained using sampling weights.

Source: authors' elaboration.

Moving to scenario 2b) in the right-hand column, the picture is quite different. In this case most respondents thought in relative terms, indicating that inequality decreases (B is more equal) when a fixed amount of MT2,000 is added to the incomes of the three households. In contrast only close to 15 per cent agreed with the translation-invariance axiom that, in absolute terms, inequality (or equality) remains the same.

The conclusions drawn here are similar to those above. We conclude that:

- When considering answers that would be consistent with either the scale-invariance axiom or the translation-invariance axiom in both types of scenarios 1 and 2, we observe that more respondents thought in relative terms than in absolute terms. However, in both scenarios 1 and 2, this was a small number of responses compared to the overall pool of answers.

- Presented with two villages where the incomes of the households in one were double the incomes of those in the other (scenarios 1a) and 2a)), more respondents thought in absolute than in relative terms. However, most responses were not in line with either axiom.

- Responses were clearer when the incomes of the second village were MT2,000 higher than the incomes in the first village (scenarios 1b) and 2b)). In these scenarios (either with two or three households), most respondents were in line with relative thinking about inequality.

Table 6 gives a summary of the results presented so far. How do they compare to previous studies? While the results in this study agree with the conclusion that a non-negligible portion of responses do suggest thinking in absolute terms (see first two rows), this study also highlights that there is great variation depending on the scenario presented to the respondents. Presenting scenarios that correspond to a proportionate increase in income is matched with more answers that are in line with absolute rather than relative thinking. However, the opposite is true in scenarios that correspond to adding fixed amounts to income.

Table 6: Summary of results

	Summary			
	A	B	Absolutists	Relativists
Double income	(1,10)	(2, 20)	39%	19%
	(1,5,10)	(2,10, 20)	34%	18%
Add fixed amount	(1,10)	(3,12)	11%	70%
	(1,5,10)	(3,7,12)	15%	67%

Note: results in the four rows correspond to answers to questions 1a), 2a), 1b), and 2b), all considered separately.

Source: authors' elaboration.

Finally, we look at the responses to the remaining scenarios, c) and d), both in the case of two households—1c) and 1d)—and of three households—2c) and 2d). Both scenarios represent some redistribution that benefits the poor the most. In scenarios 1c) and 1d), the comparison can be seen as follows:

- 1c): The income of the poorest household in Village B is five times greater than the income of the poorest household in Village A. The income of the richest household in Village B is three times greater than the income of the richest household in Village A.

- 1d): The poorest household in Village B has MT4,000 more than the poorest household in Village A. The richest household in Village B has MT2,000 more than the richest household in Village A.

Looking at the results in Table 7, we see that most respondents (42 per cent) thought that inequality was lower in Village B in both scenarios. This is consistent with thinking about inequality in relative terms. However, the second most popular response, with approximately 28 per cent of responses, was the combination of answers that 'A is more equal' in scenario 1c) and 'B is more equal' in scenario 1d). The answer 'A is more equal' in scenario 1c) is consistent with absolute thinking about inequality.

Table 7: Cross-tabulation of the answers to scenarios 1c) and 1d) (two households)

		Scenario 1d) (%)			
		A is more equal	B is more equal	Same	Total
Scenario 1c) (%)	A is more equal	9.6	28.1	4.4	42.1
	B is more equal	5.7	42.0	4.2	51.9
	Same	0.8	2.8	2.5	6.1
Total		16.0	72.9	11.1	100

Note: all values are in percentages. Does not include those who chose the option 'I do not know': 21 and 16 in scenarios 1c) and 1d), respectively. Percentages are calculated out of 1,163 responses and using sampling weights.

Source: authors' elaboration.

Similarly, in scenarios 2c) and 2d), we can compare the two villages as follows:

- 2c): The income of the poorest household in Village B is five times greater than the income of the poorest household in Village A. The income of the middle-income household in Village B is four times greater than the income of the middle-income household in Village A. Finally, the income of the richest household in Village B is three times greater than the income of the richest household in Village A.

- 2d): The poorest household in Village B has MT4,000 more than the poorest household in Village A. The middle-income household in Village B has MT3,000 more than the middle-income household in Village A. Finally, the richest household in Village B has MT2,000 more than the richest household in Village A.

The pattern of responses, illustrated in Table 8, is consistent with the previous one, with close to half of the answers indicating that 'B is more equal' in both scenarios, followed by the combination that 'A is more equal' in scenario 2c) and 'B is more equal' in scenario 2d). Hence, scenarios that include an additional household did not seem to change how respondents compared inequality levels in the two villages.

Table 8: Cross-tabulation of the answers to scenarios 2c) and 2d) (three households).

		Scenario 2d) (%)			
		A is more equal	B is more equal	Same	Total
Scenario 2c) (%)	A is more equal	9.0	22.8	6.7	38.4
	B is more equal	5.6	46.7	3.1	55.4
	Same	1.1	3.2	2.1	6.3
Total		15.6	72.6	11.8	100

Note: all values are in percentages. Does not include those who chose the option 'I do not know': 29 and 18 in scenarios 1c) and 1d), respectively. Percentages are calculated out of 1,154 responses and using sampling weights.

Source: authors' elaboration.

## 4.3   Individual characteristics

Finally, we considered whether there was a connection between the respondents' perceptions of economic inequality and their personal characteristics, including gender, the highest level of education completed, whether or not they were employed, and the type of employment (if employed). For simplicity, here we look only at the answers to the first two scenarios—1a) and 1b)—considering them separately. We focus on two categories of answers:

- 'Relative': when the answer is consistent with the scale-invariance axiom, i.e. 'Both Villages A and B are the same' in question 1a) and 'Village B is more equal' in question 1b).

- 'Absolute': when the answer is consistent with the translation-invariance axiom, i.e. 'Village A is more equal' in question 1a) and 'Both Villages A and B are the same' in question 1b).

Starting with the gender dimension, Figure 7 represents the split of answers to the two questions by female and male respondents. Figure 7, panel a) suggests that women seemed to have a greater preference than men for the answer that is consistent with translation invariance. The results of an adjusted Wald test indicate that the differences in the answers by gender are statistically significant. In the case of scenario 1b) in Figure 7, panel b), the differences in the answers between male and female respondents are less apparent and the results of an adjusted Wald test indicate that they are not statistically significant.

Figure 7: Percentage of 'absolute' and 'relative' answers, by gender

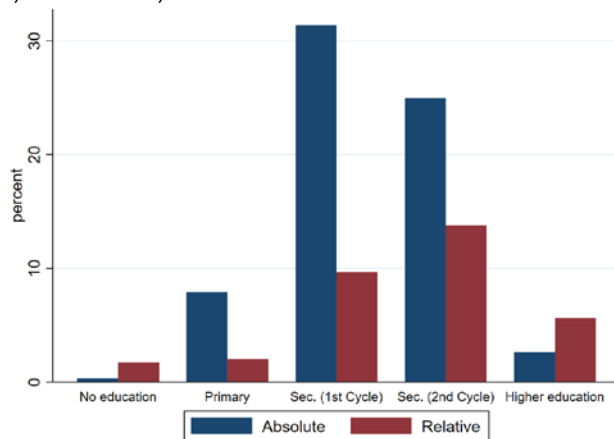a) Scenario 1a)
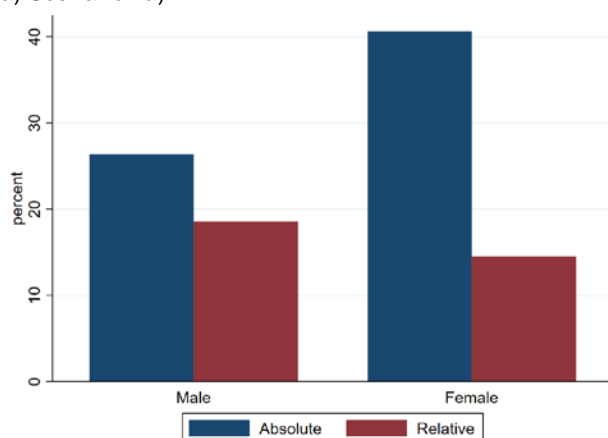
b) Scenario 1b)
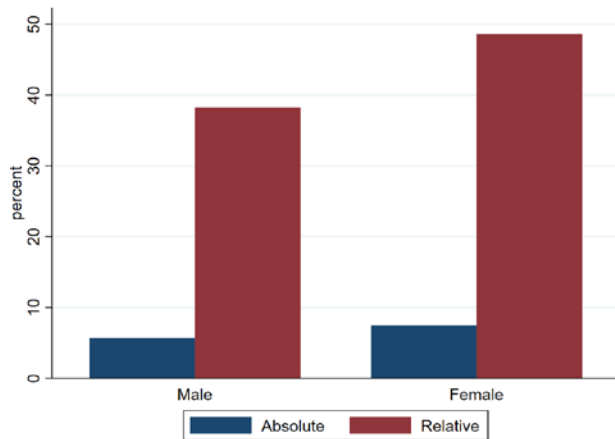
Note: 'absolute' and 'relative' are defined according to the answers to questions 1a) and 1b), respectively. See text for more details. Percentages are calculated out of 648 and 940 responses in scenarios 1a) and 1b), respectively, and using sampling weights.

Source: authors' elaboration.

When considering the education level of respondents (Figure 8), there is little apparent link between their choice of scale-invariance or translation-invariance options and the highest level of education achieved, especially in scenario 1b). However, a closer look at Figure 8, panel a) reveals that in the groups of respondents with no education and with some years in higher education, the percentage of responses in relative terms is higher than in absolute terms, in contrast to the other groups. The results of adjusted Wald tests confirm statistically significant differences in the answers of the group with no education compared to those with some education, except for higher education. The results also suggest that there are significant differences between the answers of participants with lower levels of education compared to higher levels of education. The results of the adjusted Wald tests comparing the answers of respondents with different levels of education to question 1b) indicate statistically significant differences in thinking in absolute or relative terms, but only between those with no education and with some level of education.

Figure 8: Frequency of 'absolute' and 'relative' answers, by education level

a) Scenario 1a)

b) Scenario 1b)
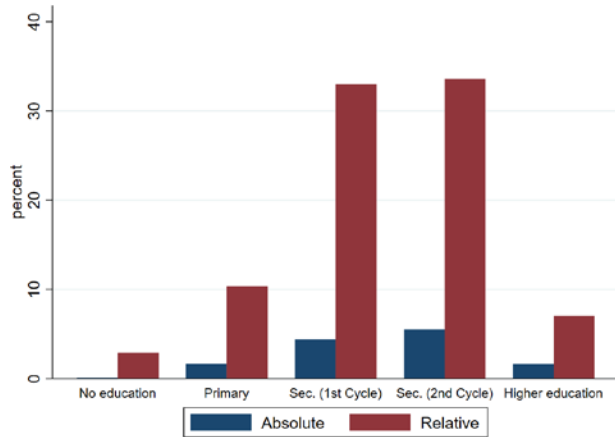
Note: 'absolute' and 'relative' are defined according to the answers to questions 1a) and 1b), respectively. See text for more details. Each education level means that the respondent completed either that level or some years of that level. 'Primary' means that the respondent completed any year between 1st grade and 7th grade. 'Sec. (1st Cycle)' means that the respondent completed any year between 8th grade and 10th grade. 'Sec. (2nd Cycle)' means that the respondent completed 11th grade or 12th grade. Percentages are calculated out of 423 and 610 responses in scenarios 1a) and 1b), respectively, and using sampling weights.

Source: authors' elaboration.

Moving to the occupation of respondents, we first tested whether there were differences in the choice of 'absolute' or 'relative' depending on whether or not the respondent had a job. The results from adjusted Wald tests (not presented here) indicate that there are no statistically significant differences for either scenario 1a) or scenario 1b).

Figure 9 portrays the split of answers, considering the different types of occupations of respondents who had a job. Most respondents indicated 'elementary occupations' as their main occupation. This involves simple and routine tasks requiring physical work, such as working in a factory, as a driver, or as a dockworker. Observation of the figure does not suggest that there is a relationship between the respondents' backgrounds and their choices. The results of adjusted Wald tests of the null hypothesis, that the means of each pair of categories is equal, highlight two categories of jobs with answers that differ from other categories: 'machine operators and assemblers' and 'other' types of jobs. However, the distinctions are not clear in terms of preference for absolute or relative thinking, and these are also categories with a low frequency of answers.

Figure 9: Frequency of 'absolute' and 'relative' answers, by occupation type

a) Scenario 1a)
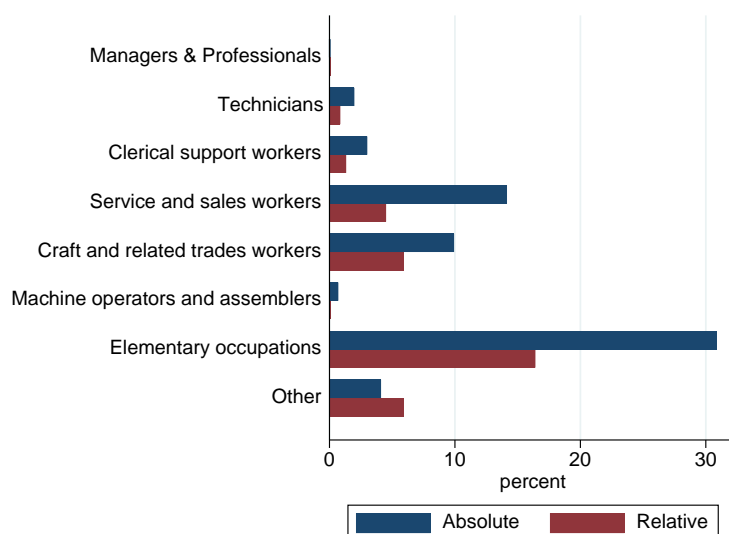
b) Scenario 1b)
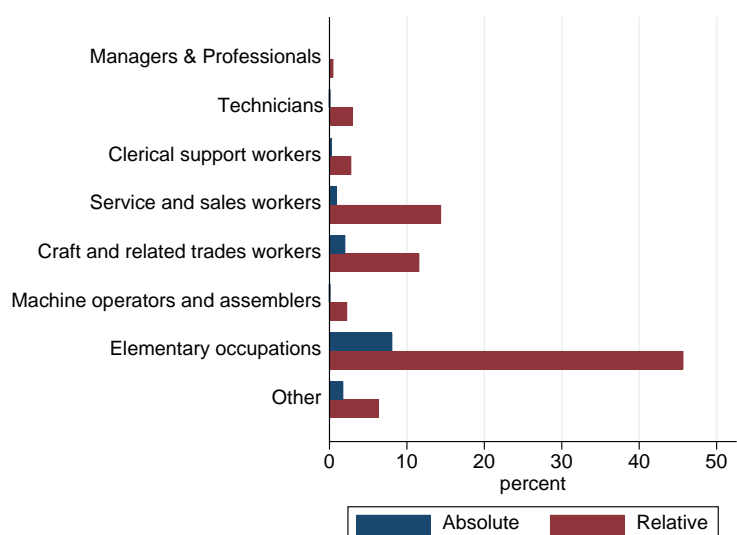
Note: 'absolute' and 'relative' are defined according to the answers to questions 1a) and 1b), respectively. See text for more details. The job categories correspond to ISCO (International Standard Classification of Occupations) categories, with 'Managers and Professionals' merging two categories. Percentages are calculated out of 430 and 625 responses in scenarios 1a) and 1b), respectively, and using sampling weights.

Source: authors' elaboration.

Overall, we find some indication that women thought about inequality in absolute terms more than men, but this is not robust across questions. We find some evidence that participants with no education thought more in relative terms than individuals with some education, although not those who had completed some years or a full degree in higher education. Moreover, we find no link between their answers and whether they had a job, and no clear differences depending on the type of occupation (for those who had one).

Furthermore, the results seem sensitive to the ways in which the scenarios were presented, as the conclusions obtained when considering scenarios 2a) and 2b) have some differences.[11] We do not find statistically significant differences in the means of the answers in terms of gender in either 2a) or 2b). Regarding the level of education, there is an indication of differences in the answers of participants with higher education and the rest of the respondents, although only for question 2a). We still find no variation according to whether respondents had a job or not, and the conclusions in terms of the type of occupation are similar to those described above only for the answers to question 2a.

Finally, we use probit analysis to complement these descriptions. The average marginal effects are reported in Table 9. The dependent variable is a dummy which takes the value 1 for thinking about inequality in relative terms and 0 for thinking about inequality in absolute terms. The regressors include the personal characteristics described so far—namely gender, education level, and job categories—as well as age, an interaction term between gender and age, the level of poverty (represented by poverty scores), the size of the household, whether the respondent was married, and, whether the respondent was ever pregnant/had become a father.

In line with the descriptives presented before, having some education is associated with a lower probability of thinking about inequality in relative terms compared to having no education at all. This is the case in both scenarios a) and b), but it is not robust to the scenarios in question 2, where respondents had to compare villages with three households. Moreover, while there seems to be a correlation between certain job categories and how they think about inequality, the results vary a lot depending on the scenario presented. Additionally, the results show no link between the answers and gender.

In terms of the additional dimensions considered here, lower levels of poverty are linked to a lower probability of answering in relative terms, but only when the comparison between villages corresponds to a lump-sum increase—scenarios 1b) and 2b). There is also some indication that respondents from bigger households are associated with a higher probability of thinking in relative terms in the same type of scenario. The results for marital status and having a child show some correlations in the questions about villages with two households, but they are completely opposite depending on how the difference in income is framed.

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[11] Not presented here but available from the authors upon request.

Table 9: Average marginal effects

	(1) 1a: Relative	(2) 1b: Relative	(3) 2a: Relative	(4) 2b: Relative
Gender	-0.11 (0.41)	0.12 (0.19)	0.29 (0.34)	-0.22 (0.23)
Age	-0.00 (0.01)	0.00 (0.01)	0.02 (0.01)	-0.01* (0.01)
Gender*Age	0.00 (0.02)	-0.01 (0.01)	-0.01 (0.02)	0.01 (0.01)
Primary school	-0.62*** (0.11)	-0.14** (0.05)	0.06 (0.17)	-0.10 (0.09)
Secondary school (1st Cycle)	-0.60*** (0.09)	-0.11*** (0.03)	0.07 (0.18)	-0.06 (0.08)
Secondary school (2nd Cycle)	-0.50*** (0.08)	-0.11*** (0.02)	0.05 (0.16)	-0.05 (0.08)
Higher education	-0.19** (0.09)	-0.15** (0.06)	0.27 (0.16)	-0.03 (0.05)
Poverty score Q2	0.11* (0.07)	-0.08** (0.03)	0.01 (0.08)	-0.09* (0.04)
Poverty score Q3	0.03 (0.06)	-0.12*** (0.03)	-0.05 (0.08)	-0.13** (0.05)
Poverty score Q4	0.07 (0.07)	-0.03 (0.03)	0.01 (0.11)	-0.10 (0.06)
Poverty score Q5	0.01 (0.08)	-0.14*** (0.04)	0.13 (0.13)	-0.19*** (0.07)
Household size	0.00 (0.01)	-0.02*** (0.01)	0.01 (0.01)	-0.02*** (0.01)
Technicians	-0.12 (0.11)	0.13*** (0.03)	-0.19 (0.13)	
Clerical support	-0.04 (0.11)	0.05 (0.10)	-0.05 (0.10)	0.20*** (0.06)
Machine operators and assemblers	-0.13 (0.11)	0.11*** (0.04)		0.18*** (0.06)
Elementary occupations	0.02 (0.06)	-0.01 (0.04)	-0.01 (0.05)	0.09* (0.04)
Other occupation	0.18 (0.11)	-0.06 (0.05)	0.12 (0.13)	0.02 (0.08)
Married	-0.12** (0.05)	0.08*** (0.02)	-0.03 (0.09)	0.01 (0.04)
Ever pregnant/father	0.21* (0.11)	-0.15* (0.08)	-0.05 (0.13)	-0.01 (0.06)
Observations	622	898	552	903

Note: the dependent variable is a dummy for answering in relative terms, with each column corresponding to one of the four questions described in detail in Section 4.2. In addition to the variables presented, the analysis included the remaining job categories, which showed no significant coefficients and are therefore not presented here, for simplicity. The results are obtained using sampling weights. Standard errors presented in brackets. Significance: ***0.01, **0.05, *0.1.

Source: authors' elaboration.

5   Conclusion

This study contributes to the literature about perceptions on inequality by gathering the views of over 1,100 young Mozambicans living in Beira and Maputo. It addresses previous arguments that, while the discourse around inequality is commonly based on relative measures (which imply agreement with the scale-invariance axiom), there is some indication that individuals think about it in different ways, including in absolute terms (which instead implies agreement with the translation-invariance axiom). As Ravallion (2014) pointed out, neither is right nor wrong; they simply reflect different normative views about inequality.

Starting with the perceptions of inequality in their neighbourhood, most of the individuals thought that inequality was too high. More than 60 per cent of the respondents agreed or completely agreed that income disparities in their neighbourhood were too large. When asked why they thought some people were poor in the country, close to 80 per cent thought this was due to circumstances outside of people's control rather than because of laziness or lack of effort. Regarding how they perceived their position in terms of income, more than half of the participants perceived their income to be similar to the average income in the neighbourhood, followed by under 30 per cent who perceived it to be below average.

Next, we used similar questions to those used in earlier studies in the 1990s to examine whether there was general agreement with relative thinking about inequality or with alternative distributional axioms. Overall, the results in this study show that a non-negligible portion of respondents seemed to think in absolute terms, but they also indicate that many did not agree with either the scale-invariance or the translation-invariance axioms. The study also highlights that there is great variation depending on the scenario presented to the respondents: proportionate increases in income seem to be matched with more answers that are in line with absolute rather than relative thinking, whereas the opposite is observed in scenarios that correspond to adding fixed amounts to income.

When considering the correlation between these results and the personal characteristics of respondents, we find some indication that female respondents thought about inequality in absolute terms more than male respondents did. However, this result is not robust across questions and disappears when we control for other socio-demographic characteristics. We find some indication that having some level of education as opposed to no education is linked to a higher probability of thinking in absolute rather than in relative terms. However, we observe no relationship between their perceptions and whether respondents had a job, and there is no clear link between choosing the alternatives consistent with the scale-invariance or translation-invariance axioms and their type of occupation. Moreover, the results change with differences in the phrasing of the questions, namely when considering scenarios with three households instead of two.

Given the trend of rising inequality in Mozambique, it is important to establish how inequality is perceived among the population, particularly among young people in the country. This study showed that this sample of young Mozambicans perceived inequality to be high in the context around them and reported having frequent contact with people who were a lot poorer or a lot richer than they were. Moreover, the results suggest that there is no vast majority who think in line with the commonly used relative measures. This suggests that inequality analysis and reporting should incorporate the results obtained using a broad range of measures, including absolute measures. As highlighted at the beginning of the study, having a better understanding of how individuals think about inequality helps to clarify their underlying value judgements and their position in important development debates and opinions about different policy options.

References

Amiel, Y., and F.A. Cowell (1992). 'Measurement of Income Inequality: Experimental Test by Questionnaire'. *Journal of Public Economics*, 47(1): 3–26. https://doi.org/10.1016/0047-2727(92)90003-X

Amiel, Y., and F. Cowell (1999). '*Thinking About Inequality: Personal Judgment and Income Distributions*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511492266

Atkinson, A.B., and A. Brandolini (2010). 'On Analyzing the World Distribution of Income'. *The World Bank Economic Review*, 24(1): 1–37. https://doi.org/10.1093/wber/lhp020

Ballano, C., and J. Ruiz-Castillo (1993). 'Searching by Questionnaire for the Meaning of Income Inequality'. *Revista Española de Economía*, 10(2): 233–59.

Barletta, G., M. Ibraimo, V. Salvucci, E. Sarmento, and F. Tarp (2022). 'The Evolution of Inequality in Mozambique: 1996/97–2019/20'. WIDER Working Paper 2022/151. Helsinki: UNU-WIDER. https://doi.org/10.35188/UNU-WIDER/2022/284-3

Bischler, J., P. Jasper, A. Khurshid and A. Kveder (2018). 'MUVA Urban Youth Survey: Technical Compendium'. August 2018, Unpublished.

Cowell, F. (2016). 'Inequality and Poverty Measures'. In M.D. Adler and M. Fleurbaey (eds), *The Oxford Handbook of Well-Being and Public Policy*. New York, NY: Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199325818.013.4

Deng, Y., S. Hillygus, J.P. Reiter, Y. Si, and S. Zheng (2013). 'Handling Attrition in Longitudinal Studies: The Case for Refreshment Samples'. *Statistical Science*, 28(2): 238–56. https://doi.org/10.1214/13-STS414

Ferreira, I. A., V. Salvucci, and F. Tarp (2022). 'Poverty, inequality, and growth: trends, policies, and controversies'. WIDER Working Paper 2022/43. Helsinki: UNU-WIDER. https://doi.org/10.35188/UNU-WIDER/2022/174-7

Gradín, C. (2020). 'Quantifying the Contribution of a Subpopulation to Inequality an Application to Mozambique'. *The Journal of Economic Inequality*, 18: 391–419. https://doi.org/10.1007/s10888-020-09451-w

Gradín, C. (2021). 'Trends in Global Inequality Using a New Integrated Dataset'. WIDER Working Paper 2020/61. Helsinki: UNU-WIDER. https://doi.org/10.35188/UNU-WIDER/2021/999-0

Gradín, C., and F. Tarp (2019). 'Investigating Growing Inequality in Mozambique'. *South African Journal of Economics*, 87(2): 110–38. https://doi.org/10.1111/saje.12215

Harrison, E., and C. Seidl (1994). 'Perceptional Inequality and Preferential Judgements: An Empirical Examination of Distributional Axioms'. *Public Choice*, 79: 61–81. https://doi.org/10.1007/BF01047919

Milanovic, B. (2016). *Global Inequality: A New Approach for the Age of Globalization*. Cambridge, MA and London: The Belknap Press of Harvard University Press. https://doi.org/10.4159/9780674969797

Niño-Zarazúa, M., L. Roope, and F. Tarp (2017). 'Global Inequality: Relatively Lower, Absolutely Higher'. *Review of Income and Wealth*, 63(4): 661–84. https://doi.org/10.1111/roiw.12240

Ravallion, M. (2004). 'Competing Concepts of Inequality in the Globalization Debate'. Brookings Trade Forum, 2004, Globalization, Poverty, and Inequality, 1–38. Available at: https://www.jstor.org/stable/25063189 (accessed 14 February 2023).

Ravallion, M. (2014). 'Income Inequality in the Developing World'. *Science*, 344(6186): 851–55. Available at: https://www.science.org/doi/10.1126/science.1251875 (accessed 14 February 2023).

Ravallion, M. (2018). 'Inequality and Globalization: A Review Essay'. *Journal of Economic Literature*, 56(2): 620–42. https://doi.org/10.1257/jel.20171419

Appendix A

List of questions included (translated from Portuguese; MT represents meticais, the currency in Mozambique)

1. Now we would like to ask you your views on equality. For these questions, suppose that there are two villages, each with only two households. I will tell you the income of each household in both villages. Please tell me which society you consider to be more equal.

a. Village A: (MT 1,000; MT10,000).   Village B: (MT2,000; MT20,000).

b. Village A: (MT1,000; MT10,000).   Village B: (MT3,000; MT12,000).

c. Village A: (MT1,000; MT10,000).   Village B: (MT5,000; MT30,000).

d. Village A: (MT1,000; MT10,000).   Village B: (MT5,000; MT12,000).

2. Now please consider two villages with three households each. Once again, please tell me which village you consider to be more equal.

a. Village A: (MT1,000; MT5,000; MT10,000).   Village B: (MT2,000; MT10,000; MT20,000).

b. Village A: (MT1,000; MT5,000; MT10,000).   Village B: (MT3,000; MT7,000; MT12,000).

c. Village A: (MT1,000; MT5,000; MT10,000).   Village B: (MT5,000; MT20,000; MT30,000).

d. Village A: (MT1,000; MT5,000; MT10,000).   Village B: (MT5,000; MT8,000; MT12,000).

Appendix B

## Results on perceptions of inequality using sampling weights

Figure B1: Perceptions of income disparities in the neighbourhood
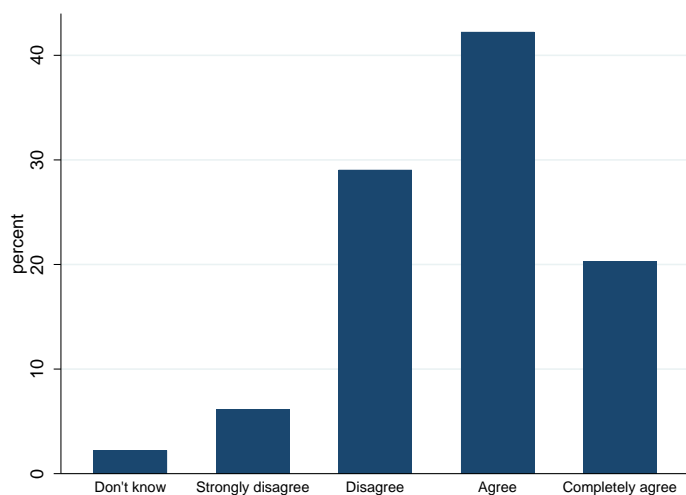
Note: frequency of answers to the question 'Please indicate your attitude toward the following statement: "The income disparities in my commune today are too large"'. Results obtained using sampling weights.
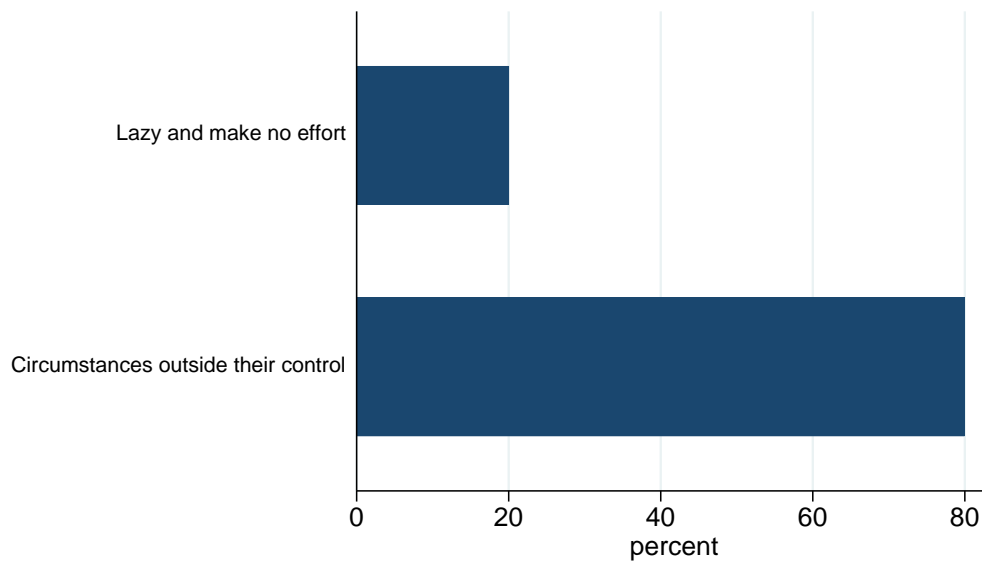
Source: authors' elaboration.

Figure B2: Perceptions of income disparities in the neighbourhood, Beira and Maputo
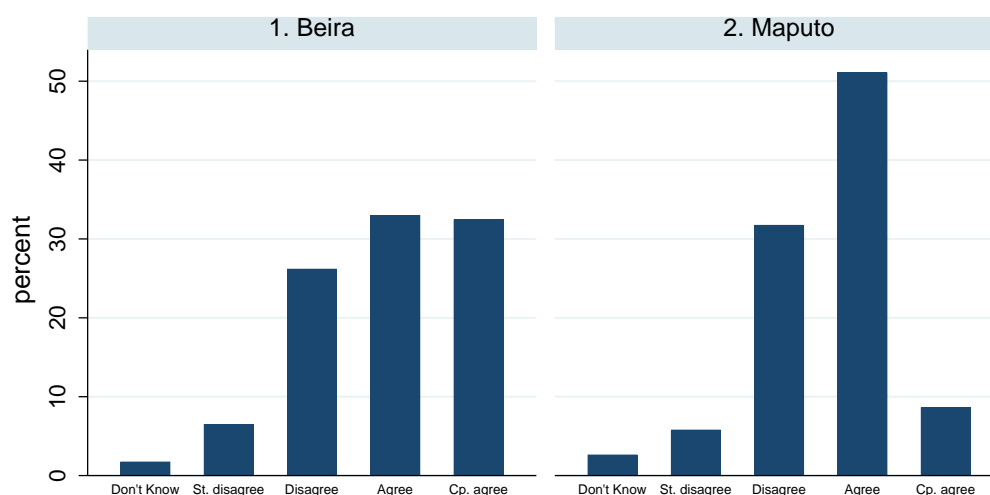
Note: answers to the question 'Please indicate your attitude toward the following statement: "The income disparities in my commune today are too large"'. Results obtained using sampling weights.
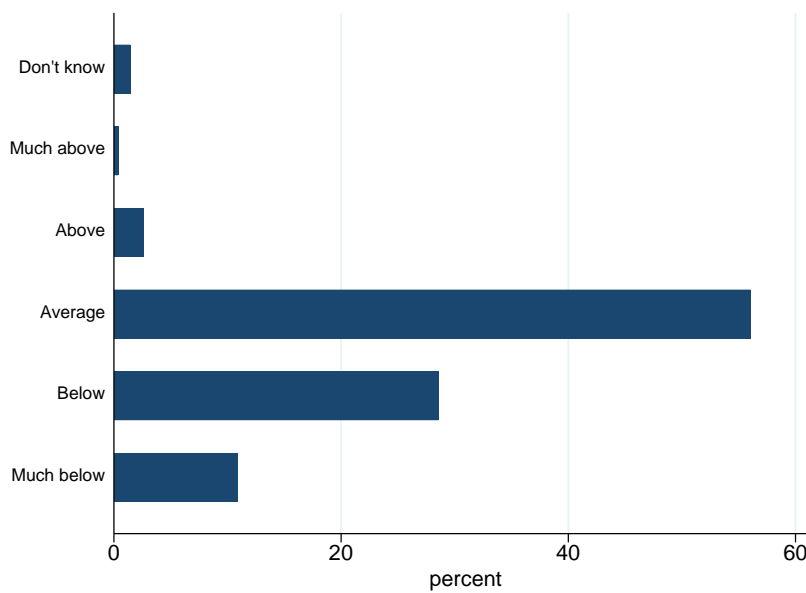
Source: authors' elaboration.

Figure B3: Reason why people are poor

Note: answers to the question 'Why, in your opinion, are some people in this country poor? Which of the following options comes closest to your view?'. Results obtained using sampling weights.

Source: authors' elaboration.
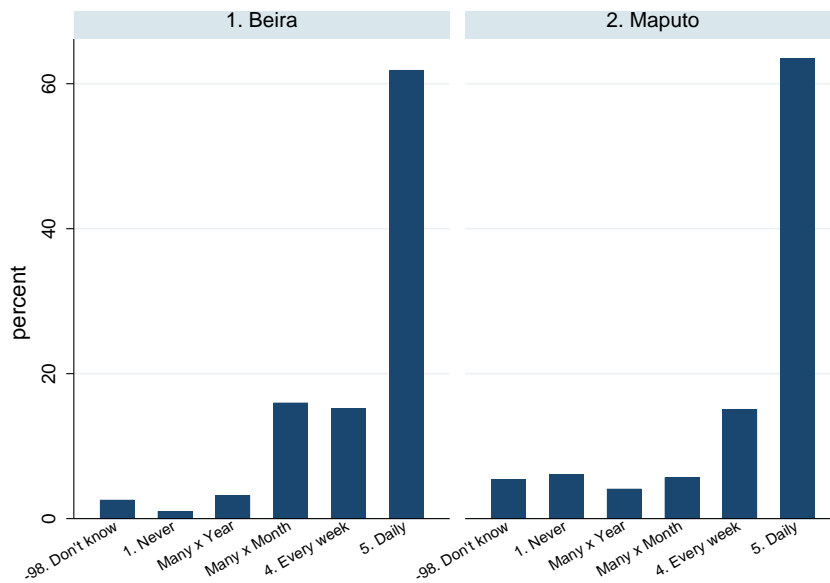

Figure B4: Perceived position in terms of income

Note: answers to the question 'How does your household income compare with other households in your neighbourhood?'. Results obtained using sampling weights.
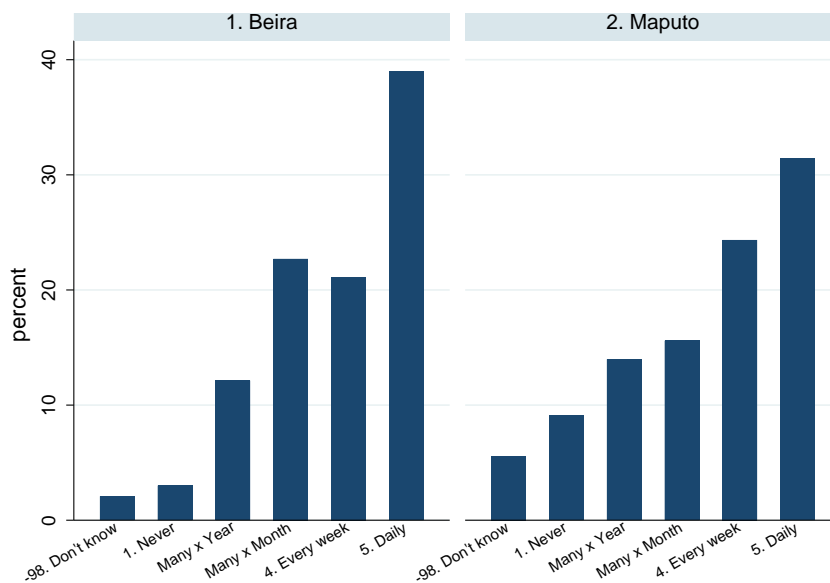
Source: authors' elaboration.

Figure B5: Perceived contact with people…
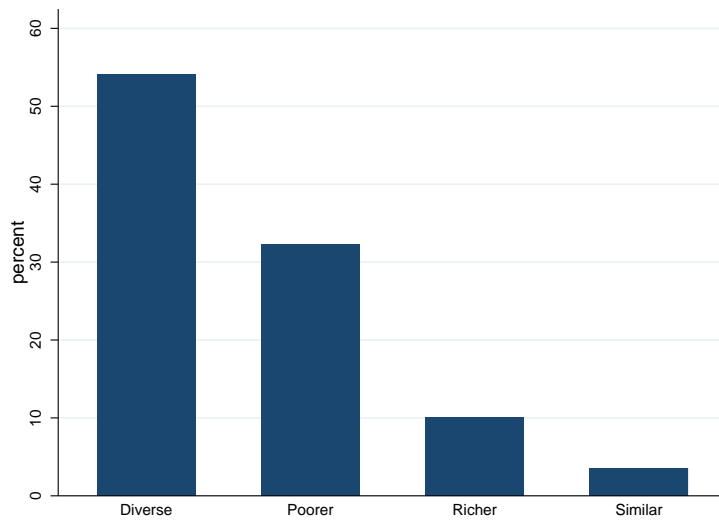
a) …who are a lot poorer, Beira and Maputo

b) …who are a lot richer, Beira and Maputo

Note: answers to the question 'How often do you have any contact with people who are a lot poorer than you? This might be in the street, on public transport, in shops, in your neighbourhood, or at your workplace' and 'How often do you have any contact with people who are a lot richer than you? This might be in the street, on public transport, in shops, in your neighbourhood, or at your workplace'. Results obtained using sampling weights.

Source: authors' elaboration.

Figure B6: Contact with people with different income levels

Note: combined answers to the questions 'How often do you have any contact with people who are a lot poorer than you? This might be in the street, on public transport, in shops, in your neighbourhood, or at your workplace' and 'How often do you have any contact with people who are a lot richer than you? This might be in the street, on public transport, in shops, in your neighbourhood, or at your workplace'. 'Poorer' indicates the frequency of respondents who have frequent contact (daily or every week) with people who are a lot poorer. 'Richer' indicates the frequency of respondents who have frequent contact (daily or every week) with people who are a lot richer. 'Diverse' indicates the frequency of respondents who have frequent contact (daily or every week) with people who are a lot poorer and with people who are a lot richer. 'Similar' indicates the frequency of respondents who do not have frequent contact (never or several times a year) neither with people who are a lot poorer nor with people who are a lot richer. Results obtained using sampling weights.

Source: authors' elaboration.