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# Progressive Cities: Urban-rural polarisation of social values and economic development around the world

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#### Abstract

In contrast to the conservative values of rural populations, cities are often seen as bulwarks of liberal, progressive values. This urban-rural divide in values has become one of the major fault lines in western democracies, underpinning major political events of the last decade, not least the election of Donald Trump. Yet, beyond a small number of countries, there is little evidence that cities really are more liberal than rural areas. Evolutionary modernisation theory suggests that socio-economic development may lead to the spread of, progressive, self-expression values but provides little guidance on the role of cities in this process. Has an urban-rural split in values developed across the world? And does this gap depend on the economic development of a country? We answer these questions using a large cross-sectional dataset covering 66 countries. We show that there are marked and significant urban-rural differences in progressive values, defined as attitudes to immigration, gender rights, and family life. These differences exist even when controlling for observable compositional effects, suggesting that cities do play a role in the spread of progressive values. Yet, these results only apply at higher levels of economic development suggesting that, for cities to leave behind rural areas in terms of liberal values, the satisfying of certain material needs is a prerequisite.

**Keywords:** urban-rural polarisation; progressive values; cities; modernisation; economic development.

#### 1. Introduction

Polarisation between urban and rural areas has become one of the world's most important political cleavages (Cramer, 2016; Ford and Jennings, 2020; Iammarino et al., 2019; Jennings and Stoker, 2016; Maxwell, 2019; Wilkinson, 2018). Values are, it is argued, at the root of this division. City populations tend to be more diverse, better educated, and more likely to do knowledge-based work. Because of this, the conventional wisdom is that city-dwellers also hold progressive values around gender rights, homosexuality, immigration, and the family. The idea that cities have grown apart from the conservative areas surrounding them has become one of the dominant trends in modern political thought. This has been taken up by popular commentators such as the FT's Simon Kuper (2019), who argued that "Famously, today's big political divide is between liberal cities and their populist hinterlands".

Yet, while the view that cities are important locations for liberal values is widespread, this belief is based on recent political events - Brexit, Trump, the Gilets Jaunes - in a small number of rich countries (cf. Huijsmans et al. 2021; Kenny and Luca 2021; Maxwell 2019). Recent efforts have moved beyond 'Western' countries, and explored paradigmatic cases in contexts such as East Asia (Evans, 2019). However, we still lack systematic cross-country evidence across other continents. Moreover, the classic theoretical explanation for the spread of progressive, self-expression values, i.e., modernisation theory, does little to explain why there might be sub-national variations in these attitudes. Focusing on one specific value, support for gender rights, Evans (2019: p. 962) recently argues that while "many scholars regard it as a truism that support for gender equality is higher in cities, they rarely explain sub-national variation in gender relations". Similarly, Ayoub and Kollman (2020) suggest that cities played a key role in the expansion of lesbian, gay, bisexual, transgender and intersex (LGBTI) rights across Europe. However, little work has systematically considered the intersection between economic development, cities, and social values across the world.

In this paper we address this omission and present new evidence on how progressive attitudes vary between urban and rural areas across countries at different levels of development. We argue that this is an important question: it tells us about how economic development feeds through into progressive values, and it helps us understand the role of cities in driving these changes. This becomes even more relevant in a context of polarisation driven by a new urban-rural political cleavage emerging in many advanced economies. We define as progressive those values reflecting "greater tolerance for ethnic, cultural, and sexual diversity and individual choice concerning the kind of life one wants to lead" (Inglehart, 1997: p. 23). These emerge in the 1960s as postmodernization drives a cultural shift towards self-expression and tolerance in advanced economies (Idem). In this study, we consider three main types of values: attitudes to gender rights, family values, and immigration. We draw on a dataset combining the World Values Survey

and the European Value Study, two compatible cross-sectional surveys with over 80,000 respondents in 66 countries, representing around 4.3 billion people, or close to half of the world population.

Combining sociological modernisation theory, research on the geographies of individual attitudes, and urban theory around the economic and social role of cities, we consider two important questions: (1) Is there an urban-rural gap in progressive values? (2) Does this vary at different levels of material development?

Our results show that while urban areas are, in general, more liberal than their rural hinterlands, this effect fades for countries with lower levels of economic prosperity. Liberal cities of the rich world seem to be growing apart, but less so in lower-income countries. This, we argue, is consistent with modernisation theory, which suggests that economic development will be accompanied with social change, but only if we consider the further role of cities in providing choice, exposure, socialisation spaces and raising opportunity costs of in-group dynamics. Plausibly, this is accompanied by a self-reinforcing process through which the socially liberal move to cities. Our results also suggest that this gap is not only the result of composition effects, as different observable characteristics between rural and urban dwellers explains only partly the correlation between individual attitudes and place of residence.

Overall, our research contributes to a growing literature which considers polarisation between urban and rural areas as a social and political cleavage. Much of this literature has generalised from the United States, in particular the 2016 election of Donald Trump (e.g., Johnston, Manley, Jones, & Rohla, 2020), or from Europe. For example, a set of studies have begun to consider these issues in a cross-national context, considering urban-rural differences in political trust (McKay et al., 2021; Mitsch et al., 2021; Stein et al., 2021) and political attitudes (Kenny and Luca, 2021) using the European Social Survey. Other studies have used the World Values Survey to investigate urban-rural differences in political trust (e.g., McKay et al., 2022). However, to the best of our knowledge, this is the first paper to empirically test urban-rural differences in progressive attitudes – which are the subject of so much popular and academic discussion – beyond the contexts of North America and Europe.

In so doing, our research also aims to engage with the separate but related bodies of literature on 'planetary urbanism' (Brenner and Schmid, 2015), and on 'progressive cities' (Douglass et al., 2019). In the last decades, many urban theorists have challenged overly simplistic theoretical approaches to cities rooted in the Euro-American experience and the view of global urbanism as a homogenous phenomenon. By contrast, contributions highlight the multifaceted and spatio-temporal heterogeneity existing between cities across the world, especially once one takes into account the urban experience in the global South (Peck, 2014; Roy, 2009; Schindler, 2017; Sheppard et al., 2013). Relatedly, a separate strand of literature explores the ways to foster 'progressive urban governance',

that is, to expand the 'right to the city' in the pursuit of inclusive spatial and social justice (Harvey, 2003; Marcuse, 2010; Soja, 2010). Progressive urban governance, it is argued, relies on broad cultures of political trust and on feelings of belonging in inclusive local identities (Douglass et al., 2019). Connecting to these two separate bodies of urban research, our contribution aims to show how the link between urbanisation and progressive values is not univocal but, instead, contingent on a country's level of material prosperity.

Our paper is structured as follows. We first outline the theoretical channels through which socially liberal values spread, but also why there may be differences in these values between urban and rural areas. Next, we outline the World Values Survey and European Value Study, and we discuss how we will use this data to test our hypotheses. Section four presents our regression models and the results. Finally, we conclude by arguing that these changes are likely to be driving much of the political cleavage between urban and rural areas.

#### 2. Modernisation and the 'disruptive power' of cities

The dominant theory for the spread of liberal attitudes across the world has been modernisation theory. Dating back to Marx and Weber, the basic version of this theory suggests that socio-economic development will lead to changes in values as individuals move from a focus on meeting basic needs to one where they are better able to make choices, i.e. the so-called 'silent revolution' (Inglehart, 1977, 1997). In Inglehart's (2018) formulation, there are two processes driving this change. The scarcity hypothesis suggests that the most pressing needs are dealt with first, and that when people are secure, they focus on postmaterialist goals such as 'belonging, esteem and free choice'. The possibility of taking survival for granted "brings cultural changes that make individual autonomy, gender equality, and democracy increasingly likely, giving rise to a new type of society that promotes human emancipation on many fronts" (Inglehart and Welzel 2005, p. 149).

Inglehart's second hypothesis suggests that this will take time (Inglehart, 2018): the socialisation hypothesis indicates that there will be a time-lag in how the scarcity hypothesis will operate, as it will take time for generations to replace each other and values to change.

These processes will operate in complex, path-dependent ways and there is no one route towards social liberalisation. The transformation of cultural values in a progressive direction is neither homogenous nor unidirectional and, for example, modernisation can 'go in reverse' when people's sense of security is being eroded (Inglehart and Norris, 2017). As it is argued, this is what has recently happened across many cities and regions in Europe and North America affected by relative economic decline, diminishing job security, or rising spatial inequality (cf. McCann 2019; Mutz 2018; Rodríguez-Pose 2018;

Rodrik 2020). But, overall, the idea is that economic prosperity and individual security progressively lead to a relative decline of conformist, in-group attitudes and a growing spread of liberal attitudes in advanced countries. While it cannot explain individual cases which are both rich and illiberal, such as Saudi Arabia, the theory has been used to explain changing values across many countries.

Cities rarely form a central part of debates about modernization theory, which have tended to focus on the nation state as a unit of analysis due to what has been described as 'methodological nationalism' (Jeffery and Schakel, 2013; Wimmer and Glick Schiller, 2002). But they do serve two key functions which are stressed in modernisation theory. The first is socialisation, the method through which, in Inglehart's (2018) view, new values consolidate. While values traditionally spread through generations, cities allow the rapid transmission of information and values between diverse contemporaneous groups. Major urban cities are diverse – or, in some cases, 'super-diverse' (Vertovec and Cohen, 2002: Wessendorf, 2014) - contexts in which more frequent interaction with 'the different' modifies attitudes. Cities across the world differ vastly in terms of urban structure, sociocultural fabric, and other key aspects which promote or hinder interaction across groups (e.g., through spatial segregation). Overall, however, urban dwellers are, as a general rule, likely to interact more frequently with segments of the population that are perceived as threatening in the conservative imaginary, such as LGTBQ+ community members and migrants. This, on average, may promote greater tolerance in urban settings relative to rural areas, where the interactions with 'the different' are scarcer. In these areas, remoteness frequently implies a lack of interaction with different people (Gimpel et al., 2020). Urban areas also provide a variety of role models who can show, for example, women in non-traditional gender roles and so lead to the quicker adoption of these skills (Evans, 2019).

Second, cities are more likely to provide enhanced choice. According to Inglehart (2018: 3), "modernization brings economic development, democratization and growing social tolerance – which are conducive to happiness because they give people more freedom of choice in how to live their lives." This freedom of choice is particularly important in cities, as they provide diverse stimuli and the diversity of lifestyle choices which allow people to select into different groups (Jacobs, 1969). As stressed earlier, not all cities across the world provide the same freedom of choice. Yet, on average – we suggest – a child growing up in a city is likely to be exposed to a much wider variety of social groups than one raised in the countryside. Overall, cities are more likely to meet people's non-material needs for culture, contacts with diversity, and interactions with different groups into which individuals can then self-select.

If modernisation theory provides a broad conceptual framework for understanding sociocultural change, others have sketched out theories of social change specific to cities. For example, in a study of Cambodia, Evans (2019) focuses on gender equality, one aspect of progressive attitudes which we consider here. She develops a theory based on three factors: self-interest, or the increased opportunity cost of women working in the home; exposure, or increased exposure to women performing valued roles in cities; and association, as they make it easier to challenge established gender norms. Testing these hypotheses, she argues for the "disruptive power of cities" (pp. 979) and for the importance of 'association' whereby access to information and public spaces allows women to challenge the existing value-system. Similarly, Ayoub and Kollman (2020) argue that since the 1990s cities played a key role in the expansion of lesbian, gay, bisexual, transgender and intersex (LGBTI) rights across Europe. Specifically, they suggest that, across the continent, urbanisation has strengthened LGBTI rights by facilitating collective organisation among movements, and by enhancing their visibility and political advocacy.

A growing amount of urban theory has challenged the view of global urbanism as a homogenous phenomenon and, instead, highlighted the multifaceted and spatio-temporal heterogeneity existing between cities across the world. In particular, the literature underlines how different forms of urbanisation may differ substantially across different countries, and between 'global North' and 'global South' contexts (Peck, 2014; Roy, 2009; Schindler, 2017; Sheppard et al., 2013). Hence, we posit, not all cities may offer the same preconditions for progressive attitudes to thrive. Consistent with the scarcity hypothesis, Inglehart (1977) suggests that the emergence of progressive values is linked to the appearance of an economically secure middle class. Although over the last decades across many areas of the 'global South' there has been an expansion of this class, the majority of this growth has taken place in a few Asian countries (Kharas, 2017; Ravallion, 2010). By contrast, rapid urbanisation in less developed countries has often brought about urban poverty and a rapid expansion of slums, where health, economic and security challenges prevail (Glaeser and Sims, 2015; Parnreiter, 2021; Sarzynski, 2012; UN-Habitat, 2004).

Beyond the material perspective, some of the 'global South' contexts may miss strong liberal institutions, which are indispensable for the safeguarding of individual freedoms. For this reason, polities without sufficient safeguards of individual freedoms may not offer the preconditions necessary to make cities promoters of progressive thinking, such as the ability of citizens to choose freely among different lifestyles, the exposure to non-conforming ideas, and the freedom of association. As a result, it is unclear whether the apparent urban-rural divide observed in developed countries is also a consistent feature in less advanced economies. Building on these theoretical observations, we test the following primary hypotheses in the next part of the paper.

H1: Across the world, there is a significant gap in individual values along the urban-rural continuum, and this gap is linked to the contextual effect of place.

H2: On net, and holding idiosyncratic country characteristics constant, these divides become apparent at higher levels of socioeconomic development.

While our two main hypotheses posit that cities may foster progressive thinking, especially in countries at higher level of socioeconomic development, an alternative explanation of potential differences in individual attitudes across the urban-rural continuum draws on composition effects (Maxwell, 2019). The composition of the population of urban areas will vary - in terms of their demographics, education, and so on. This is likely to matter significantly for their values. Balancing against these forces will be self-reinforcing processes of selective sorting. Urban-rural migration is selective and individuals who move will have different characteristics. Migration within countries is often determined by national cultural norms. Although often driven by economic motives, it is also linked to social desires, in particular the desire for young people to experience the cultural benefits of major cities (Green, 2017).

The issue of sorting is not straightforward, because migrating might itself spur changes in those that move, favouring therefore the contextual hypothesis. As Lee, Morris, & Kemeny, (2018) argue, mobility provides exposure to new ideas, peoples, and cultures, expands social networks, and breaks up established group identities. Cities bring people from different backgrounds into proximity, help them share ideas, and can spread progressive values and practices. Nevertheless, we test for the following alternative hypothesis.

## H.A: Differences in attitudes along the urban density divide are not explained by contextual effects but, instead, by composition effects.

To conclude, we suggest that few studies have tested these hypotheses across the world. Traditionally, territorial political analyses have mainly focused on political behaviour (Lipset and Rokkan, 1967; Rokkan and Urwin, 1983). In the wake of the populist resurgence of the mid-2010s, there have been many studies on urban-rural political division. Most studies have focused on the United States (Cramer, 2016; Gimpel et al., 2020; Rodden, 2019), and Europe (e.g., Ford and Jennings 2020).. Besides, there are fewer studies about how urban-rural divide is linked to values. Huijsmans, Harteveld, van der Brug, & Lancee (2021) show a divergence of cultural attitudes around immigration. multiculturalism, and European integration between urban and rural areas of the Netherlands from 1979 until 2017. Using the European Social Survey, Mitsch, Lee, & Ralph Morrow (2021) show a growing divergence of political trust between urban and rural areas. In a similar study, Kenny & Luca (2020) show political attitudes differ as well. In a study of immigration attitudes in large European cities, Maxwell, (2019: p. 472) notes the presence of both sorting and self-selection effects: "Large European cities have more positive immigration attitudes than rural areas because those cities have larger percentages of residents who are highly educated and professionals and because people with positive immigration attitudes self-select into large cities." Again, these studies tend

to be focused on the United States or Europe. There is, to date, little evidence on how this varies in other world contexts, particularly in less advanced economies.

#### 3. Progressive attitudes in urban and rural areas

In this paper, we focus on two research questions: (1) Are there structural urban-rural divides in progressive attitudes across the world? (2) Is this gap different across countries at different development stages?

#### Data - The World Value Survey & The European Value Survey

To answer our research questions, we use data from two country-level surveys: The World Values Survey (WVS) and The European Values Study (EVS). These surveys are representative of all individuals 18 and older residing within private households in each country, irrespective of their nationality. Although the surveys are collected by national teams, these must comply with several rules, such as a minimum sample size (N = 1000 for countries below 2 million and N = 1500 otherwise) and the implementation of a common questionnaire. To correct for small deviations in several dimensions relative to census data or country statistics – including the urban-rural distribution, we use survey weights included in most countries. Since both datasets offer an overlap of variables and collaborate on the survey design, they can be integrated. Specifically, we use the last waves of the WVS (7th wave) and the EVS (5th wave), whose surveys cover the period from 2017 to 2021.

We limit the analysis to the last wave of both surveys since prior waves have three limitations. First, they include too few low-income countries to test our second hypothesis. Second, many countries lack a homogeneous urbanisation variable. Third, early waves lacked coverage of rural areas, particularly in developing countries. Besides, we also exclude from the analysis all countries where questions on any of the value dimensions we consider were not recorded.

The final sample has around 81.500 observations in 66 countries: 29 high-income countries, 23 upper-middle countries and 14 lower-middle and low-income countries. For this income categorisation we follow the most up-to-date World Bank's (2020) classification.<sup>1</sup> Table 1 shows the list of countries covered, classified by income groups.

<sup>&</sup>lt;sup>1</sup> See <u>https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups</u>, accessed on 10 June 2021.

High-inc	ome	Upper-middle income		Lower middle and low		
				income		
Country	Obs.	Country	Obs.	Country	Obs.	
Andorra	834	Albania	1,172	Banglades	1,117	
Australia	1,481	Azerbaijan	1,176	Bolivia	1,432	
Austria	1,179	Argentina	635	Myanmar	1,196	
Chile	761	Armenia	1,244	Ethiopia	1,020	
Taiwan	1,194	Bosnia and	1,392	Indonesia	3,064	
Croatia	1,104	Brazil	1,156	Kyrgyzstan	1,016	
Cyprus	685	Bulgaria	953	Nicaragua	1,199	
Czechia	1,043	Belarus	1,066	Nigeria	1,109	
Estonia	831	China	2,716	Pakistan	1,603	
Finland	1,014	Colombia	1,498	Philippines	1,192	
France	1,406	Ecuador	982	Vietnam	1,200	
Germany	2,881	Georgia	1,706	Zimbabwe	1,161	
Greece	980	Guatemala	1,009	Tunisia	1,125	
Hungary	1,022	Kazakhstan	829	Ukraine	564	
lceland	1,334	Malaysia	1,313			
Italy	1,408	Mexico	1,479			
Japan	660	Montenegro	676			
South Korea	1,245	Peru	1,161			
Lithuania	820	Russia	2,443			
New Zealand	621	Serbia	1,758			
Norway	1,000	Thailand	1,265			
Poland	818	Turkey	2,060			
Puerto Rico	1,019	North	670			
Romania	1,804					
Slovakia	867					
Slovenia	763					
Spain	785					
Sweden	993					
Switzerland	2,661					
29 countries	33,213	23 countries	30,359	14	17,998	

#### Table 1: Countries in our sample, classified by income levels.

#### **Defining rural areas**

There is no clear-cut distinction between rural and urban areas. Furthermore, the concept of rural might vary from country to country, depending on their degree of urbanisation. A better way of conceptualising the divide is to consider a spectrum ranging between densely populated urban centres – often capital cities – and highly isolated rural areas (Scala and Johnson, 2017).

The data at hand offers us some structure. Although both surveys have several variables to denote the type of settlement where respondents live, the only variable consistent across countries offers five categories: over 500K inhabitants (megacities and very large cities); between 100K and 500K (large cities); between 20K and 100K (middle-size cities); between 5K and 20K (towns); and under 5K (rural areas). The degree of urbanisation is filled by the organisation which undertakes the survey, presumably using reliable census information. Thus, we can expect a higher accuracy than in other surveys where this data is reported by the respondents, such as the European Social Survey. Out of the total pooled sample, 15.73% of respondents report that they live in a very large city over 500K, 18.08% in large cities (100-500K), 21.81% in middle-sized cities (20-100K), 19.3% in towns, and 25.08% in rural areas. Figure 1 provides a visual overview of this distribution. While drawing exact comparisons is not simple, in our data around 55% of respondents live in settlements that can be defined as cities. This share is broadly consistent with UN figures, which set the world's urbanisation rate during the period 2017-2020 at between 54-56%.<sup>2</sup>

Since the data only offers information on the size of the settlement, it ignores where these are located relative to (other) urban centres. For instance, smaller places might either be in the suburbs of big cities or in remote areas. In this regard, a population variable is not an infallible way of capturing the degree of urbanisation in a given area. Yet, such a limitation would plausibly underestimate our results. If a significant gap is captured even when mixing isolated areas with small urban-adjacent places, our results are likely to be downward biased.

<sup>&</sup>lt;sup>2</sup> Source: <u>https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS</u>, accessed on 22 December 2021.



#### Figure 1: The distribution of place of residence in our pooled sample.

Notes: WVS wave 7 and EVS wave 5, authors' own calculations.

To address this limitation, we carry out a robustness check using geocoded information on the respondents and linking it to the Global Human Settlement Layer Settlement Model (GHSL SMOD) developed by the Joint Research Centre of the European Commission.<sup>3</sup> The GHSL SMOD classifies population grid cells of 1 Km<sup>2</sup> based on population data in that grid and urban density data from the given grid and those grids located nearby. The former is obtained from census data and the latter using land satellite techniques. The GHSL SMOD offers seven categories that can be collapsed into three major ones: urban centres, urban clusters and rural areas. Since all EVS and some WVS countries are missing coordinates information, this robustness check is only possible using data from 26 countries: 5 high-income, 8 upper middle-income, and 13 low and lower-middle income (the full list is provided in Appendix A.1). This sample also includes the United States, which is missing in the main analysis. This is so because the US collected geocoded data but not a settlement size variable.<sup>4</sup> Given the few countries for which GHSL SMOD data

<sup>&</sup>lt;sup>3</sup>More information on the GHSL SMOD database can be found here: <u>https://ghsl.jrc.ec.europa.eu/ghs\_smod2019.php</u>, accessed on 14 September 2021.

<sup>&</sup>lt;sup>4</sup> Results are almost identical when excluding the US from the robustness check.

is available, we use this robustness check to assess whether there is an urban-rural gap in values, but not to verify whether this gap varies across the income groups.

#### **Progressive values**

Our dataset has many variables that encapsulate 'progressive values', that is, values linked to greater tolerance for ethnic, cultural, and sexual diversity and individual choice concerning the kind of life one wants to lead (Inglehart 1997: 23). We identify three broad themes.

The first group relates to family values. On a Likert scale from 1 (never justifiable) to 10 (always justifiable), the WVS/EVS datasets include variables on tolerance to six events: *Abortion, Homosexuality, Prostitution, Divorce, Euthanasia* and *Casual Sex*.

The second group encompasses gender equality values. On a Likert scale from 1 (strongly agree) to 4 (strongly disagree), there are two variables available: '*Men make better politicians*' and '*Men make better businessmen*'.

The third group describes attitudes towards immigration. The WVS/EVS have two useful variables: 'Jobs should be prioritised for national citizens'<sup>5</sup> and 'what is the impact of immigrants on the development of your country'. These variables follow a Likert scale from 1 (strongly agree / very bad impact) to 5 (strongly disagree/very good impact).

An inspection of the data suggests that values within and across groups are highly correlated. To provide a straightforward analysis, we create an overall index of Progressive Values. This is done in two steps. First, we take the average for each group of values (family values, gender equality and immigration attitudes). Second, we rescale

the Likert scales to match that of family values (*Rescaled X* = 9 \*  $\left(\frac{X - X_{min}}{X_{range}}\right)$  + 1). The result

is an overall index where 1 represents the lowest and 10 the highest level of progressive values.

The map in Figure 2 shows the mean score in the Progressive Values Index for each country included in our study. There is clear association between the level of development and progressive values. Advanced economies in Western Europe, Australia and New Zealand show high levels of progressive thinking. Lower-middle and low-income countries in Southeast Asia and Africa show very low levels of progressive values, whereas middle-income countries in Eastern Europe, China, and Latin America have values somewhere in between.

<sup>&</sup>lt;sup>5</sup> This question is missing for Argentina, Brazil and Nigeria. For these countries, we calculate the index with the remaining questions.



Figure 2: Mean Score in the Progressive Values Index

Notes: Authors' calculations using sample weights and data from WVS wave 7 and EVS wave 5.

# Figure 3: Kernel density estimates of the progressive values index. Three groups of countries based on income levels.



Notes: data from WVS wave 7 and EVS wave 5, authors' own calculations using sample weights.

Figure 3 reinforces the point. It portrays the kernel density estimates of the Progressive Values Index for countries in the three income groups. Advanced economies not only present a higher mean in progressive values, but also the spread of progressive thinking is wider than in less advanced economies, where scores are much more concentrated in the lower range. Therefore, overall, the descriptive evidence aligns with the predictions of modernization theory: progressive thinking is more prevalent where the material needs of citizens are satisfied.



#### Figure 4: The urban-rural gap in the Progressive Values Index.

Notes: data from WVS wave 7 and EVS wave 5, authors' own calculations using sample weights. The map shows the average gap in the Progressive Value Index between places with a lower (under 5K of the smallest available) and a higher degree of urbanisation. We combine places of residence with a population between 100-500K and those above 500K since not all countries have very large cities.

The map in Figure 4 shows the gap in values between places with a lower (under 5K of the smallest available) and a higher (over 100K or the largest available) degree of urbanisation.<sup>6</sup> In line with the literature on socialisation, association and freedom of choice, the urban dwellers tend to favour more progressive ideals. European countries, particularly Central European and Nordic ones, show the largest gaps in rural-urban values. Less developed economies in Latin America, Southeast Asia and Central Asia show smaller gaps, or the gap is even reversed, with rural citizens displaying more progressive values. Although there is a correlation between the level of development and the urban-rural gap, this correlation is not perfect. For instance, Japan is an advanced

<sup>&</sup>lt;sup>6</sup> In this map, we combine places of residence with a population between 100-500K and those above 500K, since not all countries have very large cities.

economy in which rural areas seem to be more progressive than large cities. On the contrary, the urban-rural gap is larger in Turkey than in many Western countries such as Spain and France.

# Figure 5. GDP per capita (US\$ current prices) and the urban rural gap in progressive values.



Notes: The plot shows the country-level correlation between GDP per capita in PPP and the urban-rural gap in progressive values. The fitted line is calculated using sample weights. Own calculation using data from World Bank, WVS wave 7 and EVS wave 5.

The correlation between the urban-rural gap and the level of development is easier to appreciate in Figure 5, which shows a scatterplot of the mean urban-rural gap and the national GDP per capita in 2019 (international \$, current prices).<sup>7</sup> The relationship is strong: richer countries show a larger gap in progressive thinking between urban and rural areas. This gap is closer to 0 – and even positive for some countries – for lower levels of GDP per capita.

<sup>&</sup>lt;sup>7</sup> Data obtained from the World Bank, see <u>https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD</u>, accessed on 10 October 2021.

#### 4. Model and empirics

#### The empirical model

We test our hypotheses using an Ordinary Least Square (OLS)<sup>8</sup> regression model controlling for a set of individual characteristics. These controls allow us to verify whether there is a rural-urban gap that goes beyond compositional effects based on observable characteristics, i.e., beyond the concentration in cities of people that are different in characteristics such as income, age, or education. This would suggest that 'ecological' elements such as exposure, socialisation and freedom of choice may play a role in the emergence of progressive values. Model (1) captures our main specification.

 $PVI_{i,c} = \alpha + \beta 1 Urb_{i,c} + \beta 2 Dem_{i,c} + \beta 3 Econ_{i,c} + \beta 4 Satisf_{i,c} + \varphi_c + \varepsilon_{i,c} (1)$ 

Where  $PVI_{i,c}$  is the progressive values Index score for individual *i* living in country *c*.  $Urb_{i,c}$  is our variable of interest and captures the degree of urbanisation of the place of residence of the respondent.  $Dem_{i,c}$  is a set of demographic controls.  $Econ_{i,c}$  is a set of controls that account for the income decile to which the respondent belongs and their employment status.  $Satisf_{i,c}$  is a categorical variable that controls for the level of satisfaction with life.  $j_c$  are country dummies that capture country-fixed effects, included to account for structural cross-country differences, e.g., polity characteristics, welfare state provisions, etc. Since there are 66 countries in the sample, we cluster the standard errors by country to deal with the potential correlation of the error term at the country level (Bertrand et al., 2004).

Although Model (1) cannot account for other unobservable characteristics, we expect these controls to account for most of the potential cofounders. It is nonetheless important to stress that our analysis does not claim to provide a causal explanation of the relationship between progressive outlooks and place of residence. By contrast, inspired by the belief that rigorous descriptive evidence is a helpful first-step tool to then develop detailed causal explanations, we aim to present a broad, systematic analysis of a set of robust, cross-country comparative findings, which might well be analysed in more depth and with the use of more advanced causal inference techniques by future research.

The three sets of controls include the following covariates:

*Age.* We first include age as, following the literature, we may expect individual attitudes to be highly stratified by age groups, with progressive and cosmopolitan views being more likely to be embraced by younger generations (e.g. Goodwin and Heath 2016; Harris and

<sup>&</sup>lt;sup>8</sup> The results are robust when using ordinal logit and multilevel specifications. We rely on OLS to simplify the interpretation of results.

Charlton 2016).<sup>9</sup> We classify age in seven groups: below 21 years old, between 21/30, between 31/40, between 41/50, between 51/60, between 61/70, and over 70.

*Gender.* We equally control for gender, as we may expect this variable to have a significant effect on attitudes, particularly those related to family and gender values (inter alia: Evans 2019; Goodwin and Heath 2016).

*Education*. Along with age, education is consistently discussed in the literature as one of the key variables positively associated with more progressive views (inter alia: Kenny and Luca 2020; Maxwell 2019). We classify respondents' highest educational attainment following the ISCED (International Standard Classification of Education) one-digit classification, and hence distinguishing between eight groups ranging from less than primary to advanced tertiary education.

*Native.* We equally add a dummy for people born in their country of residence. For example, on average we may expect natives to have more conservative views towards migration.

*Income.* We then aim to control for respondents' economic situation, since income levels may affect one's social status and hence outlooks. Furthermore, we do so following the literature on the 'winners' and 'losers' of globalisation (Inglehart and Norris, 2017; Kriesi, 2010; Rodrik, 2020), which suggests that many forms of political and cultural backlash may be associated to personal relative economic stagnation or decline. We measure the variable by the decile in which the respondents' household income is placed with regards to that of all households in the country.

*Employment status.* Similarly, we include dummy variables for each of the following categories: employed full time, in part-time occupation, self-employed, retired, home maker (e.g., housewife, househusband, or looking after children), student, unemployed, and other.

*Life satisfaction.* We also include a measure of life satisfaction, to capture the overall level of individual satisfaction of respondents.

Finally, as discussed in the literature, the emergence of progressive values has been linked to the economic security enjoyed in advanced economies (Inglehart, 1977), in which clusters of self-expression thinking emerged in the 1960s. Across many 'global South' countries, such clusters might have not emerged or might be reduced to a narrow economic elite, and hence the urban-rural gap may be smaller or non-existent. Moreover, across many 'global South' contexts, thinner liberal institutions may also prevent the emergence of progressive thinking in urban agglomerations. To test whether the urban-

<sup>&</sup>lt;sup>9</sup> Discussing democratic backsliding in advanced democracies, Foa and Mounk (2016) provide a compelling alternative picture, where younger generations are also more likely to feel a disconnect with democracy. Either way, birth cohort are assumed to be a key determinant of individual attitudes.

rural gap is different across 'global North' and 'global South' countries, we run Model (1) interacting the degree of urbanisation with a categorical variable indicating the level of income of the covered countries: high, upper-middle, and lower-middle/low-income countries.

More details about the definition of the dependent and explanatory variables, as well as their key summary statistics, are reported in Appendices A.2 and A.3.

#### 5. Results

#### Urban-rural gap in progressive values

We start the analysis by estimating the correlation between the degree of urbanisation and the Progressive Values Index, which aggregates opinions on family, gender equality and immigration attitudes. Our focus is on the degree of urbanisation categorical variable, with very large cities hosting over 500K inhabitants being the reference category.

Table 2 presents the OLS results. Column one shows the gap when only including country fixed effects, while columns two to four progressively add key demographic, economic and life satisfaction controls. The coefficients of Table 2 suggest that the gap between urban and more isolated areas is negative and significant for all degrees of urbanisation, when compared to very large cities. This negative gap increases as the degree of urbanisation decreases. The gap is roughly twice as large in rural areas compared to middle-sized cities.

	(1)	(2)	(3)	(4)	
	Dependent variable: Index of Progressive Values				
Medium cities (100-500K)	-0.143***	-0.116***	-0.114***	-0.114***	
	(0.039)	(0.039)	(0.039)	(0.039)	
Small cities (20-100K)	-0.256***	-0.193***	-0.186***	-0.185***	
	(0.038)	(0.036)	(0.036)	(0.036)	
Towns (5-20K)	-0.349***	-0.260***	-0.246***	-0.245***	
	(0.046)	(0.043)	(0.043)	(0.043)	
Rural areas (under 5K)	-0.415***	-0.296***	-0.280***	-0.279***	
	(0.046)	(0.041)	(0.042)	(0.042)	

#### Table 2. The urban-rural gap in progressive values: robust OLS estimates.

Country FE	Yes	Yes	Yes	Yes
Demographics	No	Yes	Yes	Yes
Economics	No	No	Yes	Yes
Satisfaction	No	No	No	Yes
Observations	81,570	81,570	81,570	81,570
Adjusted R-squared	0.454	0.490	0.493	0.494

Notes: standard errors clustered by country in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. The table reports coefficients for each category in relation to the baseline ("Very large cities over 500K inhabitants").

The magnitude of the gap decreases after the inclusion of controls, suggesting that compositional effects play a role in the urban-rural gap. A comparison of columns one and two suggests that controlling for observable demographic factors (age, gender, education, immigration status) leads to a noteworthy reduction of the gap between the respondents living in very large cities (the baseline category) and those residing in smaller urban centres and the countryside. By contrast, the inclusion of individual economic controls in model three has a more moderate effect in explaining the 'gross' urban-rural gap in values, while controlling for respondents' life satisfaction (cf. model four) has almost no influence on the estimates.



# Figure 6. The urban-rural gap in progressive values: a comparison of all regression coefficients.

Notes: Coefficients' plot based on specification four of Table 1. For easier readability, the coefficients for age and education are regrouped in three classes (age: below 30, 30-55, and over 55; education: up to primary, secondary, and tertiary).

To provide a better understanding of the results, Figure 6 plots the regression coefficients for all variables included in model four of Table 1. The magnitude of the difference between very large cities (our reference category) and rural areas is roughly the same of that existing between respondents identifying as male and female. The comparison with different age cohorts is also interesting (for simplicity, in the plot we combine age groups in three categories: under 30; 30-55, and over 55): the gap between rural and urban areas is almost as large as generational differences. Similarly, the difference between urban and rural dwellers is relatively similar to that existing between respondents in the lowest (the reference category) and highest income deciles. By contrast, instead, education is correlated to differences in outcome which are around 50% larger than the magnitude of place of residence (cf., in particular, the difference between respondents with tertiary education and up-to-primary education, the baseline category). Finally, coefficients for life satisfaction, employment status, and being a foreigner are either insignificant or very small in magnitude.

Overall, the results indicate that place of residence has a significant and meaningful correlation with our Index of Progressive Values, suggesting how cities are indeed poles

of progressive thinking. This goes in line with the literature, that highlights processes of exposure, freedom of choice and socialisation, all of which are more present in large urban agglomerations relative to more isolated communities.

#### **Robustness checks**

In this section we test the robustness of our main findings. First, in the main analysis we rely on OLS to simplify the interpretation of results. Nevertheless, our dependent variable is ordinal categorical and, hence, may violate the assumptions of OLS. In Appendix A.4, we hence re-estimate our models by means of a proportional odds (ordinal logit) estimator.<sup>10</sup> The outputs confirm our findings, with coefficients remaining highly significant and, actually, larger in magnitude. The results are equally very similar when using a multilevel specification in which individual observations are nested within countries, as shown in Appendix A.5.

We then proceed to show the urban-rural gap for the different groups of values that compose the aggregate index.<sup>11</sup> Using our most complete specification (column four in Table 1), Figure 7 shows the point estimate derived from regressing family values, gender equality and immigration values on the degree of urbanisation, together with that of the overall index.

<sup>&</sup>lt;sup>10</sup> These additional estimates assume that the link between the regressors and the outcome is constant across all values taken by the latter – what is called the proportional odds assumption.

<sup>&</sup>lt;sup>11</sup> As described above, we average values of different questions within the same group of values and rescale these to a Likert scale from 1 to 10, so that the different groups of values become comparable.



Figure 7. The urban-rural gap for different types of values (OLS).

Notes: coefficient plots based on specification four of Table 1 (all controls included). The plots show regression coefficients for each residence category in relation to the baseline ("Very large cities over 500K inhabitants").

The results suggest a similar pattern to that observed in the aggregate index, although the magnitude of the gap differs across the sub-groups of values. Specifically, the difference between urban and less urban areas is the largest for those values related to the family life, such as abortion, homosexuality, and divorce (cf. the upper-right plot of Figure 7). This is twice as large as the gap in immigration attitudes and gender equality across all degrees of urbanisation. Still, the gap is significant at the 95% threshold across most types of values and degrees of urbanisation. In line with the results for the overall progressive values index, the gap is generally larger the more 'rural' the place of residence is (a partial exception is immigration attitudes, for which rural areas are not more anti-immigration than towns).

As discussed above, a problem with 'place of residence', our main independent variable of interest, is that it may report as rural areas places with smaller populations but which are nonetheless adjacent to large urban areas. In Appendix A.6 we hence re-estimate the main regressions linking geocoded information on each respondent's place of residence with the GHSL SMOD database. The geocoded data is only available for a small set of countries and, hence, the number of observations reduces to just over 30.000 (cf. Appendix A.1 for more details on the counties being included). Nevertheless, Appendix

Table A.6 confirm how adopting an alternative measure of urbanisation does not substantively affect the results, which still highlight how there is a significant global negative gap in values between urban and rural areas.

## Urban-rural gap in progressive values across levels of material development

As anticipated, our second research hypothesis posits that the gap in urban-rural values might be less relevant as we move down the material prosperity ladder. Expanding on Inglehart's propositions, we hypothesise that large cities in 'Global South' countries might not offer the required material security for progressive values to become widespread. Similarly, some developing countries may have a 'democratic deficit' that deprives cities from many of their advantages relative to rural areas, such as freedom of choice and exposure to different lifestyles. To test this idea, in Table 3 we replicate our models including an interaction term between place of residence and an ordinal variable indicating each respondent's country income group, following the most recent World Bank's classification. To simplify the readability of outputs, we collapse the degree of urbanisation variable into two categories: rural (i.e., any place below 20K inhabitants), and urban areas (i.e., any place above 20K inhabitants).

	(1)	(2)	(3)	(4)
Dependent v	ariable: Ind	ex of Progr	essive Valu	ie
Rural	-0.081	-0.023	-0.017	-0.019
	(0.061)	(0.058)	(0.059)	(0.059)
Upper-middle income	0.253***	0.456***	0.457***	0.457***
	(0.035)	(0.042)	(0.042)	(0.044)
High income	1.764***	1.848***	1.798***	1.776***
	(0.035)	(0.038)	(0.038)	(0.041)
Rural*Upper-middle income	-0.101	-0.086	-0.073	-0.070
	(0.069)	(0.067)	(0.068)	(0.069)
Rural*High income	-0.252***	-0.235***	-0.234***	-0.232***

#### country-level GDP.

Table 3: The urban-rural gap in progressive values across levels of development: robust OLS estimates interacting place of residence and

	(0.073)	(0.069)	(0.070)	(0.070)
Country FE	Yes	Yes	Yes	Yes
Demographics	No	Yes	Yes	Yes
Economics	No	No	Yes	Yes
Satisfaction	No	No	No	Yes
Observations	81,570	81,570	81,570	81,570
Adjusted R-squared	0.453	0.489	0.492	0.493

Notes: standard errors clustered by country in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. The table reports coefficients for the interaction between place of residence and a categorical variable measuring countries' level of economic development (Low/lower-middle income, upper middle income, high income). For easier readability, we combine our five places of residence into a dummy variable taking value equal to one if place of residence has less than 20K inhabitants (rural place), and zero otherwise.

The results suggest two conclusions. As anticipated when discussing Figure 5, the overall level of national economic development is a strong predictor of progressive values: the higher the income of the country, the more progressive their citizens. Second, the gap between cities and rural areas increases with the level of material prosperity. The interaction between living in a high-income country and being a rural resident is significant, implying that the gap is significantly larger for high-income countries relative to lower and low-income countries. Moreover, once we control for the gap existing in more advanced economies, the gap between rural and urban areas becomes statistically insignificant, suggesting that such gap is driven by advanced economies.

As a robustness check, in Appendix A.7 we run an alternative specification where, instead of including an interaction term between the combined place of residence dummy (rural vs urban areas) and country income group, we consider all the five place of residence categories. Since interacting these five categories with the three country income groups would result in a table difficult to read, we follow a different approach and stratify the sample of countries into three groups based on their income levels – effectively running a separate regression for each group of countries. Appendix Table A.7 further confirms our second hypothesis.

Overall, the results go in line with Inglehart's hypothesis: richer countries are more postmaterialist. Furthermore, cities leave behind rural areas only in countries that reach a sufficient level of economic prosperity. Other factors beyond material security, such as stronger democratic institutions in advanced economies, could also explain why cities in the developed world can maximise their ecological advantages, such as exposure, the freedom to choose a preferred lifestyle and the freedom to associate yourself with alike individuals, hence widening their gap in terms of values with less diverse, more isolated areas.

#### 6. Conclusion

There is widespread concern about the social and political implications of divergent values between residents of large cities and their hinterlands. In this paper, we have presented new evidence on the global geography of this divide, the extent to which it is explained by individual characteristics, and the levels of development at which it applies. Based on our analysis of representative survey data for 66 countries, our results suggest three principal findings – each of which has important implications for our thinking about cities and urban-rural polarisation.

First, our evidence shows that urban residents are much more likely to have progressive values. This result applies across three categories of values: family values, gender equality, and immigration attitudes. Second, we find that this applies even when controlling for a battery of controls for demographics, including age and education, economics, and satisfaction with local conditions. We cannot be sure if these results are driven by sorting, as people with progressive values move into cities, or reflect culture which is gained within cities, but these findings do suggest that cities provide the 'catalysts for social change' identified by Evans (2018; 2019).

However, our third finding provides an important caveat to this result: we find much stronger results for high income countries than we do for countries in lower levels of development. We argue that this suggests that only more advanced economies can provide cities with the material comfort, and probably the right institutional environment, to make progressive values relevant. We need to be cautious with this finding, which is a general trend, rather than a universal law. As our descriptive analysis shows, there are advanced economies in which cities are not more progressive than rural areas, such as Japan, as well as developing countries with large urban-rural gaps, such as Kyrgyzstan. Still, it does suggest that there is something about affluent cities which allows the expression of new values.

These results have implications for both research on values and that on urban-rural polarisation. These differences represent an important fault line at the heart of many democracies, and one which will develop as countries become richer and the process of urbanisation continues. Given that those with higher education are increasingly drawn to cities (Kemeny and Storper, 2020), patterns of sorting are likely to continue.

Future work might wish to address some of the open questions outlined here. For example, our analysis does not claim to provide a causal explanation of the relationship between progressive outlooks and place of residence. By contrast, inspired by the belief

that rigorous descriptive evidence is a helpful first-step tool to then develop detailed causal explanations, we aimed to present and discuss a set of robust, systematic crosscountry findings, which might well be analysed in more depth and with the use of more advanced causal inference techniques by future research. Our paper has shown patterns at as large a scale as possible. But doing so limits the extent to which we can identify the mechanisms underpinning our results. Qualitative studies have already become to identify these questions (Evans, 2019), but further econometric work using panel surveys might be able to better identify the extent to which results are driven by socialisation or selective mobility (see Hoogerbrugge and Burger, 2021 for an example).

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#### Appendices

# Appendix A.1. List of the countries covered by geocoded data (GHSL SMOD), classified by income levels.

High-in	come	Upper-middl	le income	Lower middle and low income	
Country	Obs.	Country	Obs.	Country	Obs.
Andorra	954	Argentina	681	Bangladesh	1,078
Cyprus	382	China	2,922	Bolivia	1,467
Greece	1,008	Ecuador	990	Ethiopia	1,028
Romania	923	Kazakhstan	814	Indonesia	3,095
US	2,177	Malaysia	400	Kyrgyzstan	1,023
		Mexico	1,576	Myanmar	1,198
		Russia	1,342	Nicaragua	1,189
		Thailand	1,290	Nigeria 1,132	
				Pakistan	1,698
				Philippines	1,112
				Tunisia	1,148
				Vietnam	1,200
				Zimbabwe	1,167
5 countries	5,444	8 countries	10,015	13 countries	17,535

#### Appendix A.2. Weighted descriptive statistics.

Variable	Obs.	Mean	SD	Min	Max
Progressive Values Index	81,570	4.99	1.688	1	10
Place of residence: over 500K	81,570	.364	0	1	.157
Place of residence: between 100 and 500 K	81,570	.385	0	1	.181
Place of residence: between 20 and 100K	81,570	0.218	.413	0	1
Place of residence: between 5 and 20K	81,570	0.193	.395	0	1
Place of residence: under 5K	81,570	0.251	.433	0	1
Age	81,570	4.025	1.708	1	7
Gender	81,570	1.534	.499	1	2
Immigration status	81,570	1.049	.217	1	2
Education attainment	81,570	2.18	.638	1	3
Household income	81,570	4.866	2.355	1	10
Employment status	81,570	3.109	2.082	1	8
Satisfaction with life	81,570	7.265	2.202	1	10

#### Appendix A.3. Description of variables.

Variable	Type, range	WVS/EVS questionnaire
Progressive values	Ordinal,	Index variable derived (as per section 3) from the following questions:
		- "Please tell me for each of the following actions whether you think it can always be justified, never be justified, or something in between, using this card: Abortion / Homosexuality / Prostitution / Divorce / Euthanasia / Casual Sex".
		- "For each of the following statements I read out, can you tell me how strongly you agree or disagree with each. Do you strongly agree, agree, disagree, or strongly disagree?
		On the whole, men make better political leaders than women do / On the whole, men make better business executives than women do"
		- "How would you feel about the following statements? Do you agree or disagree with them? When jobs are scarce, employers should give priority to people of this country over immigrants"
		- "Now we would like to know your opinion about the people from other countries who come to live in [your country] - the immigrants. How would you evaluate the impact of these people on the development of [your country]"
Place of residence	Ordinal, 1/ 5.	"Size of the place where interview was conducted": Under 5K, 5-20K, 20-100K, 100-500K, over 500K.
Age	Ordinal,	Age group of respondents: <21, 21-29,30-39,40-49,50-
	1/7	59,60-69,70-79,>80.
Gender	Nominal, Binary.	Gender of respondent: male or female.
Immigration	Nominal,	"Were you born in this country or are you an immigrant
status binary. to this countr		to this country?"

Educational Attainment	Ordinal, 1/9	"What is the highest educational level that you, your spouse, your mother and your father have attained?" Coded following one-digit ISCED – 2011.
Household Income	Ordinal, 1/10	"On this card is an income scale on which 1 indicates the lowest income group and 10 the highest income group in your country. We would like to know in what group your household is. Please, specify the appropriate number, counting all wages, salaries, pensions and other incomes that come in. ( <i>Code one number</i> )"
Employment status	Nominal, 8 categories.	"Are you employed now or not? If yes, about how many hours a week? If more than one job: only for the main job. <i>Interviewer: code only ONE option from 1 to 8 for</i> <i>the respondent.</i> ".
Satisfaction with life	Ordinal, 1/10	"All things considered, how satisfied are you with your life as a whole these days? Using this card on which 1 means you are "completely dissatisfied" and 10 means you are "completely satisfied" where would you put your satisfaction with your life as a whole? ( <i>Code one</i> <i>number</i> )"

	(1)	(2)	(3)	(4)
	Dependent var	iable: Index of	Progressive V	alues
Large cities (100-500K)	-0.199***	-0.165***	-0.164***	-0.163***
	(0.054)	(0.055)	(0.057)	(0.057)
Middle cities (20-100K)	-0.350***	-0.273***	-0.265***	-0.263***
	(0.051)	(0.050)	(0.052)	(0.052)
Towns (5-20K)	-0.495***	-0.380***	-0.363***	-0.362***
	(0.062)	(0.060)	(0.062)	(0.062)
Rural areas (under 5K)	-0.579***	-0.425***	-0.404***	-0.403***
	(0.061)	(0.057)	(0.059)	(0.059)
Country FE	Yes	Yes	Yes	Yes
Demographics	No	Yes	Yes	Yes
Economics	No	No	Yes	Yes
Satisfaction	No	No	No	Yes
Observations	81,570	81,570	81,570	81,570

# Appendix A.4. Robustness check: ordinal logit regressions of all specifications.

Table A.4. The urban-rural gap in progressive values: robust orderedlogistic estimates.

Notes: Standard errors clustered by country in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. The table reports coefficients for each category in relation to the baseline ("Very large cities over 500K inhabitants").

# Appendix A.5. Robustness check: multilevel regressions of all specifications

# Table A.5. The urban-rural gap in progressive values: multilevel estimates – individuals nested within countries.

	(1)	(2)	(3)	(4)
Values	Depende	ent variable:	Index of P	rogressive
Lorgo citico (100 E00K)	0 1 1 2***	0 116***	0 11/***	0 112***
Large chies (100-500K)	-0.143	-0.116	-0.114	-0.113
	(0.039)	(0.039)	(0.039)	(0.039)
Middle cities (20-100K)	-0.256***	-0.193***	-0.186***	-0.185***
	(0.038)	(0.036)	(0.036)	(0.036)
Towns (5-20K)	-0.349***	-0.259***	-0.246***	-0.245***
	(0.046)	(0.043)	(0.043)	(0.043)
Rural areas (under 5K)	-0.415***	-0.296***	-0.281***	-0.280***
	(0.046)	(0.041)	(0.042)	(0.042)
Country FE	Yes	Yes	Yes	Yes
Demographics	No	Yes	Yes	Yes
Economics	No	No	Yes	Yes
Satisfaction	No	No	No	Yes
Observations	81,570	81,570	81,570	81,570
Snijders/Bosker R2 Level 1	0.016	0.043	0.055	0.063
Snijders/Bosker R2 Level 2	0.024	0.002	0.023	0.039

Notes: Individuals nested within countries. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. The table reports coefficients for each category in relation to the baseline ("Very large cities over 500K inhabitants").

# Appendix A.6. Robustness check: OLS estimates using geocoded information (GHSL SMOD)

Table A.6. The urban-rural gap in progressive values: OLS estimates using
geocoded information (GHSL SMOD).

	(1)	(2)	(3)	(4)				
	Dependent variable: Index of Progressive Values							
Urban clusters	-0.186***	-0.146***	-0.145*** -0.144***					
	(0.039)	(0.035)	(0.036)	(0.036)				
Rural areas	-0.217***	-0.165***	-0.159***	-0.157***				
	(0.051)	(0.044)	(0.043)	(0.043)				
Country FE	Yes	Yes	Yes	Yes				
Demographics	No	Yes	Yes	Yes				
Economics	No	No	Yes	Yes				
Satisfaction	No	No	No	Yes				
Observations	32,994	32,751	31,897	31,851				
Adjusted R-squared	0.424	0.445	0.442	0.444				

Notes: Standard errors clustered by country in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. The table reports coefficients for each category in relation to the baseline ("Urban centres").

Appendix A.7. Robustness check: rural-urban gap in progressive values across levels of development, stratifying the sample rather than including an interaction between place of residence and country income group.

	High income		Upper middle income		Low/lower middle income	
	(1)	(2)	(3)	(4)	(5)	(6)
Large cities (100- 500K)	-0.215***	-0.172***	-0.088***	-0.062	-0.184***	-0.174
	(0.028)	(0.026)	(0.025)	(0.052)	(0.041)	(0.102)
Middle cities (20- 100K)	-0.376***	-0.271***	-0.135***	-0.081*	-0.234***	-0.202
	(0.027)	(0.026)	(0.025)	(0.047)	(0.039)	(0.121)
Towns (5-20K)	-0.515***	-0.366***	-0.248***	-0.167***	-0.217***	-0.165
	(0.029)	(0.027)	(0.028)	(0.045)	(0.039)	(0.131)
Rural areas (under 5K)	-0.621***	-0.440***	-0.265***	-0.142***	-0.295***	-0.227*
	(0.029)	(0.027)	(0.024)	(0.050)	(0.038)	(0.128)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Demographics	No	Yes	No	Yes	Yes	Yes
Economics	No	Yes	No	No	Yes	Yes
Satisfaction	No	Yes	No	No	No	Yes
Observations	33,213	33,213	30,359	30,359	17,998	17,998
Adjusted R-squared	0.369	0.445	0.160	0.206	0.283	0.302

# Table A.7. The urban-rural gap in progressive values across levels of<br/>development: robust OLS estimates.

Notes: Standard errors clustered by countries in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. The table reports coefficients for each category in relation to the baseline ("Very large cities over 500K inhabitants").