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Urbanisation, democracy, and political regime transformations[☆]

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ABSTRACT

Cities, and the process of urbanisation more broadly, have long been associated with political change – and democratisation in particular. However, there is little cross-country empirical research on the relationship between urbanisation and political change, and a tendency to conflate urbanisation with industrialisation and economic development. This gap is significant for two reasons. First, many of the hypothesised mechanisms linking urbanisation to political change are associated with socioeconomic changes driven by industrialisation and economic development. Second, many low- and middle-income countries have undergone rapid "urbanisation without industrialisation". What then are the political consequences of urbanisation without industrialisation?

To answer this, we draw a key conceptual distinction between *urbanisation* – the increase in the relative share of a country's population living in urban areas – and *urban population scale* – the absolute size of urban populations. While much of the literature focuses upon the political implications of urbanisation, we argue that the sheer scale of urban populations may be more consequential for political change. Specifically, we suggest that although the hypothesised associations between urban living and democratic preferences among citizens are weak, urban living facilitates political engagement, and hence large urban populations may stimulate political change.

We test this hypothesis with cross-national regressions analysing the determinants of levels of democracy and episodes of political regime transformation since 1960 in 161 countries. We find no association between levels of urbanisation or urban population size and levels of democracy. By contrast, we find a positive and significant association between urban population size and political regime transformations, with a bias towards democratic change. Our study offers important insights into the relationship between urbanisation and political change and the political implications of rapid urbanisation without industrialisation unfolding in many parts of the world today.

1. Introduction

Towns, cities, and urban populations feature heavily in the history and philosophy of politics in general, and the emergence of democracy in particular. From Greek city-states to the proto-industrial ports of Europe, urban centres are often cited as early incubators of democratic impulses, practices, and ultimately institutions (Abramson & Boix, 2019; Dahl, 1998; Gerring et al., 2022). In the post-WWII era, modernisation theorists argued that economic development and urbanisation were pre-requisites for democratisation (Deutsch, 1961; Lerner, 1958; Lipset, 1959). Furthermore, contemporary urban theory evokes urban areas as

key sites for collective action and democratic struggle, including perspectives on the right to the city (McCann, 2002; Parnell & Pieterse, 2010), spatial justice (Soja, 2013), insurgent citizenship (Holston, 2009), rebellion (Harvey, 2012) and revolution (Beissinger, 2022). While select studies suggest that urbanisation may promote democratic change (Anthony, 2014; Glaeser & Steinberg, 2017a), systematic empirical evidence on the relationship between urbanisation and political change in the post-WWII era is surprisingly limited.

Here, we define urbanisation in strictly demographic terms as an increase in the proportion of a country's population living in urban areas. As the share of people living in urban areas increases relative to

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those living in rural areas, a society is said to urbanise. This process has traditionally been associated with industrialisation and economic development: as urban-based industry grows, demand for labour stimulates rural-urban migration, which drives urbanisation. This shift from rural-agrarian to urban-industrial modes of production and social organisation is credited with creating conditions favourable for political change towards greater democracy, including the rise of an urban bourgeoise interested in constraining the power of monarchs, the emergence of an organised working class, mass education, and rising wealth (Barro, 1999; Gerring et al., 2022; Lipset, 1959; Rød et al., 2020).

For this reason, urbanisation has been viewed as integral to economic transformation, significant changes in citizen preferences, and increased capacity to collectively act on those preferences. Yet despite robust theory and empirical evidence indicating that urban areas enable political participation and collective action (Beissinger, 2022; Dorward & Fox, 2022), recent research calls into question any *automatic* association between urbanisation and democratic preferences among citizens (Ballard-Rosa et al., 2023).

Moreover, modernisation theory was developed at a time when most of the world's population was still rural. In 1960, when modernisation theory was emerging, just 34 % of the global population lived in urban areas (World Bank, nd.). It was, therefore, the demographic, economic, and political histories of European countries and their offshoots that formed the empirical basis for such theorising. But the post-WWII world has proved to be quite different. Demographic, economic, and political changes in much of the Global South were shaped by technologies and geopolitics that did not exist in industrialising and democratising Europe (Fox & Goodfellow, 2022). Importantly, the process of urbanisation became increasingly de-linked from economic development and industrialisation (Dyson, 2011; Fox, 2012; Gollin et al., 2016; Jedwab & Vollrath, 2015; Menashe-Oren & Bocquier, 2021). This is particularly true in Africa and Asia, the two most rapidly urbanising regions (United Nations, 2019).

From both a theoretical and empirical perspective, the decoupling of urbanisation from economic development draws into question the assumed relationship between urbanisation and democracy, given that the hypothesised mechanisms linking these phenomena are largely mediated through the socioeconomic changes that come with industrialisation and economic development. In many low- and middle-income countries (LMICs), urban areas have grown rapidly in size despite economic stagnation (and in some cases contraction), a phenomenon dubbed 'urbanisation without growth' (Jedwab & Vollrath, 2015). In some exceptional cases, cities have continued to grow rapidly even as the share of people living in urban areas has declined (Crankshaw & Borel-Saladin, 2019).

It is therefore important to distinguish between *urbanisation* as a ratio and the scale of *urban populations*. The former refers to an increase in the *relative share* of a nation's population living in urban areas; the latter refers simply to the scale of the urban population in absolute terms. While these processes often go together, they are nevertheless distinct, and this distinction is theoretically and empirically important. When considering the effects of urban population change on political change, we therefore also need to make a clear distinction between population *ratio effects* and population *scale effects* (Fox and Bell, 2012).

What then are the potential political consequences of urbanisation and urban population size without economic development? Put differently, what are the *independent effects* of *urban ratio* and *urban scale* on the likelihood and nature of political change?

We argue that the assumed associations between urbanisation and the tendency towards democracy are relatively weak. However, there are strong theoretical and empirical grounds for believing (a) that urban areas enable political activity by reducing the costs of information exchange and facilitating collective action among citizens, and (b) that the size of urban populations matters as it affects the number of people potentially engaging in political activities (i.e., more people, more politics). We therefore expect the absolute size of a country's urban

population to have an observable effect on political change, but not necessarily in favour of democracy.

We test this hypothesis by analysing whether a country's level of urbanisation and the size of its urban population are associated with levels of democracy and the likelihood of democratic or autocratic regime transformations since 1960. Panel regressions with two-way country and time fixed effects reveal that *levels* of urbanisation are not robustly correlated with *levels* of democracy. We also show that *levels* of urbanisation are *negatively* associated with democratic political change while not significantly associated with autocratic change. Moreover, *urban population size* is *positively* associated with democratic regime transformations and possibly also related to autocratic regime transformations. We conclude that there is a strong association between large urban populations and political change at the national level—and that this may slightly favour democratic transformation.

In the next section we discuss the need to make a clear distinction between the spatial demographic process of urbanisation and economic "modernisation" when interrogating the link between urbanisation and political change. We then develop a set of hypotheses relating urbanisation and urban population concentration to political change in section three. Section four outlines our data and empirical strategy and section four presents empirical results from cross-national regression analysis. We conclude with a brief discussion of how our results relate to recent research on urbanisation, political change, and democratisation, as well as modernisation theory more broadly.

2. Urbanisation, economic development and political change

Modernisation theory explicitly linked the process of urbanisation to both industrialisation and "political modernisation," of which the expansion and entrenchment of democracy was an essential component (Bairoch, 1988; Cutright, 1937; Inglehart & Welzel, 2005; Kuznets, 1966; Lerner, 1958; Lipset, 1959; Moore, 1993). Urban areas were regarded as the necessary loci for democratic preferences and practices to take root and flourish. Laski, for instance, asserted that "organized democracy is the product of urban life" (1937: 78) while Lerner (1958) claimed urbanisation was the necessary catalyst to usher in the "participant society." Cities were seen as "[playing] a key role in ... developing concepts of citizenship and freedom" (Gerring et al., 2022, p.

Central to these arguments was an interplay between urbanisation and economic development. Urbanisation was assumed to be a product of industrialisation, which was associated with rising incomes, the introduction of mass education, the emergence of a working class, and new forms of social organisation that were conducive to progressive political change. Simply put, changes in modes of production drive urbanisation alongside changes in social values, economic interests, and political preferences. Collectively, these shifts were believed to stimulate demands for democratic institutions.

There are two problems with this theory. First, industrialisation and urbanisation in the 19th and 20th centuries were also associated with the rise of fascist, communist and theocratic regimes (Inglehart & Welzel, 2005). Second, while there was a close association between urbanisation and economic development in the early phases of industrialisation in Europe, the association between these processes became much weaker in the late 20th and early 21st centuries. As a result, many of the assumed mechanisms linking urbanisation to democratisation, which relate to changes in economic conditions, were absent in many countries that experienced "late urbanisation" (Fox and Goodfellow, 2021). Instead, many low- and middle-income countries have experienced "disjointed modernisation": rapid urbanisation without the kinds of economic and institutional changes traditionally associated with urbanisation (Fox, 2014, p. 20).

Nevertheless, there is a tendency to conflate urbanisation with economic development and its political consequences. For example, in their recent book on *The Deep Roots of Modern Democracy*, Gerring et al.

(2022) have a chapter devoted to "Mechanisms" that includes a section titled "Economic Development (including Urbanisation)." While there is no doubt that economic development has served as an important driver of urbanisation in many countries, it is now apparent that urbanisation can occur without economic development, and this has important implications for how we understand the relationship between urbanisation and political change.

In the pre-industrial era, economic development and the growth of urban populations were generally deeply intertwined. Due to the heavy burden of infectious and parasitic diseases in urban centres generally experienced more deaths than births each year, resulting in a state of persistent demographic contraction (Bairoch, 1988; Dyson, 2011; Fox, 2012; Jedwab & Vollrath, 2019). It was therefore only through in-migration that they were able to sustain and grow their populations, and the pace and scale of in-migration was closely associated with production and commerce or the geographic concentration of resources in the capitals of despots (Abramson & Boix, 2019; Ades & Glaeser, 1995; De Long & Shleifer, 1993). In short, it was hard to grow cities in the pre-industrial era, so the growth of towns and urban areas most often reflected economic progress. This is why economic historians often use the number and size of urban centres as proxies for regional prosperity in the pre-industrial era (Acemoglu et al., 2002; Bairoch, 1988; Gerring et al., 2022).

But profound technological changes beginning in the industrial revolution led to sustained improvements in food production, transportation, and disease control, which made it possible for urban areas to grow to historically unprecedented size, and in regions that had remained persistently rural (Fox & Goodfellow, 2022). Crucially, improvements in collective understandings of how infectious and parasitic diseases are transmitted, and how they can be prevented or treated, led to a rapid global reduction in mortality rates, particularly after the Second World War (Acemoglu & Johnson, 2007; Fox, 2012; Jedwab & Vollrath, 2019; Preston, 1975). Importantly, improvements in mortality have occurred everywhere-even in the poorest countries in the world-driven by global vaccination campaigns, public health initiatives, and improvements in food security. Consequently, the growth of urban populations and the process of urbanisation became increasingly de-coupled from industrialisation and economic development in the post-WWII period. Even in contexts of acute economic stagnation, such as the "lost decades" of economic development in Africa and Latin America (Bates et al., 2007), urban areas continued to grow rapidly. Indeed, rapid urban population growth in the face of economic stagnation has become common (Jedwab & Vollrath, 2015).

This de-coupling of economic development from urbanisation as a geo-demographic process presents a challenge to the hypothesised relationship between urbanisation and democratisation. While in many countries, the level of urbanisation reflects past economic development, in many others—particularly lower-income countries—it is more reflective of demographic change. Given that we cannot assume that urbanisation and industrialisation go together, and that many of the previously hypothesised mechanisms linking urbanisation to political change are in fact socioeconomic rather than geo-demographic, we should not assume a strong association between urbanisation and democracy. However, there are strong historical reasons to believe that urban areas play important roles in political change.

3. Urban context, demographic scale and politics

For most of recorded history city populations were small relative to rural populations and yet played central roles in political change. This highlights the need to make a clear distinction between *levels* of urbanisation and the *size* of urban populations (i.e. demographic scale). Many poor countries today have moderate levels of urbanisation but very large urban areas by historical standards (e.g. Democratic Republic of Congo), while many rich countries have high levels of urbanisation but modestly sized urban areas (e.g. Sweden). If there is an association between cities and political change, there are reasons to believe that the size of cities matters, independent of the level of urbanisation. Indeed, we suggest that demographic scale may be more salient than ratio effects. However, we do not see strong theoretical grounds for believing that this will contribute the formation of *democratic* politics specifically.

There is a long tradition of viewing cities as incubators of democracy. Barnett (2014), for example, argues that the concentration of diverse human populations in cities functions as an incubator of democracy. The negotiation of social, cultural, and economic difference in cities creates conditions where democracy is not just an abstract ideal, but something practiced in daily life through proximity, contact, and social interaction. For example, the proximity of diverse groups and individuals in urban areas can facilitate the circulation of, and exposure to, new information and ideas and increases the likelihood of forming cosmopolitan values, political movements, and dense social networks that support collective, pro-democratic action (Luca et al., 2023).

Cities also bring citizens into proximity with rulers and allow them to engage directly with political processes. Proximity and contact give urban populations political influence, increasing the ability of urban citizens to effectively voice their demands through collective action and the organisation of protests or riots that leverage the threat of violence or insurrection (Rodden, 2010; Staniland, 2010). Even for the urban poor, "spatial proximity to power increases political influence" (Ades & Glaeser, 1995, p. 198). The net result could be improved governance and political participation (Glaeser & Steinberg, 2017a)

Importantly, size matters. As Gerring and Veenendaal (2020) demonstrate, demographic scale strongly influences political behaviour and institutions. One particularly salient example the association between demographic scale and protests. Countries with larger urban populations and more cities experience more protests (Fox and Bell, 2014), and the frequency of protests and 'social disorder' events is correlated with city size and growth (Castells-Quintana, Lopez-Uribe, and McDermott, 2022; Dorward & Fox, 2022; Eisinger, 1973; Thomson et al., 2023). Consequently, as urban populations grow, so too does the likelihood of protests, which can have significant and lasting political effects.

These dynamics can also spread beyond the boundaries of individual urban areas, influencing the national politics of highly urbanised societies in ways conducive to democracy (Beveridge & Koch, 2023). In other words, cities can provide the spark for wider political change.

However, while large urban populations facilitate political engagement and collective action, it isn't clear that they should stimulate *particular* political preferences. Much of the theory and evidence

 $^{^{1}}$ But not always. Oddo and Zanini (2022) show that the Republic of Genoa experienced episodes of urbanisation between 1300 and 1800 despite widespread poverty.

² Many poor countries have also experienced productivity growth linked to urbanisation, but this has been driven by a shift from low productivity to slightly higher productivity non-tradable services in urban areas rather than the kinds of structural changes traditionally associated with industrialisation (Diao, McMillan, & Rodrik, 2019).

³ The discussion of urban scale also is adjacent to the concept of urban primacy and urban concentration and its possible effects on political outcomes. For instance, some studies have identified an association between urban primacy and the frequency of contentious political events such as protests (Anthony & Crenshaw, 2014; Wallace, 2013), although results are inconsistent and may reflect other causal mechanisms (Fox and Bell, 2016). Others have shown that the political-economic significance of individual settlements influences relative protest frequency (Dorward & Fox, 2023). While further research into the relationships between urban geography and political events and changes is needed, we focus here on the aggregate effects of urbanisation and urban population change at the national scale.

purporting the 'democratising tendencies' of cities stems from the European and North American contexts and their unique political-economic histories. In contrast, Cheeseman (2022) and Hoelscher et al. (2023) argue that urbanisation in Africa is likely to bring about political change, yet the complex dynamics of African societies and cities mean that these outcomes may not necessarily conform to the democratic expectations of modernisation theory. Moreover, while population concentration may increase contact between diverse people and foster the kind of tolerance and dialogue believed necessary for democracy to flourish, geographic proximity does not guarantee such outcomes (Enos, 2017; Parnreiter, 2022).

Population density also generates myriad negative externalities—the 'demons of density' (Glaeser, 2011)—that require coordinated intervention to manage, such as increased disease burden, crime, congestion, and social conflicts, and these all increase with scale (Bettencourt, 2007). Where 'disorder' is endemic and urban populations are predominantly poor, demand for dictators may increase (Djankov et al., 2003; Glaeser & Steinberg, 2017a; Huntington, 1968; Nelson, 1979). China, for instance, has managed to maintain non-democratic institutions through a combination of strategic redistribution to urban areas and repression of pro-democratic protest (Wallace, 2014) despite having the largest population in the world. In short, while urban population growth may amplify certain grievances, it is not clear that citizens have a preference for democratic governance to solve them.

Moreover, even where demand for democracy *does* arise, proximity may not always facilitate effective collective action to realise such demands. The geographic concentration of citizens (or subjects) in urban areas may also make it easier for rulers to monitor populations, influence the information and ideas that circulate, and actively repress dissent (Barro, 1999; Glaeser & Steinberg, 2017a). Indeed, there are numerous examples of wealthy, highly urbanised, and resource-rich states that maintain strong autocratic institutions, such as Bahrain, Iran, Russia, Saudi Arabia or United Arab Emirates (Treisman, 2020). Perhaps the greatest challenge to the classic modernisation model today is China, which has urbanised at an exceptionally rapid pace and seen the rise of a large middle class. While large urban populations may present challenges to regimes seeking to repress dissent, rapid innovations and roll out of surveillance technologies have made strategic, selective repression increasingly viable in cities (Xu, 2021).

In summary, as the scale of urban populations increases in absolute terms, so too do opportunities for collective action; for new ideas to emerge and spread; and for the challenges associated with agglomeration to deepen (i.e. the 'demons of density' intensify with urban population size). If urban areas have political potential, their demographic size likely matters, independent of their share of the overall population of a nation. As a result, empirical analysis of the political implications of 'urbanisation' need to consider both *levels* of urbanisation (ratio effects), reflecting past economic and demographic changes, and *the size of cities or urban populations* as measures of demographic scale effects.

Drawing upon the foregoing discussion, we advance two hypotheses. *First*, at the cross-country level we do not expect to find a robust association between levels of urbanisation or urban population size on the one hand and levels of democracy on the other, with suitable controls included. We express this as follows:

H1a. Levels of urbanisation will not be significantly associated with levels of democracy when controlling for economic development

H1b. Urban population size will not be significantly associated with levels of democracy when controlling for economic development

Second, at the cross-country level we expect no association between levels of urbanisation and *political change*. However, we do expect that measures of urban population size will be associated with measures of *political change*, but not necessarily in support of democracy. We express this as follows:

H2a. Levels of urbanisation will not be significantly associated with political change

H2b. Urban population size will be significantly associated with political change, but not necessarily democratic change

4. Data and empirical strategy

We develop a set of regression models using country-level panel data between 1965 and 2020, controlling for key phenomena associated with economic development and political change.

4.1. Dependent variables

We utilise two dependent measures. Our first dependent variable is the level of democracy at time t measured using V-Dem's Polyarchy Index. This measure is based upon Robert Dahl's (1956) concept of electoral democracy and captures variation in the degree to which a country's national institutions embody the democratic ideal of polyarchy. In a polyarchy there are institutional structures that create competition among leadership (or elites) for entrance into public office (i.e., executive and legislative positions) contingent upon the consent of a broad electorate in regular elections that are both free and fair (Coppedge et al., 2011). In such a system, leaders are accountable to citizens through free, fair, and non-fraudulent elections, suffrage is extensive, and freedoms of political expression and association are maintained.

Our second dependent variable measures change in political regimes using version 14 of the Episodes of Regime Transformation (ERT) dataset (Maerz et al., 2021). ERT codes episodes of democratic and autocratic transformation from V-Dem's Polyarchy index. We use both the democratic and autocratic episode variables which code whether, for any given year, a country was experiencing an ongoing episode of transformation. Episodes of transformation are defined in the ERT as periods of substantive and sustained improvement or decline on the quality of democracy in a country. An episode is measured as an initial annual change of 0.01 in the Polyarchy index followed by a cumulative overall change of at least \pm 0.10 during the episode. An episode is ongoing if the Polyarchy index (a) has an annual change in one out of every five consecutive years, (b) does not have a reverse annual change of 0.03 or greater, and (c) does not experience a cumulative reverse change of 0.10 over a five-year period. If any of these conditions are met the episode is coded as ending. This does not, however, mean that a transformation necessarily ended in regime change (i.e., from an autocratic to more democratic regime type or vis-a-versa) but instead indicates that the criteria for an 'episode of transformation' as defined by ERT were met during this period. This is appropriate for our analysis because we are primarily interested in whether urbanisation is

⁴ In states with resource-intensive economies, a large share of wealth is likely to be concentrated in the hands associated with extraction rather than production, reducing the size and diversity of alternative economic interests and contributing to the growth of 'consumption cities' (Gollin et al., 2018).

associated with substantive and sustained political changes rather than discrete regime change or breakdown (Boese et al., 2021).⁵

4.2. Independent variables

Given the need to distinguish between urbanisation (ratio effects) and urban population size (scale effects), we include both the *level of urbanisation* in a country and *the absolute size of the urban population* (logged for skewness) as independent variables in our models. These variables are not closely correlated (R=0.08) and can be assumed to capture distinct facets of the urbanisation process. Given that traditional UN urbanisation statistics are based on diverse national definitions (Buettner, 2015) and hence not strictly comparable, we run further tests using the national population share and absolute size of the population living in cities of over 100,000 people. The data for these measures were taken from the United Nations World Urbanisation Prospects 2018 Revision.

4.3. Control variables

We reduce omitted variable bias by controlling for cross-sectional and time variant factors that plausibly influence both levels of urbanisation and urban population on the one hand and levels of democracy on the other. The set of controlled covariates is limited to: the national education level, GDP per capita, GDP growth, and a measure of natural resource dependence (Ballard-Rosa et al., 2023).

Data sources and descriptive statistics are presented in Appendix A. As education and demographic data are available in 5-year intervals, our panel represents repeated observations at 5-year intervals between 1960 and 2020. This approach is common in the literature and makes theoretical sense, given that we do not anticipate substantial year-on-year variation in these slow-moving processes (Acemoglu et al., 2008, 2009; Boix, 2011; Treisman, 2015, 2020). For control variables with annual data available, we take the mean value over the 5-year intervals. All independent variables have been lagged to the previous 5-year period (*t-1*) to address concerns surrounding endogeneity (i.e., the political outcomes we observe simultaneously influence the level of urbanisation in a given period).

Including lagged independent variables also addresses the fact that we are studying comparatively slow-moving process, and we would not expect recent changes in the level of urbanisation, for example, to have an impact on a nation's politics in the short-term, even if the processes are causally connected. As a result, the first 5-year interval in the study period is omitted meaning that the panels used in the estimation of the models presented below cover 1965–2020. Not every country in the

dataset has observations for each 5-year interval so our panel is unbalanced, beginning in 1965 with 84 countries and ending in 2020 with 161 countries. 6

In addition to these controls for both hypotheses, we also control for polyarchy in models testing Hypothesis 2. This is because there is a structural relationship between levels of polyarchy and the changes in polyarchy scores that underpin the ERT data series (i.e. fully democratic countries are structurally less likely to experience a transformation to democracy; strongly autocratic countries are less likely transform into autocracy).

4.4. Empirical strategy

We employ a series of lagged fixed effect models, using a two-way fixed effects (TWFE) estimator including both spatial (country) and temporal (five-year period) fixed effects. This takes the general form:

$$Y_{it} = \alpha_i + \lambda_t + \beta \mathbf{x}_{it} + \varepsilon_{it}$$

Here, Y_{it} is the outcome of interest and α_i and λ_t are the country and time fixed effects, respectively. βx_{it} is a vector of time-variant independent variables including our parameters of interest, level of urbanisation and urban population size, and the control variables.

The two-way fixed effects estimator simultaneously adjusts for bias arising from unobserved country- and period-specific confounders of both our urban indicators and political change. The country-fixed effects account for the heterogeneous and enduring features of different countries in the sample that don't change over the study period, including starting levels of democracy and urbanisation pre-1960 or unique cultures and political institutional trajectories. This is important given that multiple studies have demonstrated significant path dependence in democratisation (Acemoglu et al., 2008, 2009; Treisman, 2015). Focusing upon variation within countries over time also makes sense because modernisation theory implies that countries will become more democratic as they urbanise, not just that more urban countries also tend towards being more democratic.

The period-fixed effects control for time specific but country-invariant time trends and short-term shocks that influence both democracy and urbanisation, so long as they are common to all countries in the sample. In other words, the estimated coefficients can be interpreted as being unbiased by what we would expect to see in a given period for a given country. The TWFE estimator is a standard approach in the political economy literature using cross-national time-series data to test broad structural hypotheses like ours (Acemoglu et al., 2008, 2009; Boix, 2011; Gerring et al., 2022; Gjerløw et al., 2021; Treisman, 2015).

5. Results

Hypothesis 1. Democracy

Table 1 reports the ordinary least squares estimates of regression models related to our first hypothesis. Model 1 reports the bivariate correlation between the level of polyarchy and the level of urbanisation in the previous five-year period. Model 2 presents the same bivariate correlation for the size of a country's urban population. These models demonstrate a significant bivariate association between measures of urbanisation and democracy over a 60-year period. However, once both are included in the same model (Model 3) we see that the association between urban population size and democracy is no longer present. Furthermore, once the country and time fixed effect are included in Models 4 and 5 respectively, there is essentially no association. The

To our knowledge, the ERT data and the Polyarchy Index upon which they are founded represent the most robust and comprehensive measure of political structure and change available. However, we also acknowledge the alternative approaches to measuring democracy used in the literature including the Polity V and Freedom House indices. It is well known that not all approaches are created equal, and these datasets can vary substantially in terms of their conceptual foundations, reliability, and validity (Steiner, 2016; Vaccaro, 2021). While V-Dem reliably outperforms Polity V and Freedom House in terms of its conceptual definition, measurement scale, and aggregation procedures, empirical results are generally consistent across these measures (Boese, 2019; Vaccaro, 2021). We consider that any decisions of which measure to use should be based upon theoretical and conceptual grounds. V-Dem represents a reliable operationalisation of Dahl's concept of polyarchy and can be readily applied to measure the nature of political regimes and transformations across a range of geographical and historical contexts (Boese, 2019). However, while VDem and ERT are our principle dependent measures, we perform robustness checks using the Polity V dataset (see Robustness section and relevant Appendices).

⁶ We find similar results for our hypotheses with a sensitivity analysis on a subset representing a balanced panel for the 84 countries for which data are available for all periods (see Appendices B, G).

Table 1 | Urbanisation and democracy.

	Dependent variable: Polyarchy							
	(1)	(2)	(3)	(4)	(5)	(6)		
$Urbanisation_{t\text{-}1}$	0.006***		0.006***	0.004	0.002	0.004		
	(0.000)		(0.000)	(0.002)	(0.002)	(0.003)		
Urban Pop (ln) _{t-1}		0.032***	0.000	0.115***	0.021	-0.003		
		(0.005)	(0.005)	(0.031)	(0.042)	(0.044)		
Education _{t-1}						-0.012		
						(0.011)		
GDP pc (ln) _{t-1}						-0.042		
						(0.024)		
GDP pc growth _{t-1}						0.000		
						(0.001)		
esource rents (ln) _{t-1}						-0.005		
						(0.004)		
Country FE	No	No	No	Yes	Yes	Yes		
Period FE	No	No	No	No	Yes	Yes		
Observations	1059	1059	1059	1059	1059	1059		
R^2	0.255	0.034	0.255	0.853	0.867	0.868		
Adjusted R ²	0.254	0.034	0.254	0.827	0.842	0.843		

Note: Standard errors in parenthesis. Models 4 uses cluster robust standard errors. Model 6 uses two-way robust standard errors. The table reports the results of Ordinary Least Squares regression models for our chosen urban indicators on the level of democracy (measured using V-Dem's Polyarchy Index) with selected controls and country and period fixed effects. All right-hand side variables have been lagged to the previous 5-year period. *p < 0.05; **p < 0.01; ***p < 0.001.

addition of controls in Model 6 does not change this.

While a positive coefficient on urbanisation is consistent with the theory that urbanisation and democratisation go together, the association is weak and statistically insignificant with the inclusion of fixed effects. Moreover, urbanisation appears to be a (nearly) monotonic global processes: almost all countries have seen increases in levels of urbanisation since the end of WWII. Even accounting for temporal fixed effects, this may bias our estimator given that democracy was also spreading and deepening across much of the world for most of this period (see Boix, 2011, p. 810). Furthermore, the results show that the superficial association between urbanisation and democracy is not removed by the controlled covariates. This is important because, according to modernisation theory, these controls represent the by-products of urbanisation, sitting between it and democratisation in the causal chain. If these mediators were to absorb the effect of urbanisation, it would be entirely consistent with modernisation theory. However, as it is, the association is removed by the fixed effects, pointing to explanations beyond these modernisation variables.

Overall, these results confirm that there is no clear or statistically significant cross-national relationship between the level of urbanisation or urban population size on the one hand and levels of democracy on the other. Alternative specifications with a balanced 84 country sub-sample (Appendix B), an alternative measure of democracy from Polity V (Appendix C), and the size and share of a country's population living in cities with over 100k residents (Appendix D) corroborate these results.

Hypothesis 2. Political Transitions

While urbanisation and urban population size are not significantly related to *levels* of democracy, our second hypothesis states that urban population size will be associated with political change – albeit not necessarily democratic change. To test this, we turn to the relationships between urbanisation and urban population size on the one hand, and episodes of regime transformation on the other. In this case, we assess the extent to which urbanisation and urban population size are associated with the likelihood that a country moves towards or away from the democratic ideal of polyarchy. If population concentration facilitates collective action, we expect countries with larger urban populations to be more likely to experience political change, all else equal. However, we have no *a priori* expectation as to whether such changes will be prodemocratic or not. Put simply, our assumption is "more people, more politics."

To identify how urbanisation and urban population size may relate to

regime transformation, we first average our key explanatory and control variables over a 5-year period and then regress these against regime transformation outcomes for the subsequent 10-year period—the "outcome window". For example, we take average levels of urbanisation, education, income, resource rents and polyarchy between 1960 and 64 and examine whether these predict a democratic or autocratic transformation between 1965 and 1974. We use a 10-year outcome window as we do not expect demographic variables to immediately *trigger* episodes of transformation but rather function as structural conditions (or 'predispositions') that indirectly affect the probability that a transformation will occur (see Treisman, 2020). Put differently, in any given year, we expect urban population size to exert an independent effect on the likelihood of political change in subsequent years—but only up to a point. As the "outcome window" grows, so too do a range of confounding factors that are likely to weaken the association.

We present our model specifications with country and period fixed effects, as above. Our dependent variable measures the intensity of proautocratic and pro-democratic political change represented as count measures of the total number of transformation years (i.e., years in which a transformation episode occurred) recorded within each 10-year outcome window. Values of the dependent variable for models presented here therefore range from 0 to 10.

These sum-of-transformation measures represent count data. Given this we use Poisson models to account for the skewed nature of the disruption. However, the democratic transformation variable displays overdispersion (variance greater than the mean) making the Negative Binomial model an appropriate choice to adjust for the greater variability in the outcome distribution. For each model specification we first fitted a Poisson model and tested for overdispersion. If significant overdispersion was detected, we ran a Negative Binomial model. The coefficients of both models are given as incidence rate ratios, which reflect how the expected count changes (is multiplied) in association with a one unit increase in the independent variable. This means that the magnitude of the coefficients can be compared across the two model specifications (Cameron & Trivedi, 2013). However, we must remember that the underlying data-generating processes are different. The Poisson model assumes the count data have an approximately equal mean and variance, whereas the negative binomial accounts for variance greater than the mean.

Results are displayed in Table 2. We find a weakly negative and statistically significant association between *levels of urbanisation* and democratic change (p < 0.05), but only in models that also include

Table 2 | Urbanisation and political transformation in ERT.

	Democratic transformation (subsequent 10 years) Negative binomial			Autocratic transformation (subsequent 10 years) Poisson			
	(7)	(8)	(9)	(10)	(11)	(12)	
Urbanisation _{t-1}	-0.010		-0.052*	0.043*		0.023	
	(0.018)		(0.021)	(0.019)		(0.022)	
Urban Pop (ln) _{t-1}		0.874*	1.394**		0.906*	0.650	
		(0.397)	(0.463)		(0.409)	(0.494)	
Polyarchy t-1	-3.200***	-3.091***	-2.965***	3.532***	3.606***	3.524***	
	(0.433)	(0.452)	(0.435)	(0.701)	(0.669)	(0.681)	
Education _{t-1}	-0.054	-0.038	0.070	-0.029	0.110	0.061	
	(0.119)	(0.123)	(0.123)	(0.144)	(0.150)	(0.161)	
GDP pc (ln) _{t-1}	-0.325	-0.212	-0.106	-0.204	-0.090	-0.115	
	(0.301)	(0.306)	(0.318)	(0.343)	(0.337)	(0.339)	
GDP pc growth $_{t-1}$	-0.005	-0.007	-0.008	-0.044*	-0.045*	-0.044*	
	(0.010)	(0.010)	(0.010)	(0.019)	(0.019)	(0.019)	
Resource rents $(ln)_{t-1}$	0.084	0.065	0.051	-0.111	-0.117	-0.114	
	(0.064)	(0.066)	(0.065)	(0.071)	(0.070)	(0.070)	
Num.Obs.	1060	1060	1060	1060	1060	1060	
AIC	2953.6	2946.1	2941.6	1926.2	1922.8	1922.0	
RMSE	2.14	2.18	2.33	1.21	1.22	1.21	

Note: All models are fitted with country and year fixed effects. Cluster robust standard errors in parenthesis. The table reports the results of Poisson and Negative binomial regression models of our chosen urban indicators on the count of regime transformation years in a given 10-year period. *p < 0.05; **p < 0.01; ***p < 0.001.

urban population size. We do not find a significant association between *levels of urbanisation* and autocratic transformations once urban population size is included in the same model. These results suggest that as the urban share of a country's population grows, democratic regime transformation may become marginally less likely while the likelihood of autocratic transformation remains unchanged.

By contrast, we find a positive and significant association between *urban population size* and the likelihood of democratic transformations (p < 0.01) and autocratic transformations (p < 0.05), although it is worth noting that, for the latter, this is no longer the case when the *level of urbanisation* is included in the same model. In other words, once we hold constant the overall level of urbanisation within a country, the absolute size of its urban population is associated with an increased likelihood of democratic transformations occurring.

5.1. Robustness checks

We run a range of robustness checks to ensure these results are not driven by our choice of empirical model, outcome window, sample, dependent variable, or urbanisation indicators.

First, we consider the effect of alternative dependent measures. While the ERT is widely used, and consistent with our conceptual understanding of democracy, it is by no means the only way of measuring political transformations. As such, we use an alternative measure of political change adapted from the Polity V dataset. Model results are presented in Appendix E, and broadly support our main findings in Table 2.

Using Polity V data, the *level* of urbanisation is associated with a small but statistically significant decline in the likelihood of democratic transformations and is not significantly associated with autocratic transformations once urban population size is controlled for. These results are consistent with our main findings using ERT data. The results for urban population size, however, vary slightly. Using Polity V data, urban population size is positively and significantly associated with democratic transformations, consistent with our main findings using ERT data. However, for autocratic transformations, Polity V data shows a statistically significant (p < 0.05) association between urban population size and autocratic transformations; for ERT data this relationship is positive but not statistically significant.

In sum, our results suggest no strong relationship between levels of urbanisation and political transformation, if anything it is slightly negative. We find a slightly ambiguous relationship with regards to urban population size which is positively and significantly associated

with democratic transformations in both the ERT and Polity models and significantly associated with the likelihood of autocratic transformations in the Polity models only. We return to this in our discussion.

Next, we recognise potential concerns surrounding endogeneity between income, democracy, and urbanisation such that prior levels of democracy may cause urbanisation. While the endogenous relationship between income growth and political change via industrialisation, urbanisation, and political change was a *feature* of early urbanisation in Europe and North America, this has not been replicated in the experience of 'late urbanisers' in the post-war era. As such, the fixed effect structure of the model should account for this prior endogeneity. However, if reverse causality were to exhibit long-term effects our result may not accurately represent the association between urbanisation and political transformation.

To address this concern, we implemented a two-stage approach whereby urbanisation and urban population size are first modelled as a function of the endogenous political and economic factors. For brevity, we include empirical descriptions, models and results in Appendix F, and confirm that endogeneity has been well captured by our original empirical design. Moreover, this is what we would expect since it is largely the experiences of early urbanising, high-income countries that informed the development of modernisation theory (Fox & Goodfellow, 2022).

To further explore this issue, we also split the sample between high-vs. low- and middle-income countries and re-ran the analysis in Tables 2 and 3 (Appendix G). The rationale behind this being that most LMICs began their urban transition in the second half of the 21st Century. That being the case, we would not expect to see a strong link between urbanisation and political change in LMICs but some evidence of an association with respect to urban population size. The results show that, for the ERT measure, there remains a weakly negative relationship between the level of urbanisation and democratic regime transformation in LMICs. The results also indicate an ambiguous relationship between urban population size and political change. The Polity models suggest a positive association between urban population and political transformation (both autocratic and democratic); the ERT results do not.

Next, we test alternative 5-, 15-, and 20-year outcome windows and find a weak negative correlation with urbanisation and a positive and generally statistically significant correlation with urban population size, as in Table 2 (see Appendix H). We also did this for models using the Polity V change measure over 5-, 10-, 15-, and 20-year periods (Appendix I). Additionally, we then ran the same analysis with a balanced panel representing an 84-country subsample and achieve

similar results, although the negative correlation on urbanisation becomes somewhat stronger (Appendix J). To ensure our results are not an artefact of our preferred dependent variable we first run alternative linear probability models, with the dependent measure specified as a binary outcome incidence variable rather than a count variable. The results of these models also corroborate our core findings (Appendix K). Finally, we run models with 5-, 10-, 15-, and 20-year outcome windows using our alternative measures of urbanisation and urban population (i. e. only counting those in agglomerations of 100k+) (Appendix L), and controls for urban concentration (Appendix M) and obtain very similar results. Overall, then, we consider the results here robust to a battery of alternative data and modelling specifications.

6. Conclusion

This paper provides evidence on the relationship between urbanisation and political change independent of industrialisation and economic development. We have argued that urbanisation – when viewed as a geo-demographic process of population concentration, densification, and spatial organisation of a country's population – is likely to influence political change through the overall concentration of populations in urban areas.

Population concentration, as measured through the absolute size of a country's urban population, enables political activity through information exchange and collective action potential, and the absolute size of urban populations determines the scale of political activity – larger urban populations imply a greater likelihood of political change. However, we do not see strong reasons for this political change to tend towards democracy.

As expected, we find no clear evidence to suggest that increased levels of urbanisation, or larger urban populations, directly contribute to democratisation (Table 1). Instead, higher levels of urbanisation are associated with a marginally lower likelihood of democratic regime transformation (Table 2). By contrast, we find strong evidence to suggest that large urban populations are associated with a higher likelihood of democratic regime transformation. This is consistent across models predicting outcomes derived from both ERT and Polity transformations. Our evidence regarding autocratic transformations is more mixed. Although our ERT models return a positive coefficient, the association between urban population size and autocratic transformation is not statistically significant once the level of urbanisation is included in the same model. However, our models based upon the polity V data (Appendix E), suggest a positive and statistically significant association (p < 0.05) between urban population size and autocratic transformations. Summarising broadly, our results clearly suggest that urban population size is associated with political change. And, contrary to our expectation, this seems to lean slightly towards democratic change.

These seemingly contradictory results – that *urbanisation* appears to be marginally negatively correlated with regime transformations, but *urban population size* is significantly associated with the likelihood of regime transformation – highlight the importance of distinguishing between urban population ratio and scale effects. They are also consistent with the findings of Rød et al. (2022) who show that urbanisation (as part of a suite of development indicators) increases democratic regime survival. Although in this case, we do find some evidence to suggest larger urban population sizes are associated with regime stability across the political spectrum.

While the negative coefficient on the levels of urbanisation variable is relatively weak for both democratic and autocratic transitions, it is possible that this result is an artefact of the composition of our sample: the most urbanised countries are also the wealthiest, which makes maintaining any form of regime easier. However, it also fits our theory: in small, highly urbanised countries, governing regimes of any type may find it easier to appease or repress their populations, and the potential for collective action is structurally curtailed. By contrast, in a less urbanised country with a large urban population, appeasement and repression are more challenging, and opportunities for collective action are greater. In highly urbanised countries with large urban populations, these countervailing tendencies are in tension.

A dispassionate interpretation of the theory and empirical evidence presented in this paper would suggest that the growth of urban areas makes political events more likely (more people, more politics), with a pro-democratic bias. This could be because, in many parts of the world, urban populations tend to hold more cosmopolitan values than their rural counterparts (Luca et al., 2023). More urban societies might, therefore, become slightly more 'predisposed' to democratic values, and the political activity implied by large urban populations increases the chances of a 'trigger' event that sets political change in motion. These findings therefore resonate with the emergent 'conditional modernisation theory' (Treisman, 2020).

But this is far from deterministic. We also find some mixed evidence to suggest that the growth of urban populations is positively associated with autocratic shifts, albeit with weaker effects and slight inconsistencies across data sources. This potential finding is important, particularly in today's rapidly urbanising regions, such as Africa and Asia, as it suggests that growth of cities may increase the likelihood of more frequent episodes of political change (e.g. Cheeseman, 2022; Hoelscher et al., 2023). However, it also offers reason for caution, as growing cities may spur political change that is as likely to favour autocracy as it is democracy. Indeed, our results from a sub-sample of LMICs (Appendix G) suggest stronger likelihoods of transformation being autocratic than democratic in the Polity data. Where population concentration is not accompanied by improvements in income and education, very different trajectories may emerge.

This study has taken a national approach, arguing that local urban and demographic processes will affect national political change. Future research should investigate how urbanisation and population concentration, specifically the mechanisms of proximity and contact, shape the political lives and behaviours of urban residents and shape broader processes of political change. Whilst it is true that many LMICs are urbanising in the absence of industrialisation and economic development, this does not mean that the experience of all urban areas or urban residents is the same. Economic geography will ensure that some cities are better off than others and within those cites, some citizens will feel the benefits of urbanisation more than others. As such, our results are valid at the macro scale but cannot be used to make inference at lower geographic scales. This highlights the need for research of individual cities and the citizens that reside within them. This implies leveraging research designs that allow for comparisons at individual level within and between distinct urban areas and across countries displaying different levels of income and material conditions.

CRediT authorship contribution statement

Nick Dorward: Writing – review & editing, Writing – original draft, Software, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. Sean Fox: Writing – review & editing, Writing – original draft, Investigation, Funding acquisition, Conceptualization. Kristian Hoelscher: Writing – review & editing, Writing – original draft, Project administration, Investigation, Funding acquisition, Conceptualization.

 $^{^7}$ In these models the dependent regime transformation variables are coded as a 1 if there was a transformation episode in *any* year within the respective 5-, 10-, 15- or 20-year window of time and zero if there was no transformation during the same period.

⁸ However, further research is needed to probe the relationship between population size and autocratic transformation given the slight inconsistency of results across ERT and Polity V datasets.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.polgeo.2025.103382.

Data availability

Data will be made available on request.

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