The Influence of Democracy on Infrastructure

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April 2026

Democracies are often thought to provide more public investments than non-democracies, as citizens can demand these services at the ballot box. Yet many scholars recognize that autocracies also engage in distributive programs, and electoral incentives can encourage targeted public investments within democracies. A growing concern across contemporary democracies is their declining ability to deliver complex public projects, especially relative to autocracies, potentially straining the social contract. Understanding these dynamics requires analyzing how political systems interact with variation in public goods' unit costs, design, implementation, and material characteristics.

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Background

The payment of taxes to governments in return for public services lies at the heart of debates surrounding the social contract and political legitimacy. Bueno de Mesquita et al's (2003) "selectorate theory" was foundational in rationalizing why democracies should deliver more public goods than non-democracies.[1] Given incumbents in democratic societies must win the hearts and minds of a broad cross-section of society, unlike non-democracies, where leaders can primarily cater to a narrow elite via private transfers, the difference in mean provision of public services should thus tilt towards democracies.

[1] Bueno de Mesquita, Bruce, Alastair Smith, Randolph M. Siverson, and James D. Morrow. 2003. The Logic of Political Survival. Cambridge: MIT Press.

However, beyond cross-regime differences, substantial heterogeneity remains within regimes. Since the seminal work of Weingast, Shepsle and Johnsen (1981), it has long been recognized that inefficiencies can arise from "pork-barrel" arrangements – geographically targeted transfers – in the distribution of public projects in democracies.[2] And among non-democracies, although the absence of electoral pressures may provide fewer incentives for the distribution of public goods, we still see several authoritarian-leaning states deliver an array of large-scale and complex projects. Given voters cannot demand these services via the ballot box, the puzzle of "authoritarian distribution" thus remains an open and active research agenda.

[2] Weingast, Barry R., Kenneth A. Shepsle, and Christopher Johnsen. 1981. "The Political Economy of Benefits and Costs: A Neoclassical Approach to Distributive Politics." Journal of Political Economy 89(4): 642–664.

The Distribution of Infrastructure

Democracies versus Non-Democracies

MEANINGFUL EVIDENCE FOR CROSS-REGIME DIFFERENCES IN INFRASTRUCTURE PROVISION IS SCARCE. A core challenge is whether infrastructure is treated as a "stock" or "flow" expenditure.[3] High-income countries, which are typically democratic, mostly devote spending to maintaining mature infrastructure stocks built decades ago. By contrast, modernizing societies, often more authoritarian-leaning, remain focused on expanding public capital through "green-field" investment. Raw comparisons of infrastructure across regimes are thus far from straightforward.

[3] **Flows** refer to expenditures measured per unit of time and largely exhausted within a given period, such as annual spending on public-sector wages or infrastructure operations. **Stocks** refer to durable assets that persist and accumulate over time, net of depreciation, such as highways, railways, ports, and electricity grids.

MANY CONTRIBUTIONS HAVE FOCUSED ON COMPARING ALLOCATION DECISIONS ACROSS REGIMES AS OPPOSED TO BASIC DIFFERENCE-IN-MEAN CONTRASTS OF INFRASTRUCTURE PROVISION. Through constraints on executive power, either via a legislature or judicial review, and the enforcement of accountability measures via elections, democratic institutions are frequently argued to prevent systematic and arbitrary targeting of public investments.

BURGESS ET AL. (2015) FIND THAT DEMOCRACY MUTES ETHNIC FAVORITISM IN THE ALLOCATION OF TRANSPORT INFRASTRUCTURE.[4] The authors focus on transport stocks by digitizing historical maps of Kenya's road distribution since the 1960s. Exploiting variation in Kenya's post-independence experience with democracy, they find that democratic institutions quelled co-ethnic favoritism in the construction of new roads, whereas periods of authoritarianism exacerbated selective targeting to districts co-ethnic with the president.

[4] Burgess, Robin, Rémi Jedwab, Edward Miguel, Ameet Morjaria, and Gerard Padró i Miquel. 2015. "The Value of Democracy: Evidence from Road Building in Kenya." American Economic Review 105(6): 1817–1851.

The data. A core innovation of Burgess et al. (2015) is simulating a counterfactual, market-driven (i.e. apolitical) road network for comparison based on population metrics. This helps contrast the intensity of distortions from non-democratic, political decision-making versus pure market-driven, economic allocation choices.

Allocation Within Democracies

Although democratic institutions can prevent arbitrary targeting of public investments relative to autocracies, a large body of work suggests electoral incentives still generate some strategic allocation within democracies. Infrastructure may thus still reflect underlying political preferences of voters due to electoral pressures, as opposed to policymakers strictly following market fundamentals.

The theory. Whether politicians target "swing" or "core" districts/supporters lies at the heart of these debates on distributive politics. See Gary Cox. 2012. "Swing Voters, Core Voters, and Distributive Politics." In Political Representation, edited by Ian Shapiro, Susan C. Stokes, Elisabeth Jean Wood, and Alexander S. Kirshner, 342–357. Cambridge University Press.

FAJGELBAUM ET AL. (2023) PROVIDE DIRECT EVIDENCE OF ELECTORAL DISTORTIONS IN ALLOCATION USING CALIFORNIA'S HIGH-SPEED RAIL REFERENDUM OF 2008. The paper finds that, albeit still under development, planners designed stations to maximize electoral support rather than economic returns, locating stations away from

dense urban centers where support was already assured, and toward swing areas where a station could move votes. This electoral logic is projected to reduce the project's economic benefits by 15 to 25 percent relative to a pure market-driven design.[5]

[5] Fajgelbaum, Pablo D., Cecile Gaubert, Nicole Gorton, Eduardo Morales, and Edouard Schaal. 2023. "Political Preferences and Transport Infrastructure: Evidence from California's High-Speed Rail." NBER Working Paper No. 31438.

The Puzzle of Authoritarian Distribution

While a canonical intuition in political economy suggest democracies should provide more public investment than non-democracies, many autocracies nonetheless engage in broad-based distributive programs. Examples range from China's high-speed rail network and new metro systems across Gulf monarchies to extensive road development in Kazakhstan. Explaining why non-democracies pursue such programmatic investments despite the absence of electoral accountability has motivated a growing literature on authoritarian distribution. More broadly, these cases complicate the view that democratic institutions necessarily generate superior public investment provision, particularly when some autocracies appear capable of delivering large-scale and complex projects.

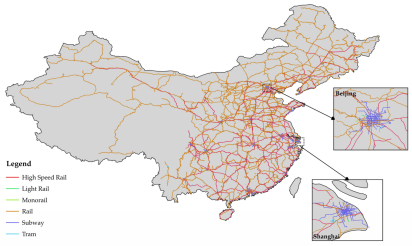

Figure 1: China's High-Speed Rail Network (original figure, source: OpenStreetMap 2025)

Several theories explain this pattern. One emphasizes *performance legitimacy*, whereby autocrats seek to legitimize non-democratic rule through the high-profile delivery of major projects.[6] Magaloni (2006) develops a theory of *punishment regimes*, in which autocrats reward loyalists and withhold resources from rivals, conditioning material benefits on support for the incumbent.[7] Albertus et al. (2018) extend this with a theory of *coercive distribution*, whereby state provision embeds citizens in relationships of dependence that weaken rival distributive appeals.[8]

[6] Nathan, Andrew J. 2020. "The Puzzle of Authoritarian Legitimacy." Journal of Democracy 31(1): 158–168.

[7] Magaloni, Beatriz. 2006. *Voting for Autocracy: Hegemonic Party Survival and Its Demise in Mexico*. Cambridge: Cambridge University Press.

[8] Albertus, Michael, Sean Fenner, and Dan Slater. 2018. *Coercive Distribution*. Cambridge: Cambridge University Press.

A key question is whether autocracies are choosing the optimal investment portfolio. Despite arguably impressive spells of rapid construction, the authoritarian addiction for flashy projects may ultimately lead to several public investments becoming white elephants. Key examples include ghost cities across China, in addition to projects such as the Sheikh Jaber Al-Ahmad Al-Sabah Causeway in Kuwait, essentially a bridge to nowhere. This appetite for infrastructure may thus come at the expense of other public goods that are plausibly more welfare-enhancing, such as investments in human capital via education reform. Although there is limited empirical evidence, limits on corruption, transparency in procurement processes, and greater market competition for public contracts arguably prevent democracies from superfluous and conspicuous construction.

Declining Performance and an Eroding Social Contract?

An emerging issue across contemporary democracies concerns a growing inability to deliver public goods and services to citizens despite a supposed abundance of resources.[9] Infamous examples of democratic failure include decades-long impediments to California High-Speed Rail in the US, the partial cancellation of High-Speed 2 in the UK, and increasing travel delays of the Deutsche Bahn in Germany. This contrasts the rapid construction drive across a non-trivial number of autocracies, as mentioned above. And Fukuyama et al. (2025) emphasize such declining performance is plausibly related to eroding satisfaction and confidence with democracy.[10]

[9] Klein, Ezra, and Derek Thompson. 2025. Abundance. New York: Simon & Schuster.

[10] Fukuyama, Francis, Chris Dann, and Beatriz Magaloni. 2025. "Delivering for Democracy: Why Results Matter." Journal of Democracy 36(2): 5–19.

Democracies have not always struggled to deliver major public works, as illustrated by the American interstate highway system in the 1950s. Yet since the 1960s, expanding regulatory oversight and procedural constraints have made infrastructure provision increasingly difficult.[11] Part of this reflects a growing "procedure fetish" or "vetocracy", whereby layered accountability mechanisms, while limiting arbitrary spending and allocation, also create opportunities for organized interests to obstruct implementation.[12,13] Autocracies clearly face far fewer of these constraints. A key question for democracies is thus how to balance accountability mechanisms with effective delivery.

[11] Dunkelman, Marc J. 2025. *Why Nothing Works: Who Killed Progress—and How to Bring It Back*. New York: PublicAffairs.

[12] Bagley, Nicholas. 2019. "The Procedure Fetish." Michigan Law Review 118(3): 345–395.

[13] Fukuyama, Francis. 2016. "Vetocracy: Too Much Law and Too Little Infrastructure." *The American Interest*, November 8.

Brooks and Liscow (2023) suggest rising infrastructure costs in the United States is partly attributable to the expansion of regulatory oversight and participation.[14] Using data on spending per mile across the history of the US Interstate Highway System, they find that real construction costs roughly tripled between the early 1960s and 1980s. Input prices (labor and materials) explain little of this increase; instead, the authors point to rising incomes and the post-1970 expansion of "citizen voice" through environmental regulation, litigation, and civic activism, which empowered communities to demand costlier highway designs, rerouting, and mitigation measures.

[14] Brooks, Leah, and Zachary Liscow. 2023. "Infrastructure Costs." American Economic Journal: Applied Economics 15(2): 1–30.

The data. Brooks and Liscow (2023) compile decades of federal highway spending records and match them to data on exactly when and where each Interstate mile was completed, allowing them to track the real cost per mile built over time.

Unpacking Public Goods

Several canonical models and theories in political economy typically treat public goods as a scalar, g; the actual content of public goods themselves are abstracted away. Education spending is thus implicitly deemed equivalent to a four-lane highway. Although two types of public goods may be non-excludable and non-rivalrous in theory,

they can vary substantially in their expense, implementation, and material characteristics. What separates infrastructure from other kinds of public goods relates not only to its general complexity in construction, but also its diffuse tangibility and visibility during operation that remains durable over time.

Mani and Mukand (2007) show how the "visibility" of public goods can distort allocation decisions.[15] Given more visible public goods are easier for voters to observe and reward, governments may over-provide them relative to less visible but more welfare-enhancing services. Theoretically, societies at intermediate levels of democracy are therefore more prone to over-deliver highly visible public goods, as electoral pressures remain too weak to induce the optimal public goods mix.

[15] Mani, Anandi, and Sharun Mukand. 2007. Democracy, Visibility and Public Good Provision." Journal of Development Economics 83(2): 506–529.

Despite this contribution, disaggregating g remains a fairly limited research pursuit. Studying i) the puzzle of authoritarian distribution and ii) concerns over increasing democratic failure can be achieved through unpacking how political forces interact with procurement processes, contractual arrangements, unit costs and the physical characteristics of public goods. Why exactly incumbents pursue certain types of public projects over others remains an open question.

While some public goods, such as education and healthcare, have readily accessible metrics, infrastructure has remained notoriously difficult to measure on a systematic basis. Infrastructure assets also vary widely across sectors: transport projects, for example, differ substantially from energy investments in their design, scope, construction, and operation. These data gaps continue to constrain empirical work on the political economy of infrastructure, where more effort is needed.

Looking Ahead

The distribution of public goods within and across regime types has been an active area of research, although infrastructure has been notoriously difficult to measure. Across many advanced democracies, concerns have emerged that increasingly stringent procedural constraints hinder the delivery of complex public investments, weakening satisfaction with democratic performance. Meanwhile, although some autocracies may circumvent these constraints, the over-provision of highly visible public goods can generate long-run inefficiencies. Taking procurement processes, contractual arrangements, unit costs, and the physical characteristics of public goods seriously can thus deepen our understanding of both effective democratic delivery and authoritarian distribution.

Acknowledgments: This brief was prepared collaboratively by the Democracy Action Lab team, with a special contribution by Christopher Dann.