

## 6. The Technological Revolution, Segregation, and Populism – A Long-Term Strategic Response

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Covid-19 is a threat, but it also creates opportunities for serious thought about the future. Given deep structural problems which have enabled populism to become embedded in England, there is a need to think of a longer-term transformation: not whether but how and where the state comes back in, and how relations between state, markets and planning, city-regions, innovation and universities are reconfigured.

Historically, the two major populist movements in the advanced world (American in the late 19th century and Germany et al in the 1930s) occurred as a consequence of massive technological changes; the movements were not primarily located in the big cities, and they involved those in previously established but now declining occupations. Populism only disappeared as those populations reduced in size and as those areas changed function or declined much further.

Responding to the ICT revolution, populism in England (the subject of this paper) locates today in Rodríguez-Pose's 'places that don't matter' (PDMs), and is reinforced by the deep educational/residential segregation of contemporary

society with 50% higher education participation and graduate-intensive big cities. But England seems stuck here and major ‘pathologies’ in the neo-liberal framework are responsible. These include higher education as a competitive market, the separation of cycles and growth in macroeconomic policy, and the reliance on markets with arms-length regulation and de facto absence of government from a shareholder-value maximising private sector. Policy is still short-term and largely made in Westminster despite city-regions. A long-term policy transformation is necessary to restart the ‘transmission belt’ of the ICT revolution. We need developing long-term plans based on city-regional agglomerations, into which core city networks linking knowledge-based companies, research universities and city-regional administrations are integrated; with expanding travel-to-work areas incorporating the ‘places that don’t matter’; and supported by a research-oriented economic policy.

## Keywords

Populism; Pathologies of Neoliberal Framework; Planning; City-Regions; Travel-to-Work-Areas; Places-That-Don’t Matter; Universities; Knowledge Economy

## 1. Introduction

### 1.1. How policy-making needs to change to undermine populism

How we should remould policy-making to undermine populism? Attacking the roots of populism will require major – indeed transformational – changes of strategy. This is possibly the case

for any country facing a populist threat, but is certainly the case for England, the focus here. In particular, this paper raises questions about the unqualified way in which the neo-liberal framework shaped UK policy-making in recent decades and fed these populist urges.

The COVID-19 pandemic means we are faced with the possibility of a prolonged and perhaps deep recession. It is a critical opportunity to rethink a number of basic aspects of policy making in the UK. As the *Financial Times* wrote on the consequences of the pandemic:

Radical reforms – reversing the prevailing policy direction of the last four decades – will need to be put on the table. Governments will have to accept a more active role in the economy. They must see public services as investments rather than liabilities, and look for ways to make labour markets less insecure. Redistribution will again be on the agenda; the privileges of the elderly and wealthy in question...As western leaders learnt in the Great Depression, and after the second world war, to demand collective sacrifice you must offer a social contract that benefits everyone. (*Financial Times*, The Editorial Board, 2020 April 4)

This chapter is designed to generate a debate about the need for a more radical long-term plan covering core inter-related areas of the economy, going beyond reliance on markets and centralised policy, made at arm's length from industry. To be clear, effective competition is critical for innovation. But so too is an activist government, especially at and across city-regional levels, networking with advanced companies and with integrated public services.

Change will not be short-term. Any debate about a nation's underlying policy framework and the need for deep structural changes is most fruitful if it takes place with a view to the medium- or long-term. The real question is whether such a debate is feasible in the chaotic political world we currently live in.

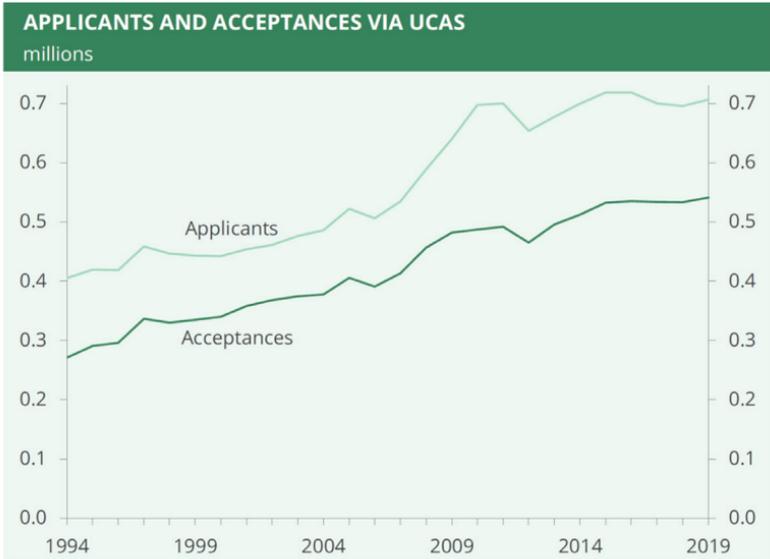
A significant challenge for those seeking to implement such change in England will be to counter the dominant populist narrative, still driven by Brexit. There is much uncertainty as to the cause of this populist tendency, but we follow Rodríguez-Pose's view that regional inequality is a central cause. Our working hypothesis is that the explanation lies in the extraordinary contrast between successful graduate-intensive urban agglomerations and the 'places that don't matter' (PDMs) – those places segregated residentially, educationally, occupationally, culturally, and by age. One striking measure of the segregation is that 50% of young people go through tertiary education in England (certainly amazing by historic standards), but 50% still do not, and it is in this latter group that populism continues to have great appeal.

Two decades ago this segregation seemed to be diminishing, most importantly through this steady rise in participation in tertiary education. However, England's progress in reducing such inequalities has stagnated, a reversal that is exemplified most clearly by the now only slight upward trend in higher education participation, as seen in **Figure 6.1**. In countering the appeal of populism, the question is whether, and how, this stagnation can be reversed.

## **1.2. Why has the stasis occurred and what are possible exit strategies?**

The major populist movements in the advanced world over the last century and a half (in the late 19th century, the 1930s, and

**Figure 6.1: Higher Education Student Numbers, UK 1994–2019**



*Note:* This is taken from Higher Education Student Numbers House of Commons Library Briefing Papers No. 7857, 13th March 2020, Paul Bolton.

contemporaneously) have arisen at times of major technological regime change, which in turn have caused economic and social disruption. In each case, large, previously established occupational groups were pushed into decline, which also helped to segregate particular regions or territories.

It has been in these areas of decline where populist movements have developed, most often involving those who were in established occupations subject to the prolonged process of decline. The most notable instances have been the US in the late 19th century (the second Industrial Revolution), focused on the small farms and farming communities; Germany in the 1930s

(the Fordist Revolution), once more centred on farmers, but also small town petty bourgeois, artisans, and clerical life; and finally the more widespread ICT revolution of the 2010s, centred on industry and clerical occupations, and encompassing smaller urban and rural areas, and now declining ex-industrial cities.

Historically, such populist pressures only ended through major occupational and geographic change, particularly when there was a sufficiently large move out of the declining occupations. This was most often achieved through the old populations dying and the young moving elsewhere, often into newly emergent jobs and industries. For instance, in late-19th-century America it was the industrial boom in growing cities and WWI that provided the solution. So did the Fordist boom in the post-WWII decades for continental Europe.

The contemporary world is stuck in the implementation of this change. Working by historical analogy, the ICT revolution could hope to resolve the threat of populism through a move away from assembly-line manufacturing jobs and, by increasing tertiary education, into 'graduate jobs', using these jobs to transform cities. However, in England much of this change has already taken place, with the tertiary participation now stagnant. Thus, the country is in stasis.

## **2. The English Knowledge-Based Neo-Liberal Framework and Its Six Pathologies**

For the ICT revolution to flourish, a neo-liberal framework<sup>1</sup> was initially necessary. It allowed a partial dismantling of the unionised, Fordist-Chandlerian economy, which had involved nationalised industries, capital controls, protected financial systems, and state intervention. However, while it may have

been initially necessary, the major pathologies within the neo-liberal framework have taken effect over the last three decades, particularly as a result of the dominant position it took in policy-making in England.<sup>2</sup> Some of the framework's elements are valid: it is clear that knowledge economies flourish with competitive markets in innovative technologies and high value-added industries, especially when provided with access to high-risk finance and reservoirs of highly-educated workers. However, this has created the illusion that there always efficient market solutions to problems, with the consequence of down-playing the role of government. For meaningful change to continue, we need to recognise the role of government, echoing the broad type of approach Polanyi brilliantly used in the *The Great Transformation* [1].

### **2.1. Higher education as a competitive market**

The first pathology in the UK is that higher education developed into a competitive market, as Camilla Cavendish has forcefully noted [2]. Higher education could have developed in the same way as schools, which certainly compete, but within a highly constrained 'state' system: For example, if the school leaving age is raised, young people are required to stay an additional year in school. Similarly, the examination system is centrally controlled and administered, as are residential rules for admission. Instead, despite having government-set participation targets, higher education has become a competitive market, free from significant government oversight.

Or, rather, it has become two markets. One is for investment goods – the collection of skills, personal networks and certifications that make up a university education. Here, supply is provided, marketed, and sold by universities, with the demand

side fulfilled by student participants, who choose to invest in a sunk-cost, long-term asset with an unknown rate of return.

The second market is for the services provided by these student participants after graduation, with demand being met by graduate jobs. Apart from the auditing of teaching and research, assessing student satisfaction, and validating degrees, the state plays a limited role.

So participation in the higher education sector has become a market choice. Over the medium-term, the sector depends on the direct demand for graduates in the job market, and indirectly depends on the graduate premium for both the graduates and the employers, as the Goldin-Katz model shows [3]. This means that stagnation may plausibly follow as a result of the following trends:

- a decline in new graduate jobs as a result of the slowdown of innovation and productivity growth (see below); and
- the austerity-induced freeze in health and education spending on training new doctors and nurses, and the continuing low status and reward structure of teacher careers (see below).

## **2.2. Macroeconomic policy with private consumption as macroeconomic driver**

When the neo-liberal framework was applied to macroeconomic policy, it was dominated by inflation targeting. Independent central banks used short-term interest rates as an instrument, while capital mobility has meant that the long-term real interest

rate has been pinned by the world rate. In recent years (since the financial crisis) the zero lower bound on the nominal interest rate has resulted in a reliance on fiscal policy.

In turn, fiscal policy has operated with fiscal rules consistent with a target for the public-debt-to-GDP ratio. Since a rise in public investment results in an increase in public debt – with any increase in public sector (or national) wealth disregarded – borrowing has been restricted. This has played a leading part in the public sector austerity of recent years, very much including the sharp slowdown in discretionary spending (including investment) in health and education.

And while governments have been keen to encourage private sector borrowing, the secular slowdown in expected and actual GDP growth has substantially dampened private sector investment (despite profitability) including in research and development (R&D) and productivity enhancements. In contrast, household borrowing to finance private consumption expenditure has not been constrained, with mortgage collateral provided by rising house prices.

Most worrying is that the core distinction in macroeconomics between growth and cycle may have broken down, as Cerra et al. suggest [4]. If both public and private investment are declining as the direct and indirect result of public debt ratio targeting, then innovation and productivity growth is likely to decline; because that reduces GDP growth, austerity policies have to deepen in order to meet the debt ratio targets, further dampening investment, innovation, and productivity growth. This Kaldorian vicious circle is reinforced by hysteresis effects on human capital.

### **2.3. Low tax rates on higher incomes**

There is one further element of fiscal policy, emphasised in the neo-liberal framework, that has played a long-term role in the stagnation. This is that income tax rates should be lowered on higher incomes to encourage risk-taking. This reflected the perception that financial risks were higher as a result of the ICT revolution (and the uncertainties as to what directions innovation would come from), and that increased human capital had potentially very high returns.

It is doubtful that the increase in post-tax inequality and the high post-tax rewards for those working in high value-added private service sectors have played a major part in promoting innovation [5]. The costs of lower taxes, especially when imposed at times of relatively low growth (most notably during the austerity period after the financial crash), have been mostly borne by public services.

This has meant that many public sector jobs are confined to low levels of pay. While these jobs are often viewed as graduate-level, they tend to come with a low career premium, and so fail to stimulate higher education participation. For instance, for public sector teachers there has been some increase in pay (particularly in starting salaries), but any meaningful increases have been constrained by low tax rates elsewhere. This correlates with research of Goldin and Katz, who argue that the slowdown in the supply of new graduates between 2000 and 2017 is due to the fact that the graduate premium is confined to the top half of graduates [3].

As a consequence, public school teaching remains a low-paid and low-status career – especially in relation to higher-level

private sector services. And new teachers frequently spend only a few years teaching before moving elsewhere. Thus, even the provision of new graduate teaching jobs may be unattractive for raising higher education participation, if linked with a low career premium.

In summary: the rise in post-tax earnings for high earners is linked to the failure of higher education to continue past rates of growth, while also holding back increases, for instance, in the numbers of doctors and teachers.

#### **2.4. Governmental withdrawal from R&D**

In addition to the economic pressures, neo-liberal thinking has tended to oppose government intervention in research and development. Bloom et al. have argued, albeit in the context of the US, that the policies that enhance innovation are: high-skilled immigration, open and competitive trade, and state subsidies on private R&D spending. Direct intervention, such as DARPA assisting in the development of the internet, seems to have been less helpful.

#### **2.5. Economic geography, tipping points, and the limits to markets – Networked agglomerated cities and ‘places that don’t matter’**

The main growth drivers of neo-liberal economies (according to the research of Katz and Brookings in the US) are successful cities. In America, such cities tend to be those that have strong research universities, prominent new technology sectors, and high value-added private sector services such as law, finance, and consultancy. Closely attached are secondary economy industries,

including government, media, and culture. These cities are surrounded by well-connected travel-to-work areas, with abundant housing. In America, there is a major focus on building and maintaining strong networks among these sectors, particularly between the university and innovation sectors and government and knowledge-based business.

This model is not followed in England. Research universities are seldom core actors in the economy and the networks between sectors hardly exist. The model implies social externalities (to the cities they are in) from investment in expansion of research universities. In principle, research universities should enjoy strategic complementarities with city-regional government and major knowledge-based companies, with all the players committing to long-run investments in order to profit from 'knowledge' agglomeration. But credible commitments are difficult to make. In effect then, major northern cities in England may suffer from 'under agglomeration', as Overman has underlined [6].

Much as the English state has relied on markets to establish links among universities, it has also relied on them to resuscitate the 'places that don't matter'. This reliance worsens the PDM problem. Many could be potential commuter towns or cities, functioning as travel-to-work areas. However, due to the underinvestment in these areas, with governments not refurbishing transport systems that were set up for an industrial era or renewing the housing stock, they remain unattractive. There is no market solution here, as the younger people and potential commuters have either moved away from or refuse to move to PDMs, and so private transport companies have limited reason to invest in transport infrastructure. This, in turn, means that

private housing developers have no incentive to build. Thus, PDMs remain PDMs.

## **2.6. Shareholder-value maximisation**

Shareholder-value maximisation has become (and more or less remained) the dominant focus among publicly quoted companies. This has been particularly apparent in the UK, due to its especially shareholder-friendly takeover rules. The focus on shareholders receiving a rapid return on their investment has led to short-term profit maximisation at the expense of employee skills, R&D spending, and sustainability. In turn, this has made longer-term cooperation and commitment between the public and private sectors harder.

Very large asset management institutions, especially those with ‘passive’ management strategies, such as Blackrock, Vanguard, and Fidelity, are also aware that long-term decision making leads to higher shareholder value. Larry Fink, the CEO of Blackrock has ‘explained’ this in his 2018 and 2019 letters to the CEOs of companies in which Blackrock has shareholdings. Likewise, an important book by Colin Mayer shows *inter alia* how companies can work effectively with government, especially at the city-regional level, by redefining their legal purpose [7].

## **3. Transformative Strategies? Blue Skies Thinking**

We argued above that some governments have over-relied on markets and that this has led to the decline of certain regions, which have become vulnerable to populism. Rather than leaving the key choices to markets, the state needs to think in terms of long-term interrelated plans, with markets operating on a secondary level.

In taking this approach, a long-term perspective is fundamental, given the nature of the problems we are trying to solve.

These plans need to be first constructed at city-regional level, with these city-regions then linked. For instance, here we focus on Manchester and its surrounding area, but this would ideally form part of a cross-Pennine link, encompassing Liverpool, Manchester, Leeds, and Sheffield. Following McCann, a model for these cities to follow would be London and the South-East, where the economic growth of the cities is seen as benefiting other regions rather than draining their resources. Alongside this, the political infrastructure of these regions would develop, with local governments in place in each city-region.

Next we model what policy would have to look like for the following (or similar) to be achieved:

1. Raising the higher education participation rate to 80% by 2030. This would be achieved by restructuring and differentiating tertiary education while simultaneously regenerating growth of graduate careers in the private and public sectors.
2. Integrating PDMs into the Manchester travel-to-work area, while constructing networks between research universities, city-regional government, and knowledge-based companies.
3. Restarting productivity growth based on these networks, alongside a new macroeconomic policy that integrates counter-cyclical and pro-growth policies.

All these three questions need to be seen in the context of AI and the associated technologies. The term 'AI' will be used to refer to

this huge change which will dominate the next decade – and far beyond. AI will lead to re- and upskilling, to job changes within and between companies, as well as career switches; the evidence increasingly suggests this will greatly favour graduates and disadvantage those without tertiary education. This will dominate all levels of tertiary education. ‘More generally, as Angus Deaton has said: “This BA/non-BA divide just comes up again and again”[8].

### **3.1. Major increase in higher education participation: Two levels of tertiary education**

Higher education participation needs to increase in the long-term, and with this growth of graduates we need a corresponding growth of graduate jobs. Our research university system is surpassed only by that in the US, but both the form and the content of higher education needs to change in major ways.

- (1) Every comparable advanced country other than the UK has a two-part tertiary system. The main degree route is offered alongside a lower-level vocational education, usually a two-year college system. A community college system on American lines can act as a connective between PDMs and Manchester. Given the defined economic needs of the region, responsibility for the syllabi and qualifications must lie with the city-regional government.
- (2) Teaching should become a high-status career, attracting some of the ablest students. Currently, teaching conditions and pay mean that many leave after only a few years in the profession. There is a major case for

raising national income tax in order to increase *all* teacher salaries, not just at entry level. The argument that low taxes on high incomes incentivises workers is not strong enough [5] to displace the advantages of better teacher pay.

- (3) Moreover, there is a need to improve the level of primary and secondary education in PDMs, providing children with the skillset needed to enter university. While hiring more able teachers and introducing community college is an important part of this, given the fundamental learning difficulties that stem from disadvantage – particularly for boys, as Chetty has shown [9] – ultimately it is the integration of these PDMs in the Manchester TTWA that is critical.
- (4) Financing wider higher education participation. This should be considered in the same way as raising the school leaving age. Much as the advantages offered by leaving at 18 warrant sixth form being free at point of use, the same applies to universities. Therefore, if necessary, paying for a high level of university participation should be done through higher tax rates.
- (5) In pushing for more vocational components to form a part of tertiary education at community colleges, there needs to be a greater consideration of the need for professional schools.
- (6) Expanding higher education participation requires a corresponding expansion of graduate jobs; here a contingent strategy is needed. Here again city-regional government needs to be involved: There is a huge

shortage of UK-trained doctors and nurses, partly as a result of austerity. And place-based job creation needs to be planned out with the NHS.

### **3.2. Integrating PDMs into the TTW of the city-region and building it up further as a successful agglomeration**

In elevating Manchester, the focus should ultimately be on de-elevating the whole Northern city-belt into a ‘northern polygon’, orientated around Manchester, a counterpart to the ‘southern polygon’ orientated around London. Using the development of American cities as an example [10], city-regional mayors need to devote resources to building up inner-city networks, connecting leaders across the major sectors. Developing these sectors and networks will require significant investment, financed most likely by borrowing. Much of this spending should be focused on research and development, and other research has suggested that there is a strong basis for innovation districts to be established. Funding could also be awarded on a competitive basis, such as Mayor Bloomberg’s New York competition, which invited external universities to bid for a major new campus. This is similar to the system of Germany’s federal government, which awards cities major funding that links together the universities, major companies, select smaller companies, and external research systems. This forces different bodies from within the same city-region to cooperate.

Simultaneously with the development of fast transport systems and the refurbishment of housing stock (see below), these should work to bring in knowledge-based multinational corporations and their subsidiary networks. It should also bring in students, young professionals, and tourists. If established

correctly, this system should result in a positive multiplier effect, leading to a rise in house prices in Manchester's and other integrated cities' CBDs. In turn, this should invite the integration of other peripheral cities, such as Bolton, Bury, and Wigan into the greater metropolitan area.

For the development of these fast transport linkages and the refurbishment of housing stock, the relationship between city-regional government and private companies needs to be redefined, shifting the focus away from immediate shareholder maximisation. This means that franchising is not an effective way forward, as it creates too strong a temptation to game the system. Instead, there needs to be an alignment between the interests of high-level management in industry and the city-regional government. This alignment would point towards a 'social purpose' company, or a new model of high-level municipalisation. Such a purpose could incorporate some elements of experimentation, with the city-region functioning as a laboratory for technological advancements, such as through the construction of rapid transport systems instead of solely rail links. This would serve as a further enticement for large high-technology companies, continuing the positive multiplier effect.

### **3.3. Macroeconomic policy, research, productivity growth**

Finally, we turn to macroeconomic policy, a key element of the neo-liberal framework. The key of the separation of growth and cycles is admirably summarised in Cerra et al. [4]; see also Benigno and Fornaro [11] and Carlin and Soskice [12].

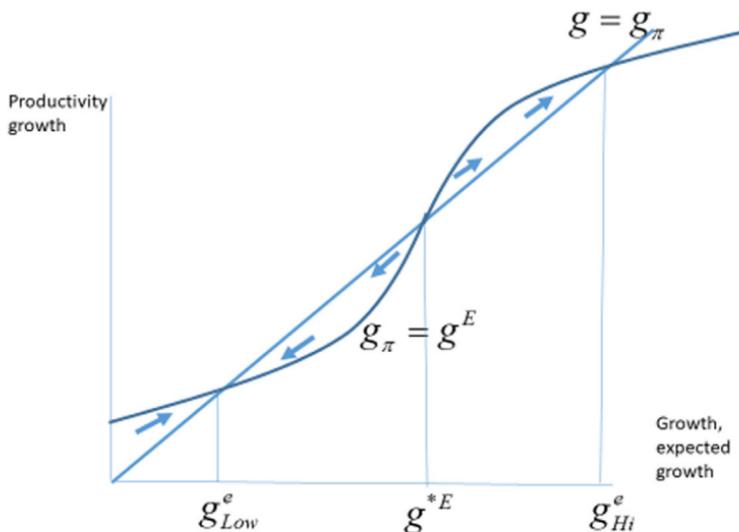
There is a danger implicit in standard inflation-targeting monetary policy, as well as public sector debt-ratio targeted fiscal

policy, given that productivity growth may depend on expected GDP. Should there be a downturn in growth expectations, this assumption would lead to a reduction in productivity growth, which would in turn tighten fiscal and monetary policy. Thus, the contraction would be self-fulfilling.

Below we provide a simple account of how these multiple equilibria can happen. If growth expectations are low, say below  $g^E$  in **Figure 6.2**, then productivity growth (and GDP growth) gets pushed to the low equilibrium [12]. If expectations are above  $g^E$ , then productivity and GDP growth will rise to a higher level. This is a coordination game in pure strategies, where there are pessimistic and optimistic equilibria.

Something like this seems to be at the core of what has happened to productivity growth, perhaps through the 2000s as well

**Figure 6.2: Multiple productivity growth equilibria**



as since the financial crisis. This is not an aggregate demand problem in the ordinary sense, but it suggests an active promotion of demand, so growth expectations do not collapse. Arguably the solution involves putting more resources into research in both public and private sectors. Tobin referred to this as ‘high-pressure demand policy’. Productivity growth, in a skills-biased technical change world then implies the demand for new graduate jobs increases, and real earnings increase as well.

#### **4. Conclusion**

To uproot the populist ideology from English soil will take nothing less than another Polanyi-style great transformation. This paper sets out a broad long-term strategy that aims to reduce the allure of populism, focusing on three related ideas: first, the need to create inclusive growth; second, to promote social mobility out of segregated pockets of society, especially PDMs; and third, to recreate the social contract on a regional, national, and cosmopolitan level. This is in some ways the most important, and can be achieved through an increase in higher education participation rate and the construction of a wide ‘graduate job’ economy. Key to doing this is to develop a long-term strategy for creating corresponding growth in regionally-focussed graduate jobs. A major element in doing this will come through the health sector, and creating graduate level jobs in the care sector. And a second long-term element from raising productivity growth, associated with AI.

We have not discussed the reorganisation of democracy. We are a society without an explicitly populist party, but we have a highly populist electorate and a sharply divided political system.

It is often suggested that a major reason for that is that we are majoritarian system rather than PR. But the sharp divisions and frequent sense of chaos at Westminster reflects the absence of a median voter in the national electorate. So the real focus should be on whether it is possible, at the city-regional level, to reconstruct this median voter. That is another task that seems necessary to uproot populism.

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### **Competing Interests**

The author has no competing interests to declare.

### **Notes**

<sup>1</sup> Neo-liberal framework' has become a shorthand in the political economy literature for the major shift away in policy development from the key role of the state to a greater reliance on markets. In the UK this gathered speed during the 1980s in the Thatcher administrations. It refers *very loosely* (as an idealised picture of the justification of policy making by governments internally and in self-presentation to the wider

electorate) to: greater use of markets in a range of areas such as housing and transport; an emphasis on denationalisation and increased market competition, domestically and in Europe; treating universities as a competitive market; capital mobility and widespread liberalisation of controls in finance, permitting greater risk-taking; a well-developed shareholder-oriented market in corporate control; central bank autonomy and responsibility for an inflation target via interest-rate setting, international capital mobility and the elimination of exchange controls; and fiscal policy focussed on low taxes and playing a minimal role in discretionary macroeconomic management.

<sup>2</sup> See Schmidt and Thatcher for a sophisticated comparative discussion, explaining why the UK form of liberalism was ‘purer’ than elsewhere, Schmidt, V. and M. Thatcher, Eds. (2013). *Resilient Liberalism in Europe’s Political Economy*, Cambridge University Press.

## References

1. Polanyi K. *The Great Transformation: The Political and Economic Origins of Our Time*. Boston: Beacon Press; 1944.
2. Cavendish C. Universities are pleading for a bailout to paper over their failures, FT Opinion [internet]. *Financial Times*. 2020 April 3. <https://www.ft.com/content/7be4f44e-7582-11ea-95fe-fcd274e920ca> (accessed 2020 April 4).
3. Goldin CD, Katz LF. *The race between education and technology*. Harvard University Press; 2009. DOI: <https://doi.org/10.2307/j.ctvjf9x5x>
4. Cerra V, Fatás A, Saxena S. *Hysteresis and Business Cycles*. *CEPR Discussion Paper*; 2020. DOI: <https://doi.org/10.5089/9781513536996.001>
5. Duflo E, Banerjee A. Economic incentives don’t always do what we want them to [internet]. *New York Times*. 2019 October 26. <https://www.nytimes.com/2019/10/26/opinion/sunday/duflo-banerjee-economic-incentives.html> (accessed 2020 Mar 23).

6. Overman H. It's not that London is too big, but that other large UK cities are too small [internet]. 2017 June 6. <https://blogs.lse.ac.uk/businessreview/2017/06/09/its-not-that-london-is-too-big-but-that-other-large-uk-cities-are-too-small/> (accessed 2020 April 4).
7. Mayer C. Prosperity. Oxford University Press; 2018.
8. Leonhardt D, Thompson SA. How Working Class Life is Killing Americans, in Charts. *New York Times* [internet]. 2020 Mar 3. <https://www.nytimes.com/interactive/2020/03/06/opinion/working-class-death-rate.html> (accessed 2020 April 4).
9. Chetty R, Hendren N, Katz LF. The effects of exposure to better neighborhoods on children: New evidence from the Moving to Opportunity experiment. *American Economic Review*. 2016; 106(4): 855–902. DOI: <https://doi.org/10.1257/aer.20150572>
10. Katz B, Bradley J. The metropolitan revolution: How cities and metros are fixing our broken politics and fragile economy. Brookings Institution Press; 2013.
11. Benigno G, Fornaro L. Stagnation traps. *The Review of Economic Studies*. 2018; 85(3): 1425–1470. DOI: <https://doi.org/10.1093/restud/rdxo63>
12. Carlin W, Soskice D. Stagnant productivity and low unemployment: Stuck in a Keynesian equilibrium. *Oxford Review of Economic Policy*. 2018; 34(1–2): 169–194. DOI: <https://doi.org/10.1093/oxrep/grxo60>