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POLICY DEBATES

A place-based system? Regional policy levers and the UK's productivity challenge

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ABSTRACT
National governments are increasingly focusing on 'place' in attempts to tackle economic challenges. This puts pressure on regions to deliver productivity improvements. Drawing from stakeholder interviews, document analysis and secondary data analysis, this paper considers the productivity policy levers available to regional leaders. Three UK regions are compared in relation to four policy levers (nodality; authority; treasure; organization) and four drivers of productivity (investment and innovation; transport infrastructure; entrepreneurship and employment; skills). Despite differences, all three regions can be identified as 'nodality institutions', lacking the authority, treasure and organization to drive productivity improvements.

KEYWORDS
Levelling up; regional drivers of productivity; regional governance institutions; regional inequality; inclusive growth; place-based policy

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1. INTRODUCTION

Addressing place-based inequality and improving regional governance are key problems in regional policy, with the most pressing and deeply embedded challenge being productivity. In the UK, productivity gaps between the best- and worst-performing regions have been widening since the early 1980s despite numerous initiatives. The differing performance of regions has been deemed a 'regional productivity puzzle', with the UK shown to be 'one of the most regionally unbalanced countries in the industrialized world' (McCann, 2020, p. 256). This problem is compounded by the UK's relatively low productivity compared with other developed economies, as well as relatively low levels of productivity growth in recent decades. The productivity issue is crucial to the development of regional economies, but this will only improve the lives of local people if it is considered alongside inclusivity and well-being within regions (Pike et al., 2007).

The last decade has seen the rise of 'place-based policymaking', which entails developing 'existing place-based technologies, capabilities and specialisms' and taking advantage of the opportunities that arise (Bailey et al., 2018, p. 1525). It is recognized that the power and capacities of regional institutions are key to delivering effective place-based policymaking (Martin et al., 2016). Rodríguez-Pose (2013) argues that institutions are crucial for economic development, but that institutional intervention cannot follow a place-blind 'one-size-fits-all' approach. Therefore, in addressing productivity disparities between regions and inclusivity levels within regions, the question of how to improve regional governance necessarily arises. How different levels of government interact is critical in determining the effectiveness of public investment and the incentives for private investment, with clarity of responsibilities, clear communication, and aligned priorities being particularly important (Organisation for Economic Co-operation and Development (OECD), 2020).

For effective regional policy (in the UK and elsewhere), it is essential to assess the capacity of regional governance in redressing unequal regional productivity. This paper aims to contribute to this discussion by comparing three regions with different governance structures: Enterprise M3 LEP (EM3 LEP) in South East England; the Cardiff Capital Region (CCR) city deal; and the North East

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Combined Authority (NECA). The governance capacity of these three 'regional institutions' is assessed using the 'NATO' framework, which considers their place in regional networks (*nodality*), their decision-making powers (*authority*), their budgetary capacity (*treasure*) and their institutional capabilities (*organization*) (Hood & Margetts, 2007). Across these four dimensions, the policy levers of the three regional institutions are analysed in terms of their impact on four economic drivers of productivity: investment and innovation; transport infrastructure; entrepreneurship and employment; and skills (derived from Pitelis & Runde, 2017; Bailey et al., 2018). In taking this approach, we contribute to the ongoing discussion on the interrelationship between policy levers, regional governance and productivity outcomes.

Overall, we show that, despite differences between the three institutions, they are all primarily '*nodality* institutions', lacking the *authority*, *treasure* and *organization* to make transformative policy interventions in the drivers of productivity. Outcomes also depend on the interaction of contextual factors, including past economic performance, economic geography and local political economy. There is also the importance of agency, the creativity and strategy of individual leaders, though this is itself embedded in and influenced by the local governance structure (Sotarauta & Beer, 2017). However, it is the structure of subnational governance that should be the key tool for intervening in regional productivity, and yet, in the UK, it is a major barrier to solving the productivity puzzle.

The remainder of the paper is structured as follows. It begins by outlining the context of UK regional policy, and then introduces the three regions in relation to the NATO framework. The discussion section considers how the regional institutions have used policy levers to influence the drivers of productivity.

2. OVERVIEW OF REGIONAL POLICIES

The three regions discussed in this paper have been significantly influenced by the development of regional policies in the UK over time, particularly in relation to reforms to regional governance structures and attempts to tackle regional inequality. Regional governance structures were initially weakened by the centralized policy levers of the 1960s and 1970s, and then by the political and economic dismantling of local government in the 1980s and 1990s. However, since 1997, the UK has pursued a steady, if slow and uneven, programme of political devolution, starting with the creation of elected governments in Scotland, Wales, Northern Ireland and Greater London, and nine 'regional development agencies' (RDAs) in England.

Given the historical absence of regional government in the UK, the post-1997 devolution project represented a significant shift in the country's regional policy (Bradbury, 2021). These reforms preserved key features of a centralized system and continued a tradition of ad hoc regional policy reform (Dorey, 2008). For example, the creation of the Welsh Assembly represented a major transfer of powers, but this followed the haphazard and top-down political tradition, inheriting the remit of the Welsh Office and steadily gaining powers from Westminster. In England, the RDAs built on the legacy of the post-war 'regional economic planning councils', providing a mechanism for regional regeneration supported by major state spending (Nurse & Sykes, 2020). However, many of New Labour's regeneration projects, such as 'the Urban Renaissance Programme', were exclusively focused on infrastructure rather than a broader 'place-based' agenda (Bentley & Pugalis, 2014). Overall, the New Labour period of regional policy was marked by the resurrection of active regional policy and a major devolution of powers, but also by a retention of central control.

In 2010, the Conservative–Liberal Democrat Coalition government promised to 'end the era of top-down government' with a commitment to 'localism' (HM Government, 2010, p. 11). This entailed deregulation of local authorities, new local accountability mechanisms and devolution to business-led institutions (Clarke & Cochrane, 2013). 'Local enterprise partnerships' (LEPs) replaced existing institutions in England, operating at a smaller geography and with greater business input. Despite claims to localism, many important regional powers were absorbed by the UK government (Bentley & Pugalis, 2014). The move from RDAs to LEPs is widely seen as a step backwards in the UK's regional policy, both in terms of empowering local actors and in tackling place-based inequalities (Tomaney, 2016). This included a lack of clarity about place, an unconstructive competition between places, concerns about organizational capabilities, and major problems with accessing and using data (Fai & Tomlinson, 2018; Newman et al., 2021).

A second wave of devolution in the 2010s came with the creation of 'combined authorities' (CAs), primarily in England's urban centres. They were implemented by negotiated deals, absorbing LEPs and local government powers under the leadership of an elected mayor. In Wales and Scotland, 'city deals' were created to perform a similar function, but without the same level of power, resources and elected mayors. These reforms to subnational government stood against a backdrop of austerity, which led to a dramatic reduction in local authority budgets and an acceleration of regional inequality (Hastings et al., 2017).

In addition to financial restrictions, a 'rhetoric–reality gap' has been identified in the post-2015 devolution agenda, with central power largely protected and retained (Ayres et al., 2018; Gerhes et al., 2020). This 'gap' is between central government's discourse of a major transfer of budgets and powers, and the reality of an ad hoc process that 'affords repeated opportunities for the enforcement of the centre's norms' (Ayres et al., 2018, p. 859). Therefore, while it is widely recognized that the scale of devolution is insufficient, a key challenge is to identify what devolution has taken place and to specify what is lacking, a task to which this paper aims to contribute.

Over many decades, regional policy in the UK has grappled with two interlinked challenges: a historic centralization of power and deeply entrenched regional inequalities. The first challenge has begun to be met with an active but incomplete programme of devolution. However, although decentralization in high-income countries has been linked to reduced regional inequality (Rodríguez-Pose & Ezcurra, 2010), the UK's partial devolution has not solved the problems of lagging regional economies. A key factor here is 'place leadership', the public–private strategic leadership in a region and its capacity to respond to 'path-breaking economic change' (Bailey et al., 2010, p. 462). A second key factor is the leadership *institutions*: place-leadership significantly depends on the development of regional governance institutions, both in terms of organizational forms and the wider set of norms (Hermelin & Persson, 2021). It therefore goes beyond official leaders and relates to wider business and knowledge networks, which are often underdeveloped in lagging regions (Barzotto et al., 2019). This suggests a strong link between the governance of lagging regions and their economic development.

To tackle these interlinked challenges, the current government has promised to represent 'left behind places' with a flagship agenda to 'level up' less prosperous regions, an agenda associated with place-based investments in infrastructure, skills and governance. A central challenge for those developing place-based policy is to understand how the structures of devolved governance can be organized to address the underlying economic inequalities between and within regions. In the following sections we explore how productivity outcomes across regions, and inequality within regions, might be associated with the UK's different governance arrangements of the LEPs, CAs and city deals. These bodies are established to govern regional business and knowledge networks, but if they are to do so effectively, they need to successfully employ a range of policy levers.

3. THE SCOPE TO APPLY PLACE-BASED POLICIES IN RESPONSE TO LOCAL NEEDS

To explore how different subnational governance arrangements in the UK may have contributed to differing performance, we present three case studies. Each has a different governance structure, reflecting the diversity of subnational governance arrangements in the UK. They have differing economic geographies and, in turn, different economic and social trajectories and associated needs. We have selected a LEP in Southern England that has relatively high productivity; and a CA (without a mayor or devolution deal) in Northern England and a city deal in South East Wales, both of which have lower productivity performance.

Regional variations in productivity (measured using gross value added (GVA) per hour) by NUTS-2 regions show an uneven distribution of growth across the UK, with London, the South East and parts of Scotland achieving the highest rates of productivity in regional outputs. Of our three case studies, EM3 LEP has the highest productivity with a GVA per hour of £42.00 for 2018, in contrast to rates for CCR and NECA at £31.50 and £30.70, respectively.

The productivity performance of the three regions is greatly affected by the characteristics of their surrounding areas. The EM3 LEP is situated in the South East, an area of high productivity. In contrast, South East Wales and the North East of England have lower productivity. CCR performs well in comparison with the other Welsh regions, but this reflects its strong connections to the South West of England and the M4 corridor, which have a greater influence on performance than more distant parts of Wales. NECA and EM3 LEP perform broadly in line with their neighbours. These trends are the product of complex geographical and historical factors, but also of local and place-specific dimensions, both in terms of the levers of power and the extent to which regional institutions have been able to use those levers to intervene in economic development.

The EM3 LEP established in 2011 is one of six LEPs in the Greater South East and covers parts of Surrey and Hampshire. It is not aligned with other local boundaries, conjoining northern Hampshire with western Surrey. It has a population of 1,704,600, covering several cities and 13 local authorities (Hoole & Collinson, 2020). As with all LEPs, the EM3 does not have regulatory, legislative or tax-raising powers. Instead, its role primarily relates to economic development strategies (Britton & Woodman, 2014), attracting and channelling government investment, and creating partnerships between local stakeholders. Consumer services is a growth area, but development in high value sectors is limited, with a productivity in manufacturing, distribution and information and communication technology (ICT) lower than other areas. Employers face a skills shortage, against the background a highly skilled population, high labour force participation and low unemployment (EM3 LEP, 2020b).

NECA established in 2014 is one of 10 CAs set up in England to enable groups of local councils to collaborate across boundaries, though it is the only CA without a mayor or devolution deal. It now covers four local authorities, following restructuring in 2018, when three councils left to form the North of Tyne Combined Authority (NTCA). NECA works closely with the North East LEP, which has a growth deal and also covers the NTCA. The region has experienced extensive deindustrialization since the 1980s, although manufacturing employment remains above the UK average and professional and technical employment below average. Durham University supports research in the region and is linked to various regional innovation initiatives. Each CA operates with different powers, budgets and arrangements negotiated through bespoke deals. It is therefore impossible to assume that one CA represents all. Our focus on NECA seeks to respond to a tendency in the literature to focus on the most powerful CAs. However, there are clearly commonalities across the CAs, and aspects of our analysis will be relevant to other areas.

CCR sits within the nation of Wales, which has its own devolved parliament (the *Senedd*) and government.

The CCR city deal (CCRCD), as one of four regional growth agreements in Wales, provides a 20-year investment contract of £1.2 billion agreed in 2016 between the UK government and 10 local authorities in South East Wales. Its negotiation did not involve the Welsh government, nor was there a public consultation (Beel et al., 2021). City deals in Wales and Scotland differ from LEP growth deals in England, as they do not devolve revenue generation to the region and can fund new projects (Beel et al., 2021). The region has the highest population density in Wales; and home to the cities of Cardiff and Newport and the previous industrial heartland of the South Wales Valleys, it remains the most urbanized part of Wales. The region has experienced deindustrialization since the 1980s and due to high levels of deprivation it has received extensive European Structural and Investment funding, focused on infrastructure, innovation, business, employment and skills – Wales qualified for over four times more than England per person between 2014 and 2020 (Brien, 2021). The reduction of European Union (EU) funding is therefore expected to be acutely felt.

Consideration of the different policies that have been applied to improve growth in each context allows discussion of the effectiveness of different regional institutional forms. While these cases *illustrate* different governance arrangements, there is no typical form for a CA, LEP or city deal; different devolution deals have been negotiated in different instances. They are also evolving, as powers and levers are not static but are continually negotiated as boundaries are tested during policy implementation.

The scope and nature of the resources devolved to the three regions, and their degree of autonomy in using them vary. CAs have some devolved budgets but these are variable, limited and rely on the submission of a strategy to meet the UK government's requirements (as is also the case for the programme funds for EM3 LEP's Growth Deal).

Comparing the tools, levers or instruments that regions can use to develop and implement policy provides insights into local policies for economic development. There are numerous typologies of policy lever (for an overview, see Margetts & Hood, 2016), but we employ the 'seminal' (John 2013, p. 605) 'NATO' model (Hood & Margetts, 2007). This a parsimonious model that, unlike some other approaches, considers policy tools and levers largely in isolation from the historical and institutional traditions within which they operate. But this parsimony makes NATO, as Margetts and Hood (2016) argue, well adapted to comparative work, both within and across national settings: our approach could be used to develop our work by comparing case studies in the UK with others elsewhere. The wider context matters, particularly in the case of subnational authorities such as our case studies, but NATO provides a reasonably comprehensive heuristic framework that allows us to enumerate and classify the levers that a body possesses, and to examine the effect of different contexts on what different bodies can do.

The NATO model identifies four categories of policy levers that any level of government may possess: *nodality*, *authority*, *treasure* and *organization*. *Nodality* is 'the property of being in the middle of an information or social network' (Hood & Margetts, 2007, p. 21) and allows a governance body to gather, organize, and disseminate information, advice and guidance. It can also include other activities related to networks, such as fostering collaboration between different bodies and stakeholders (Connell et al., 2017). *Authority* is 'legal or official power … to demand, forbid, guarantee, adjudicate' (Hood & Margetts, 2007, p. 5). It is the ability to make decisions that other actors must obey, as well as to endorse or certify products or actions as valid. *Treasure* is the 'monies or money-like substances' (Hood & Margetts, 2007, p. 78) that can be used to buy resources, or provide grants or loans to services, individuals and organizations, often with conditions attached. An institution's control over its *treasure* may vary between a fully devolved budget and a national government grant with strict use conditions. *Treasure* also includes the power to raise money through borrowing or taxation. Finally, *organization* is the material resources (such as land, buildings, vehicles, and equipment) and staff that a government directly controls and can use to act itself (Hood & Margetts, 2007, p. 102).

These levers interact with each other. For example, the greater a government's ability to distribute funds or make binding decisions (*treasure* and *authority*), the more incentive there is for other actors to collaborate with it (*nodality*). Similarly, *nodality* can be used to persuade other stakeholders to make available their *organization* resources, such as local authority-owned land for housing or development. These are the tools by which policymakers will be able to achieve the effective governance of business and knowledge networks, which as we have noted is strongly linked to regional economic development. By applying the NATO typology to the three bodies we can consider how well equipped they are to fulfil their regional governance responsibilities, and we identify corresponding deficiencies in their toolboxes.

While the literature and data show that there are failings within the UK's system of subnational governance, it is necessary to speak to stakeholders to build explanations of how and why political institutions are failing. In the case-study regions, we conducted 19 interviews with stakeholders, including government officials, business leaders, academics, and trade union representatives. To understand the 'why and how' of institutional challenges, we used a semi-structured interview schedule containing both open and probing questions. These were divided into five main themes: 'strategy', 'devolution', 'accountability', 'skills policy' and 'capabilities'. All interviews were transcribed for analysis in NVivo, with coding identifying and grouping similar pieces of text within and between interviews. This analysis produced seven new themes to add to the five from the interview schedule, each containing a list of extracts. Within each theme, the extracts were then organized to identify the 'key points' (usually about five to 10 in each theme). These key points were written as bullets or short paragraphs, each supported with extracts from at least two different interviews. The data analysis was conducted separately in each of our case-study regions, though researchers worked closely to ensure that comparable findings were produced for the eight case-study regions (three of which are presented in this paper).

The findings from the interviews were then compared with a document analysis of the policies, strategies, and governance in each region. We particularly focused on local industrial strategies, where they were available, as well as local economic plans, transport strategies and net zero policies. The findings from the interview analysis ensured that the document analysis could be targeted and critical. Some key points from the interviews were tested against the document analysis, and others were used to challenge the claims or emphasis of policy documents. The research was further supported through analysis of secondary data, which primarily related to productivity outcomes but also included a range of data to cross-check claims made in the policy documents.

4. FINDINGS AND ANALYSIS: THE DRIVERS OF PRODUCTIVITY

A central aim of the UK's institutions of regional governance is to promote and develop the drivers of productivity to achieve more equal and higher average productivity growth. Their ability to do so depends on the range and strength of policy levers and how they are used. This section considers how the case study regions have used policy levers to influence the four drivers of productivity: investment and innovation; transport infrastructure; entrepreneurship and employment; and skills (derived from Bailey et al., 2018; Pitelis & Runde, 2017). In addition, each of the four sections begins with a brief engagement with the existing literature to show how each driver influences productivity. It is, however, important to acknowledge that much of this literature is contested, and while there is research supporting the importance of these drivers, a wide range of variables may alter their relative importance for local contexts at any given time.

4.1 Investment and innovation

Regional productivity performance has been linked to investment in research and development (R&D) and other innovation activities (Cozza et al., 2012; Vieira et al., 2011). Foreign direct investment (FDI) and trade openness are closely linked to productivity growth, as they stimulate innovation, particularly for small and medium-sized enterprises (SMEs) and where there is an active R&D environment (Arnold, 2018). Innovation and R&D are therefore recognized as important for regional productivity performance, with some regions 'more disposed towards innovation' due to environmental factors such as existing local industries or universities and subsequently lower costs of knowledge transfer (McCann & Ortega-Argilés, 2015, p. 187).

R&D intensity and the clustering of research organizations can encourage innovation by building international linkages and specialization, expanding market reach, and accessing a larger base of ideas, technologies, skills and products (Uyarra & Ramlogan, 2012). However, regional institutions have limited capacity to create clusters of innovative industries and research institutions, not least because funding limitations and funding uncertainty create institutionalized short-termism. One interviewee explained:

> We've got a fantastically supportive business community, but you've got to feel for them when they do get on board and they do start something then all of a sudden the grant that supports these activities just disappears overnight and they don't understand why it's happened.
>
> (interview, local authority)

The main impact regional institutions can have on innovation is to influence collaboration through partnership approaches. This is an example of *nodality*, as it draws on the regional institutions' place in social and information networks. Both EM3 LEP and CCRCD seek to foster collaboration as a primary governing strategy. For example, EM3 LEP identifies its most impactful attempts to stimulate innovation as, first, 'bringing business, innovation focused institutions and academia together', and second, establishing 'business driven leadership which takes ownership of the challenges of innovation' (EM3 LEP, 2020a, p. 63). While this demonstrates the importance of nodality as a strategy for EM3 LEP, there are questions about who is included; trade union representatives report having 'virtually zero engagement with business counterparts on a sectoral level'.

CCRCD encourages partnerships that are sector focused, linking the private and public sectors through partnerships with business and universities, for example by providing space in science parks. This strategy is supported by a strong private sector representation on its economic growth partnership and its investment panel, which assesses funding applications. European funding has provided complementary support for innovation development, alongside other areas, with several key projects in the region. However, as this funding is directly administered by the Welsh government it may increase innovation performance without enhancing CCRCD's policy levers.

In NECA, the innovation strategy, led by North East LEP, also focuses on facilitating business networks, especially through its 'Innovation Supernetwork', which runs schemes that bring together business leaders. The North East LEP channels some funding into the private sector to support R&D projects, such as an £8.9 million investment in the Centre for Process Innovation. However, there are concerns that the scale of investments undermines these projects: 'Unfortunately, limited resource, [that's] when things get tough [and] people turn inwards. They focus on solving their own problems and looking after their own organizations' (interview, local chamber of commerce).

FDI projects are important to all three regions. To attract inward investment, a key strategy for regional institutions is ‘strategic coupling’, whereby temporary coalitions are created with lead firms (Dawley et al., 2019). In order to use couplings to successfully attract FDI, regional institutions rely on close collaboration with governments. Currently, however, there are major problems with these relationships, especially between Westminster and the English regions, with local politicians in the North East commenting that ‘it’s very, very, difficult for us to have an institutional relationship with [the UK government]’, and a commentator in the EM3 region complaining that the current arrangement is ‘Whitehall decision-making with a little bit of local trimming around the edges’. In South East Wales, an interviewee observed that engagement between the CCRCD and the Welsh government had been limited, a pattern that may have its origins in the establishment of the city deal (Beel et al., 2021). Given that the three regional institutions primarily rely on their *nodality*, specializing in coordinating and convening, the failings of central–local relations have an amplified effect on their capacity to deliver policy interventions associated with investment and innovation.

In summary, the regional institutions vary in the extent of their *authority* and *treasure*, which influences their ability to influence R&D allocations. The UK government’s control over R&D allocations reduces the ability of regions to respond to local needs and develop integrated innovation strategies. LEPs’ limited control over funding and the uncertainty of budget allocations institutionalizes short-termism, limiting their capacity to support innovation. However, the EM3 LEP and CCRCD explicitly aim to foster collaboration through *organization*, and CCRCD’s control over its budget facilitates these efforts. While ‘strategic coupling’ has the potential to attract FDI to regions, it has not been effective in any of our studies due to the absence of strong working relationships between local and national politicians.

4.2 Transport infrastructure

Transport infrastructure plays a key role in determining where local industry is located within the region, and in turn influences productivity through affecting firm performance (Banister & Berechman, 2001). The benefits of transport infrastructure investment include extending the catchment of available workers, lower costs of production, stimulation of inward investment and unlocking inaccessible land (Docherty & Waite, 2018). Across Britain, cities account for over half of businesses and jobs (Swinney et al., 2018) and access to cities increases job density and knowledge-sharing and new learning.

A strong influence on productivity growth is through the benefits of clustering or ‘agglomeration economies’, discussed above, arising from the concentration of economic activity in a particular area. This is demonstrated by larger cities having higher productivity than smaller cities (McCann, 2013). Linked to this, investment in infrastructure that increases economic mass and improves connectivity can improve economic performance via accessibility improvements, leading to places attracting more firms (Gibbons & Overman, 2010).

The EM3 LEP is located in a transportation hub, with good proximity to Heathrow, Gatwick and Southampton airports, and is well connected for road and rail transport, though the region’s reliance on road and aviation creates major future challenges in the shift to a greener economy. The EM3 LEP has a transport action group that brings together public and private stakeholders to consider future strategy, but the LEP lacks specific powers in relation to transport and has no set transport budget. It is a member of ‘Transport for the South-East’, a partnership of LEPs and local authorities that is currently bidding for statutory powers. EM3 LEP’s transport strategy is therefore not supported by any *authority, treasure* or *organization*.

NECA has a degree of formal *authority* and *treasure* shared with the NTCA through the North-East Joint Transport Committee. Like EM3, the region relies heavily on air and road connectivity. NECA’s global connections rely on the North East’s seaports and airport, both of which have grown in recent years. While this growth brings benefits for the region, this needs to be balanced against the environmental consequences. Interviewees reported difficulties creating a transport strategy because of institutional complexity, with responsibilities spread across ‘the LEP, the transport [committee] and two combined authorities’ (CA staff), which means that ‘it’s incredibly confusing and complicated’ (local politician).

The Welsh government has responsibility for roads, buses, taxis and private hire vehicles; rail, ports and aviation remain the responsibility of the UK government (Welsh Government, 2021). CCRCD has *authority* and *treasure* in some local aspects of transport, but this has not translated into public transport efficiency, which has remained low (OECD, 2020). It does have a transport authority with the powers and budget to influence clustering and support access to employment. *Treasure* is evident in public transport projects that are financed through the city deal. For example, of the £1.22 billion budget for the CCRCD, £734 million is ring-fenced for the South Wales Metro. The metro is managed by Transport for Wales, which is owned by the Welsh government, and monitored by the transport authority, comprising cabinet members from the CCR local authorities. This illustrates the governance (and *nodality*) advantages posed by CCRCD having coherent administrative boundaries with its member local authorities (Welsh Government, 2021, cited in Beel et al., 2021).

As well as directly influencing productivity, transport has a significant impact on inclusivity, with local patterns of interconnectivity enabling and constraining inclusive growth (Hughes & Lupton, 2021). As our interviewees explained, *exclusive* transport policies ‘make it very difficult to live your life without a car, [with] the cost of car ownership [and] fuel poverty increasing’. Inclusive transport policies, based on active transport and affordable, reliable public transport, increase the geographical range within which disadvantaged and disabled people live their lives. This opens employment opportunities, as well as services, leisure, and social connections. Inclusive transport policy is effectively closed off to those regions, like EM3, which lack *authority* and *treasure* in relation to transport. In contrast, the North-East Joint Transport Committee has the *authority* to embed inclusivity in its transport policy, with its 2021–35 Transport Plan aiming to be 'greener, more inclusive, healthier, [and] safer' (Transport North East, 2021, p. 32). CCRCD's high *authority* and *treasure* in some aspects of transport is reflected in its passenger rail vision, which has a focus on connectivity for deprived areas and regeneration (CCR, 2019).

This analysis highlights that the transport powers (*authority*) and budgets (*treasure*) of CCRCD (and to some extent NECA) are major aspects of place-based policy interventions, allowing for locally targeted investments that contribute to wider transformative projects in well-being and prosperity. The coordination of CCRCD's networks, the alignment of its governance structures (*nodality*), and the leverage to raise finance (*treasure*) is critical in all its areas of operation. The EM3 LEP in contrast has a high degree of physical nodality, but this does not necessarily foster *nodality* as a policy lever, and is not supported by any *authority, treasure* or *organization*, precluding the use of transport policy to improve productivity and inclusivity.

4.3 Entrepreneurship and employment

Regional productivity performance has been linked to entrepreneurship, and productivity varies considerably by industry (van Oort & Bosma, 2013). The different industry and sector balance of the three case study regions is a powerful explanatory factor for differential performance, and their different governance structures give them various capacities to intervene in this area.

While the EM3 LEP has comparatively high employment in high-productivity sectors, these sectors are facing job losses, as noted by an interviewee: '[We've] been losing jobs … in some of the frontier sectors that offer the most in terms of productivity'. The policy levers, specifically the *authority*, of the EM3 LEP to meet this challenge is very limited. Gerhes et al. (2020) show that LEPs fail to deliver enterprise policy-making because of a rhetoric–reality gap in their economic interventions. Rather than focusing on generating jobs and supporting SMEs, LEPs' governance structures draw them into national policy priorities in supporting large high-productivity firms (Gerhes et al., 2020). Interviewees felt that the EM3 LEP targets high-productivity sectors for collaboration, working closely with them to enhance growth strategies, while explaining that 'low-productivity companies … aren't the sorts of companies we deal [with]' (LEP staff). This is notable in EM3 LEP's Strategic Economic Plan, which particularly focuses on 'driving existing high growth digital-technology sectors' (EM3 LEP, 2020b).

In contrast, CCRCD, has adequate *authority* to influence job creation, but the nature of the *treasure* presents incentives to maximize the quantity of jobs without consideration for job quality. The performance targets and funding mechanisms of CCRCD limit its ability to respond innovatively to local needs and its ability to adjust the balance between productivity, inclusivity and sustainability: 'we want to invest in sustainable development, active travel, new ways of working, [but] every time we don't hit that GVA target, we can expect some kind of fiscal penalty'. While these incentives may reinforce inequalities by leading to lower quality jobs, CCRCD is also required to implement the Well-being of Future Generations (Wales) Act (2015), which requires public bodies to meet goals in four aspects of well-being: social, economic, environmental and cultural.

NECA's Strategic Economic Plan identified job creation as its primary target. In its job-creation plan, it emphasizes the importance of 'inclusivity'. However, despite this claim, a bias towards high-productivity firms excludes start-ups and small entrepreneurs, which lack the necessary connections and knowledge to access funding. As one interviewee noted:

> some of the new emerging businesses and entrepreneurs haven't got a clue sometimes what North East LEP is. You need to [ensure that] very small family businesses are just as likely to get financial support … as the big industries and the well-established companies.

While regional institutions have the *authority* and *treasure* to provide extensive support for start-ups, this support is notably absent in all three regions. The CCRCD Investment Framework has built an understanding of industries through good relationships with the private sector (Morgan et al., 2019). However, as the nature of its *treasure* entails a target of £4 billion of privately leveraged financing, it focuses on existing businesses, both in terms of membership of the Business Council and leveraging investment from larger companies (CCR, 2019; Beel et al., 2021). Similarly, the Economic Growth Council and the Business Council focus on a 'limited number of significant interventions' (CCR, 2019, p. 6). Because these bodies, and their equivalents in the EM3 LEP and NECA, are populated by business leaders, their resulting *nodality* is likely to lead to a greater concern with supporting existing businesses rather than stimulating the creation of new ones.

In summary, the different governance and incentive structures at play in relation to entrepreneurship and job creation influence the support offered to new and existing businesses. The limited *authority* of LEPs results in the adoption of national policies and a focus on high productivity sectors, and an inability to counteract an outflow of jobs. The job and GVA targets associated with CCRCD's *treasure* risks focusing on job creation and overlooking other aspects of job quality. Its relatively high *authority, organization* and *nodality* can, however, be used to counteract this tendency. The nature of the regions' *nodality*, with business leaders populating the councils and boards, is likely to lead to a focus on larger existing businesses, rather than an interest in supporting start-ups. In this area, *nodality* appears to override *authority* and *treasure* powers that are available to the regions.

4.4 Skills

Regional productivity performance has been linked to knowledge assets (including both human and technological), as a skilled workforce can attract investors and supporting innovation and R&D (Paci & Marrocu, 2013). An educated and skilled workforce is important for economic performance and productivity, and regions with a high proportion of level 4 skills have higher productivity levels (Oguz & Knight, 2011). Employers often refer to a skills mismatch, where they seek employees with higher skills than are available in the labour market, and subsequently report significantly lower productivity (Morris et al., 2020).

Each of the three case-study regions has a dedicated body for skills. These bodies are partnerships between employers, colleges, universities, local government, the Department for Work and Pensions, and private training providers, although the degree of independence and therefore scope of *authority* varies between the regions. The CCRCD Skills Partnership additionally includes representatives from trades unions and the Welsh government. Interviewees emphasized the importance of 'a tripartite relationship between government employers and trades unions'.

North East LEP's skills advisory board has a similar (though by no means equal) level of oversight from NECA; one representative from both NECA and NTCA sit on the board. An interview explained that, 'of the 60 LEP staff, 30 work on the skills agenda, [which] demonstrates the focus we put on that' (CA staff). The EM3 Skills Advisory Board has greater autonomy but fewer resources in terms of both *treasure* and *organization*:

> I don't think LEPs generally down here have the resources to enable them to do social inclusion on a big scale, however desirable that would be, and I think that's where access to skills budgets in particular would be very important.
> (commentator)

The key challenge identified in the strategic plans of the three cases is matching educational qualifications with available employment. This requires long-term education planning and more high-skilled job opportunities. All three regional institutions recognize this challenge and struggle to meet it, but their approaches and levels of success vary. The EM3 LEP's skills policy involves developing *nodality* by building networks between local educational institutions and businesses. The North East has higher *treasure,* as it is backed by larger and more secure funding, and it seeks to address the supply of skills through the provision of training and support at various levels by using its *organization*. For example, North East Ambition delivers careers advice in schools and colleges, while Opportunity North East seeks to boost social mobility among the young with a £24 million budget allocation (North East LEP, 2019).

Despite these intentions, the challenges of making progress on skills policy were recognized in relation to the limited *authority* that local government has over education providers. As an interviewee from the North East explained, 'local authorities are not really in control … of what skills are inculcated through colleges and so on because colleges are running themselves … '.

Therefore, while all three regional institutions focus on exercising and increasing *nodality* by creating networks and partnerships between educators and employers, they lack the *authority* to commission skills from educational institutions. Where the funding is available, they provide young people with careers advice or they support businesses in finding apprentices, as with EM3's Hub. However, without powers over educational institutions, regions are not able to plan, or even coordinate, the skills pipeline. One response is to focus on stimulating skills demand, as with NECA's focus on job creation, but there is a dilemma in which job creation depends on the existence of a skilled workforce. On the other hand, while the North East LEP has no *authority* over skills produced by colleges, it sees an important part of its role as researching supply and demand in the labour market, and disseminating this information to colleges to help them plan their provision. This appears to be a striking example of *nodality* in the information-focused definition of the term.

5. POLICY DISCUSSION

If the UK is to achieve the twin aims of increasing productivity and decreasing inequality, it must address two central problems of place: first, how to tackle inequality *between* regions, especially in terms of the stark regional disparities in productivity; second, how to ensure that devolved institutions have the capacity to improve productivity and inclusivity *within* regions. The government has sought to unite these two issues in the 'levelling up' agenda, but to tackle place-based inequalities using a place-based system, it must look to the current levers and drivers of productivity and inclusivity at the regional level.

This paper has aimed to contribute to that task by considering the drivers of productivity and inclusivity in relation to the policy levers of devolved institutions. The various powers of these three regions have been considered in relation to their place in regional networks (*nodality*), their decision-making powers (*authority*), their budgetary capacity (*treasure*), and their institutional capabilities (*organization*).

There is some variability between the levers of power in the three regions, but, broadly, the picture is one of insufficient *authority*, *treasure*, and *organization*. Even before LEPs were established, Bentley et al. (2010) had predicted that the UK government's re-centralization of economic development functions, and imposition of spending controls, would leave them with insufficient powers and resources to fulfil their functions. Our research indicates that it extends to the other regional bodies which we have studied as none of our cases possess significant formal *authority* or *organization*. Where they are responsible for dispensing funds, this *treasure* is likely to take the form of grants for specific purposes, and in the case of EU funding it has not been within the control of the region and is becoming increasingly centralized.

Overall, it is as *nodality* institutions that all three of our cases are best understood. But although nodality can be a 'home-grown' and relatively informal policy tool, which can be developed by network actors themselves to share and coordinate their more formal resources, it does itself require sufficient resource commitment. The benefits of nodality are not resource-free. Members of networks need to allocate time and attention to network participation: this may explain why some actors, such as smaller businesses, can be excluded. Paradoxically, while nodality can make limited formal resources stretch further, it is when those resources are most limited that, as our interviewees told us, actors may deprioritize network participation to focus on their own immediate concerns. Where nodality arrangements are informal this deprioritization is at a greater risk of occurring in contrast to where they are more formal, such as trades unions, industry bodies, and chambers of commerce in Germany. This is because the formal arrangements, especially the corporatist approach taken in Germany and other European countries, holds partnerships in place during difficult times and forces institutions to find negotiated solutions.

Governance bodies therefore need to be able to invest formal resources in managing the networks through which they exercise their nodality (Connell et al., 2019). Directly, this will often entail having time and people to develop and foster the connections from which networks are built, and to minimize the transaction costs of network participation to members – in NATO terms. This primarily entails a commitment of *organization* and (some) *treasure* which may be relatively small in relation to the gains. Less directly, a governance body's possession of *treasure* and *authority* can provide incentives for other parties to participate in networks, for example by offering opportunities to influence the distribution of funds or the making of binding decisions. Applying a framework such as NATO thus brings into focus the relation between these policy levers, and shows us that collaboration and partnership-working (*nodality*) cannot be an alternative to the other levers, because network governance only works effectively when governance institutions have sufficient powers (*authority*), resources (*treasure*), and institutional capacity (*organization*).

To understand how far these levers are sufficient for tackling inequality between and within regions, this paper has considered how they are used in each place in relation to the main drivers of regional productivity: investment and innovation; transport infrastructure; entrepreneurship and employment; and skills.

Innovation is crucial to productivity, but is currently marked by major regional disparities. Some EU and national investments have attempted to counter this imbalance, but regional levers are very limited. While certain projects are possible, these are circumscribed by national objectives, undermining regional capacity to develop long-term place-based innovation strategies. The institutional focus on *nodality* presents certain advantages in relation to attracting FDI through strategic coupling. However, this is currently undermined by a lack of effective local–centre communication, and limitations in *organization*, which are further indications of the failure to establish a strong place-based system. Providing improved communication channels through which the regions can express their local objectives and to which national policy can respond would enhance organization. Existing attempts to enable this communication through the 'Cities and Local Growth Unit' received mixed responses from our interviewees, and while the new 'regional levelling up directors' represent a positive move, they step into a context of mistrustful central–local relations and will find their capacity stretched. They should therefore be complimented by new forums through which communication can help leverage inward investment. One option would be to fund and provide a more formal role to 'interface institutions' such as the local government associations. Another would be to establish place-based evaluation units, which would conduct economic research and policy evaluation within an area, comprising of both local and national representatives as well as a core research team. Here, the NATO framework highlights that an overreliance on *nodality* in attracting inward investment actually limits its effectiveness; *nodality* is strongest when it is supported by effective *organization* within subnational institutions, which in turn relies on the *treasure* to support internal institutional resources, such as policy evaluation.

Transport infrastructure is the most important sector for place-based policy interventions, both in terms of the prevalence of devolved transport powers and the sector's potential for impacting productivity and inclusivity, via health budgets to encourage active travel, environmental budgets for tackling air pollution, or business development budgets to encourage clustering. However, there are significant differences between the case studies with notable variations in *authority* and *treasure* in response to the specific governance arrangements in the regions. Devolving more transport budgets is crucial, so that places can use transport investment as a productivity lever. However, there is also a need for more cross-regional working, which in turn depends on a move away from complex and competitive governance structures. The key to both is reforming the funding system. The obvious option is wholesale reform to create a stable and transparent funding formula based on local *need*. In the long-term, this is the best way to resolve the place-based productivity problem (Newman et al., 2021; Seaford et al., 2020). However, immediate changes to the existing system are important, notably allowing local institutions more freedom to move funds from one project or sector to another. Where a local institution is spending on one of the four drivers of productivity they should be enabled to combine budgets, grants and funding streams. It is important to emphasize the interplay between *authority* and *treasure* within the

NATO framework, because the problem is not just a lack of funding (though that is a problem), but it is about the form that funding takes and the capacity for differing levels of *authority* depending on how the *treasure* is constituted.

In relation to entrepreneurship, one problem common to all three regions is that their *nodality* links them closely to big local employers. This leads to a focus on larger firms at the expense of SMEs, and especially of start-ups, which are often absent from regional economic policy. Job creation, rather than business creation, is the priority for all three regional institutions and a focus on the quantity rather than the quality of jobs contributes to an emphasis on productivity over inclusivity. The existing balance between high- and low-productivity sectors means that there is considerable variability in the challenges faced, but there is also variability in the powers of regional institutions to intervene. Rebalancing these capabilities through adjusting communication channels (*nodality*), funding streams (*treasure*), devolved policy remits (*authority*), and the institutional capacity to utilize them (*organization)* would provide the potential to achieve improved outcomes. The NATO framework provides theoretical underpinning to the distinction between these key aspects of the subnational governance system, emphasizing the need to activate these capabilities in unison, rather than attempting to enact change through a governance system that is heavily reliant on one (in this case *nodality*) without the others. Policy remits are particularly important here because problems in one policy sector are often best solved by reforms to another. This is most obvious in the role of social policy in the pursuit of entrepreneurship and job quality. For example, increased capacities to organize and deliver more comprehensive child-care or better financial support for stay-at-home parents enable people to increase their contribution to the local economy. Other examples include back-to-work support, preventative health, and stable affordable housing, where policies often linked to welfare or 'wellbeing' have broader economic consequences. Therefore, leveraging the four drivers of productivity, and especially entrepreneurship, depends on cross-sector place-based policymaking that exploits the positive feedback loops between social policy and economic development.

In relation to skills, there is a 'skills mismatch', where existing skills are insufficient to meet business demand, which can contribute to declining productivity and inclusivity. All three regions have partnership models for the governance of skills, using *nodality* as the main mechanism for meeting the skills challenges. However, variations largely depend on regions' *organizational* capacity to utilize their *nodality*, and available *treasure* to establish business support and skills training schemes. The NATO framework usefully uncovers the relationship between these three aspects, but it also ensures that we isolate and emphasize the most important reform needed in the delivery of place-based skills policy: ultimately, the ability to meet the skills challenge is undermined by a lack of *authority* over education and training at the regional level, and by the difficulties of planning and predicting future skills demand. Devolving education and skills decisions to the regions would enable them to better respond to their local contexts, but because some of these powers have been devolved directly to schools and academy chains, it is also necessary to draw powers up. 'Drawing up' powers involves giving governance institutions more powers within their local networks, so that they are able to strategically influence the activities of network participants, rather than just being another participant themselves. It is not primarily about the balance between tiers of government, and does not entail 'unitarization' or the transfer of powers from local authorities to the city region level. One example is to draw powers up from academies and school chains, but others could include powers to favour or restrict certain businesses in key sectors and to take powers from national 'arm's-length bodies'. More generally, the powers of local governance institutions should not just come from existing processes that can be devolved, but also from local policy innovations where institutions are enabled to draw up or establish new powers to enable productivity improvements.

6. CONCLUSIONS

If existing place-based inequalities are to be tackled, the problem of regional governance must be addressed within a wider reorientation towards a place-based system. Using the NATO framework, this paper has considered the current structures of regional governance in the UK in relation to their capacity to drive productivity and improve inclusivity.

Overall, we show that despite differences between the three institutions, they are all primarily '*nodality* institutions', lacking the *authority*, *treasure* and *organization* to make transformative policy interventions in the drivers of productivity. The capacity of *nodality* to drive productivity is undermined by the wider failings of the place-based system. It is also important to recognize that regional solutions cannot be delivered through *nodality* alone.

Governance structure is obviously not the only cause of productivity outcomes. Outcomes also depend on the agency of local leadership and the interaction of contextual factors, including past economic performance, economic geography and local political economy. The slight advantages of the North East's CA model, and the South East Wales region's position within a devolved nation, are both significantly outweighed by the historical economic drivers that give South East England such a significant advantage. However, it is the improvement of governance structures, across all four NATO levers, that is in the gift of national policymakers. These are the tools by which local contexts and local leadership can (to some extent) be affected.

Our research also suggests a direction for further development of the NATO typology. NATO is a parsimonious classification of policy tools which can be applied to any type or level of government. As such, it provides a helpful heuristic framework for policymakers to understand their repertoire and allows comparisons to be drawn across time and place; but in its original form it does not claim to account for qualitative aspects of those tools. However, it is possible to develop the framework more qualitatively. For example, Vabo and Røiseland (2012) explore the degree of coercion involved in the nature and use of each of the NATO categories and show that they can be used in 'hard' and 'soft' ways.

Inspired by this use of NATO in a different context, and by our findings, we could think about the degree of constraint attached to policy tools. For example, if a body acts (as in our cases) as a conduit for funding under strict externally imposed conditions, it still possesses some *treasure*, but less than a body with independent funding powers. We could therefore look to develop the NATO categories along a scale of constraint: thus *treasure* could exist in forms that are high constraint (e.g., administering hypothecated funding under strict imposed conditions), medium constraint (funding hypothecated but with local discretion in setting some conditions), or low constraint (unhypothecated funding) – and so on for *authority* and *organization*.

Our analysis is limited to a snapshot of the performance and operation of three regions of the UK and therefore generalizing the findings to other regions and time periods should be done with an awareness of these limitations. This is especially important given the UK government's 'levelling up agenda', which entails ongoing reforms to place-based leadership to tackle place-based inequality. While this paper has not analysed the levelling up agenda in detail, the findings offer important lessons for those tasked with delivering this mission. While tackling regional inequality depends on effective regional governance and the extent to which actors can work together to overcome governance and funding constraints, the scale of the place-based disparities currently far outweighs the impact of existing levers of change at the regional level. Despite the creativity of regional and place-based institutions and the acknowledged importance of contextual factors, it is the structure of subnational governance that should be the key tool for intervening in regional productivity, and yet, it is currently a major barrier to solving the productivity puzzle.

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