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Place-Based Industrial and Regional Strategy – Levelling the Playing Field

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Abstract

Over the past decade there has been renewed interest in the role of industrial strategy in enhancing innovation, productivity, and competitiveness within and across firms, sectors and regions with an eye to fostering more balanced regional economic growth. This Special Issue explores how policy makers could adopt place-based industrial policy measures to foster regional catch up and a more balanced and cohesive regional growth. In doing so, the papers are a mix of contributions which develop theory, provide evidence and highlight 'state of the art' or good practice that can inform a level playing field fostering regional industrial strategy.

Key words: Place based industrial strategy, regional growth, competitiveness, regions,

JEL Codes: L52, O25, O30, R58

1. Introducing the special issue

Debate on the efficacy or otherwise of Industrial Strategy (IS) goes back to at least [List \(1841\)](#), who argued in favour of a state interventionist approach, targeting and supporting promising sectors and firms. Advocates of IS often distinguish between catching up and forging ahead ([Rosenberg, 1963](#)), and point out that no economy has been able to catch up without such support measures. Many concede that when an economy is at the technological frontier, market forces can play a more important role; they point to the hypocrisy of nations that have reached the said frontier based on public sector support, demanding catching up nations to refrain from doing the same. Opponents of IS highlight the negatives of state intervention, such as policy failures, the financial and redistributing costs of initiatives and market distortions. The phrase ‘lame ducks’ became synonymous in the UK with regards to firms (over)relying upon state support, instead of upping their game to compete ([Bailey & Tomlinson, 2017](#)). Such negative connotations - often alongside a degree of ideological fervour - had by the 1990s turned IS into something of a word of disrepute.

Similar considerations apply to regional policies. [Myrdal \(1957\)](#) and [Kaldor \(1970\)](#) pointed to circular and cumulative causation to explicate why success can breed success arguing in favour of regional policies in lagging regions. Government failure though can be more prevalent than market failure and it can even lead to market failures in both lagging and leading nations and regions: regions may be lagging in part at least, because of such government and other institutional failures. Such concerns also discredited IS ideas too (see [Chang \(2002\)](#), [Pitelis \(1994\)](#)).

However, over the past decade there has been renewed interest in the role of industrial strategy in enhancing innovation, productivity, and competitiveness within and across firms, sectors and regions with an eye to fostering more balanced regional economic growth (and catch-up). Scholars have revisited the role of the state as a potential complementor to markets, and as a public entrepreneur that may ‘crowd in’ private sector investments ([Bailey et al., 2015](#); [Klein et al., 2010](#)). One popular approach emphasises the adoption of place-based industrial strategy, where policy is tailored to local conditions and industrial bases ([Bailey & De Propris, 2019](#); [Bailey et al., 2018](#); [Barca, 2009](#)). In the EU this is manifested in the Smart Specialisation Strategies (S3) approach (see [Barzotto et al., 2019, 2020](#)), while in the UK, local industrial strategies and more recently the ‘levelling up agenda’ have been promoted to reduce the country’s widespread regional imbalances (see [Bailey & Tomlinson, 2021](#)).

Despite the excitement around place-based industrial strategy, several challenges remain. In seeking to foster regional and sectoral advantages by building upon extant ones, and to promote the new technologies aligned with the 4th industrial revolution (‘Industry 4.0’), policy can favour those who already possess strong advantages. This can exacerbate rather than reduce regional inequities. Since the so called Great Financial Crisis (GFC), the EU has experienced more divergence in regional outcomes ([European Union, 2014](#)). There are several reasons for this, but fundamentally leading regions are more likely to host stronger infrastructure, entrepreneurial and business networks and business ecosystems, hence be in a better position to benefit from regional policies – this is akin to the ‘Matthew effect’ (see [Merton, 1968](#))ⁱ. The advent of digital technologies has the potential to further widen regional digital divides, in part because regions better positioned to take advantage of the new opportunities are those which are already more developed ([Bailey & De Propris, 2019](#); [De Propris & Bailey, 2021](#); [Harrison et al., 2020](#)), raising questions about a local system’s ability to transform ([De Propris & Bailey, 2021](#)). Differently put, both in theory and in practice, place based industrial policies (such as S3) may lack the attributes that can help level the playing field and sometimes they may (inadvertently) exacerbate inequalities.

In the above context, the question for national and regional policymakers is how best to foster more balanced and inclusive regional growth. In an interesting turn, the aforementioned challenges raise the possibility that governments can employ horizontal policy instruments in a place-based way that accounts for and aims to reduce regional disparities. In effect, this would imply some form of targeting, albeit in this case not the conventional national champions type, but instead targeting lagging regions, identifying gaps and weaknesses and helping to close these. Such gaps can relate to institutional and agency weaknesses, hard and soft infrastructures, skills and capability gaps, the cohesion of business and social networks, the strength and embeddedness of (local) educational institutions and research bodies, and the extent policy devolution and democratic local governance. These elements form the basis for clusters and business ecosystems, knowledge transfer, innovation system/potential, extant or otherwise. There are several other possibilities, such as re-orientating policy towards supporting general purpose and enabling technologies ([Pitelis & Teece, 2016](#)), promoting social innovation and foundational sectors, and public and social entrepreneurship ([Klein et al., 2010](#)), and enhancing the institutional, physical and soft infrastructure, among others.

This Special Issue addresses some of these issues through a set of fourteen papers that explore how policy makers could adopt place-based industrial policy measures which also foster regional catch up and a more balanced and cohesive regional growth. In doing so, the papers are a mix of contributions which develop theory, provide evidence and highlight 'state of the art' or good practice that can inform a level playing field fostering regional industrial strategy. While the papers draw on case examples from around the globe, several focus on the UK. This is perhaps not surprising, since in the post Brexit era, industrial strategy and place-based policy began to be favoured by UK policymakers, notwithstanding the recent political instability. In this regard, the UK has become an interesting observatory to learn from the design and implementation of regional industrial strategy ([Bailey & Tomlinson, 2017, 2021](#)).

The collection begins with [Beer et al. \(2021, in this issue\)](#) who highlight the critical role of agency and discourse in instigating regional change and transformation. Agents include firms, but also local governments and other stakeholders, who assume place leadership and define and interpret local narratives and discourses around place. Collectively these actors shape visions and expectations and identify opportunities to facilitate new paths (see also [Fai et al., 2022](#)). This process is explored through a synthesised framework combining Grillitsch and Sotarauta's (2020) 'Trinity of Change Agency' with Moolaert et al.' (2016) 'Agency Structure Institutions Discourse'. This is then applied to two Australian case studies. The case analysis highlights the drivers of regional change, but also critically the centrality of discourse in transforming regional paths. The paper concludes by arguing that place-based industrial strategies should recognise the value of agency-based perspectives and the centrality of discourse in regional development.

In a similar vein, [Flanagan et al. \(2022, in this issue\)](#) advocate a more prominent role for placing agency, institutions, and networks at the core of regional industrial strategy, and for the adoption of a more participatory approach. The paper's starting point is a concern that regional industrial policies are often heavily focused on enhancing technological capabilities and ensuing opportunities (e.g., as in the Smart Specialisation approach), but largely ignore societal and collective problems that are regionally based. Consequently, societal challenges – such as those found in foundational sectors (e.g., transport, health, education, energy and social services) rooted in regional economies - are largely overlooked in policy circles. Such sectors can offer fruitful opportunities for social innovation that can have a real and positive impact on regional development paths (see also [Morgan, 2019](#)). To address this policy deficit, [Flanagan et al. \(2022\)](#) unpack (local) problem-framing and discourse, valuation, and market processes, which are shaped by local actors, their interactions (networks) and institutions,

shared values/visions and expectations, They use these to highlight a wider set of ways in which regions can detect and create new market opportunities, within and across territories, based upon their place-specific context, assets and needs. This process is seen as being conducive for the design of a more socially orientated regional industrial strategy that is tailored to addressing the specific challenges of places.

Within any industrial strategy framework, policymakers have a range of policy instruments at their disposal. Critical in this process, however, is the vertical and horizontal policy mix and co-ordination between central and local government to deliver industrial upgrading. One of the key challenges is to co-ordinate vertical policies to ensure the effective dissemination of national standards, yet also allow local governments the autonomy to formulate place-based policies according to their own developmental conditions. This is not always easy to achieve, especially when national directives are poorly understood by local government agencies, which are inhibited by limited resources and managerial capacity. To avoid such tensions and inherent power struggles, a degree of ambidexterity in policymaking is required at both national and local levels (Duncan, 1976). Xiong et.al (2023, in this issue) explore this dilemma in the context of China's 'Made in China 2025' initiative to upgrade Chinese manufacturing, through a bibliometric-based policy analysis of Chinese policy documents and instruments. The authors find China has been relatively successful in co-ordinating a range of policy instruments across different tiers of government and consequently have achieved a degree of ambidexterity in their industrial upgrading process that offers lessons for national-local policy mixes elsewhere.

Care also needs to be taken in policy implementation and policymakers need to be aware of existing and new policy evaluation processes: flexibility, policy-learning and keeping abreast of new methodological approaches are advisable (see [Aranguren et al., 2016](#)). In this spirit, [Day & Merkert \(2021, in this issue\)](#) focus on public procurement. Recent narratives have suggested public procurement can be used to achieve a broader set of policy goals, particularly at a local level (e.g., the Cleveland and Preston models – see Rowe et al. ,2017), a position which conflicts with established neo-classical principles based upon seeking least-cost (sometimes foreign) contractors. Neoclassical economics principles are entrenched in public policy and can influence and sometimes limit the efficacy of state intervention. In seeking to reconcile these two positions, [Day & Merkert \(2021\)](#) offer policymakers a new framework based upon public procurement processes that monetize the significant and overlooked value of domestic investment within advanced manufacturing clusters. By measuring financial impacts inherent within a firm's bid, policymakers would be better able to understand wider industrial value of procurement contracts. The authors argue this more strategic place-based approach is likely to be of particular benefit for lagging regions and would allow scope for public procurement to be more strategically and spatially targeted.

Human capital development is widely regarded as being crucial for regional growth and productivity, yet too often, skills policy is designed and implemented in a centralised, and often a backward looking way with little spatial consideration. This has especially been the case in the UK, which is analysed in the paper by [Corradini et al. \(2022, in this issue\)](#). Indeed, UK skills policy has traditionally been characterised by a perceived dichotomy (and hierarchical ranking) between educational qualifications vis-à-vis vocational training, and a tendency to largely focus on addressing (ex-post) industry specific skills mismatches. Yet, as the authors also note, the lack of a spatial dimension to skills policy has so far received only limited coverage in the regional studies literature, despite the fact skills shortages and local low-skills traps are both real and can exacerbate regional imbalances (see also [McCann \(2020\)](#)). After reviewing recent UK skills policy initiatives, [Corradini et al. \(2022\)](#) call for a new integrated regional skills framework, involving the participation of local stakeholders and based upon

a place-based and horizontal policy approach, where local skills can be nurtured and developed across a range of local (and different) activities. It is envisaged that regional skills policy could then be more strategic and proactive, as part of broader regional industrial strategy approaches, such as S3, which align skills and training with the evolution of local industrial paths, and address anticipated future local skills requirements. Such an approach should foster regional growth, and regional resilience (see [Pike et al., 2010](#)).

Regional infrastructure investments are perhaps the most visible form of industrial policy intervention. These public investments can help to re-invigorate places and ‘crowd in’ private sector investment and activities ([Crafts, 2009](#)). [Vasilakos et al. \(2022, in this issue\)](#) examine the extent to which regional infrastructure investments in Indian regions attract firms, and foster manufacturing output and regional growth. The authors propose that horizontal policies and targeting can be combined if public policy makers target lagging regions and provide horizontal infrastructure support for the region. Employing a Dixit-Stiglitz type model as a baseline, the study finds that alongside skilled labour and the stock of regional fixed capital, place-based regional infrastructure investments in electricity generating capacity and national highways have had a positive impact on the number of manufacturing firms operating in a region, fostering economic activity and performance. The results hold resonance for lagging regions, since they suggest industrial policy might be effective in closing regional gaps in ‘hard’ infrastructure to attract firms and new private investment to stimulate economic activity. The authors propose that a top-bottom-up approach to such horizontal cum vertical (the authors call these ‘horizontal’), policies, that entail the central state deciding on which regions to target based on objective and simple criteria and then the regional public policy makers using the funds for approved infrastructural investments. This helps minimise beggar thy neighbour-type policies by regions.

Another place-based policy instrument that has gained favour in recent years is economic incentive zones (IZs), which include freeports and special economic zones. These are cluster-ecosystem-supporting infrastructure-type policies that seek to attract and support firms and other actors to promote regional growth. As [Arbolino et al. \(2022, in this issue\)](#) note, the nature and characteristics of IZs differ widely, which makes policy evaluation and identifying ‘best practice’ difficult. The authors set out a new methodological approach to evaluate IZ policies that allow for inter-regional comparison. This is based upon constructing a new composite index based upon capturing the core elements of different IZ development plans (within regions) and assessing their long-term impact on regional economies. The authors suggest the methodology could assist policymakers in better aligning IZ policy instruments with the appropriate level and stage of industrialization of the region, while ensuring greater complementarity of IZs with other industrial policy instruments.

The role of universities in regional industrial strategy has also become more prominent, especially with the popularity of Triple Helix type models. These suggest that policy has been geared towards fostering university–industry collaborations, especially over research and ‘priority’ technologies identified in industrial strategy documents ([Dimos et al., 2021](#)). However, as Johnston et al. (2022, in this issue) note in their paper, there has been a tendency in policy directives to assume all universities can contribute to knowledge generation and research in priority technologies (within a place-based framework). At the same time, there is a lack of knowledge among policymakers of the idiosyncratic differences in university third mission activities; not all are research intensive, ‘entrepreneurial’ or ‘engaged’. Using data from the UK Higher Education Business & Community Interaction (HE-BCI) survey, the paper controls for spatial and temporal variations among UK universities, before considering whether their ability to generate knowledge in priority technologies is dependent upon their entrepreneurial or engaged nature, and strategic orientation. The analysis has implications for

understanding the contribution of UK universities to the UK Industrial Strategy in terms of knowledge generation, and for regional growth and the impact on spatial inequalities.

University Spinouts (USOs) have also been at the forefront of recent industrial policy measures to foster local entrepreneurship and growth. These include regional policy support measures for USOs such as incubators, fablabs, technology transfer offices and seed funding. Moreover, as noted by [Rosli & Rossi \(2015\)](#), across several countries, the rate of USO creation is now regarded as a key metric to assess university performance and (local) impact. Yet, a critical issue, especially in lagging regions, is the ability of regions to retain and indeed attract USOs, once they have been created. [Rossi et al. \(2021, in this issue\)](#) empirically examine the regional factors behind USO retention and attraction in the UK. While UK regions have different propensities both to retain and to attract USOs, the analysis suggests USOs are attracted by the benefits of their local university's intangible resources (such as connections/knowledge) – so nurturing strong local university-business links is important. However, in stronger regions with higher localization economies and innovation resources, USO attraction rates are higher, which present a challenge for policymakers seeking to address regional imbalances. The authors conclude by offering several suggestions for regional industrial strategy to be tailored to improve the local ecosystem of lagging regions and ensure they are able to better retain and attract USOs.

Brexit and Covid have led to the emergence of a new UK discourse around industrial policy and regional inequalities which are among the highest in the advanced industrial economies. These regional inequalities were manifested in a 'geography of discontent' where electorates in the UK's 'left behind' places have rejected long-standing political structures (e.g., Brexit) (see [McCann & Ortega-Argilés, 2021](#)). Addressing regional inequalities was therefore deemed a priority by the Johnson government in the UK through its 'levelling up' agenda ([HMG, 2022](#)). However, as [McCann et al. \(2021, in this issue\)](#) argue, the challenges are long standing and deep rooted, and symbiotic of an overly centralized UK policy and governance structure, where there has been a tendency to favour sectoral interests over places. Consequently, there have been successive decades of policy ambiguity, confusion, and contradictions, which have hindered rather than supported regional development (see also [Fai & Tomlinson, 2019](#)). The UK's current policy interest in devolution offers new opportunities, but also poses complex challenges. [McCann et al. \(2021\)](#) unpick the key issues in these debates and offer some considered reflections on how UK regional industrial policy can be most effectively employed in the 'levelling up' agenda.

Aligned to the 'levelling up' agenda is a continued commitment from government to support manufacturing in the UK's traditional industrial regions. As [Sunley et al. \(2021, in this issue\)](#) note, there is a perception among policymakers that advanced manufacturing (AM) is widely dispersed across the country, and hence offers new opportunities – through promoting 'urban innovation districts'- for productivity growth, especially in lagging regions such as the Midlands and Northern England, Scotland and Wales. [Sunley et al. \(2021\)](#) consider this premise, by examining data on the UK geography of AM activities. Contrary to some policymaker perceptions, Sunley et al.'s ([2021](#)) spatial analysis reveals a mixed picture, which is both complex and differentiated in scale and scope across regions and sectors; some traditional industrial regions appear to have lost ground (and capabilities) in AM, while other traditional industrial regions (especially based on AM engineering) have grown. The paper then considers the implications for the execution of industrial policy around clusters and innovation districts, and for addressing regional imbalances.

The landscape for UK industrial strategy and 'levelling up' is particularly challenging given the disruptive impact of Covid-19 and Brexit on supply chains and European Union export markets (see also [Bailey and Tomlinson, 2020](#)). This is especially the case in the Midlands automotive industry,

which may serve as a lesson as to how regions and decentralised regional bodies might anticipate and respond to disruption, caused by socio-political events such as Brexit. The industry and region are the focus of two papers by [Bailey et al. \(2022, in this issue\)](#) and [Qamar et al. \(2022, in this issue\)](#). In this regard, [Bailey et al. \(2022\)](#), draw on new survey data to highlight the vulnerabilities of Midlands automotive firms and capture the extent of their resilience to Brexit induced trade disruption. [Qamar et al. \(2022\)](#) specifically consider the liquidity ratios and hitherto financial resilience of the region's largest automotive firms. Their analysis raises concerns that key flagship Original Equipment Manufacturers are at risk of closure, with potentially major effects on the regional economy (especially given a few large firms account for a disproportionate share of employment and value-added in the region). Both [Bailey et al. \(2022\)](#) and [Qamar et al. \(2022\)](#) argue for a proactive place-based industrial policy to mitigate these adverse impacts. [Bailey et al. \(2022\)](#), for instance, suggest policy ought to embrace new partnerships between regional bodies and business, to promote recovery and possibly reposition the automotive sector in seeking new opportunities.

At the heart of UK industrial strategy initiatives is a preoccupation with improving labour productivity growth, especially in the regions outside London which is regarded as a role-model, based on recorded higher levels of Gross Value Added (GVA) per employee job/hour of work (see also [Harris & Moffat, 2021](#)). Finally in the volume, [Coffey et al. \(2022, in this issue\)](#) question this framing, offering a critique of the GVA-measured productivity metric, and demonstrate how it is shaped by both positive agglomeration effects and negative agglomeration effects (which are largely ignored) that can lead to flawed policy choices. The paper then examines this in the context of the High Speed 2 (HS2) rail network programme, a major public infrastructure project premised on reducing regional productivity differentials by improving connectivity with London, but which has significant costs and has raised environmental concerns. The paper argues for a major rethink on the use and interpretation of productivity metrics, especially in framing industrial policy outcomes which can skew policy decision-making away from the issues that matter to people, and the enrichment of places in which they live (and, as such, undermine the 'levelling up' agenda).

2. Conclusions and new research opportunities

Industrial Strategy and specifically, place-based industrial strategy, have become increasingly more salient. In part, this reflects global challenges such as climate change, geopolitics and wars, immigration flows often related to the above, trade tensions and neo—protectionism, pandemics, increasing market power and distributional inequities and more. All these impact upon global and local value chains and transform the world as we know it. Regional economies especially feel the brunt of these challenges. However, the policy toolkit, resources and/or clarity on the policy approach are not always available to regions to resolve them.

Several of the policy analyses, case studies and policy proposals in this Special Issue do, however, offer some valuable lessons for regions. Institutions, agency, education, skills and capabilities, alongside research and development, firms, universities and innovation, governance and networks are all critical constituents of dynamic regional ecosystems. As the papers in this Special Issue highlight, nurturing and harnessing these components in a fruitful way, often requires carefully tailored place-based industrial strategies.

Finally, more opportunities do exist for further research and policy measures. These may include cross fertilising ideas from strategic management and industrial/regional strategy ([Bailey et al., 2020](#)), and exploring the opportunities provided by 'open team production', alongside alternatives to the hierarchical capitalist firm, such as new cooperatives and hybrids ([Berti & Pitelis, 2022](#)). We hope the papers in this Special Issue will inspire more work on these topical and important issues.

References

- Aranguren, M. J., Magro, E., & Wilson, J. R. (2016). Regional competitiveness policy evaluation as a transformative process: From theory to practice. *Environment and Planning C: Politics and Space*, 35(4), 703-720. doi:<https://doi.org/10.1177/0263774X16662469>
- Arbolino, R., Lantz, T. L., & Napolitano, O. (2022). Assessing the impact of special economic zones on regional growth through a comparison among EU countries. *Regional Studies*, 1-15. doi:10.1080/00343404.2022.2069745
- Bailey, D., Cowling, K., & Tomlinson, P. R. (2015). An industrial strategy for UK cities. In D. Bailey, K. Cowling, & P.R.Tomlinson (Eds.), *New Perspectives on Industrial Policy for a Modern Britain* (pp. 263–286). Oxford: Oxford University Press.
- Bailey, D., & De Propriis, L. (2019). Industry 4.0, regional disparities and transformative industrial policy. In M. Barzotto, C. Corradini, F. M. Fai, S. Labory, & P. R. Tomlinson (Eds.), *Revitalising lagging regions: Smart Specialisation and Industry 4.0* (Vol. 1, pp. 67-78). UK: Taylor & Francis.
- Bailey, D., de Ruyter, A., Hearne, D., & Ortega-Argilés, R. (2022). Shocks, resilience and regional industry policy: Brexit and the automotive sector in two Midlands regions. *Regional Studies*, 1-15. doi:10.1080/00343404.2022.2071421
- Bailey, D., Pitelis, C. N., & Tomlinson, P. R. (2018). A place-based developmental regional industrial strategy for sustainable capture of co-created value. *Cambridge Journal of Economics*, 42(6), 1521-1542. doi:<https://doi.org/10.1093/cje/bey019>
- Bailey, D., Pitelis, C. N., & Tomlinson, P. R. (2020). Strategic management and regional industrial strategy: cross-fertilization to mutual advantage. *Regional Studies*, 54(5), 647-659. doi:10.1080/00343404.2019.1619927
- Bailey, D., & Tomlinson, P. R. (2017). Back to the future? UK industrial policy after the great financial crisis. In P. Arestis & M. Sawyer (Eds.), *Economic Policies since the Financial Crisis* (pp. 221-264). London: Palgrave Macmillan.
- Bailey, D., & Tomlinson, P. (2020). Covid-19, the economy and the West Midlands' recovery: A regional perspective. In J. Mair (Ed.), *The pandemic; where did we go wrong? A very public inquiry* (pp. 154–159). Bite-Sized Books, <https://bite-sizedbooks.com/shop/pandemic-where-did-we-go-wrong/>
- Bailey, D., & Tomlinson, P. R. (2021). Levelling Up: An Industrial Strategy Perspective. *Academy of Social Sciences*. doi:<https://acss.org.uk/levelling-up-an-industrial-strategy-perspective/>
- Barca, F. (2009). *An agenda for a reformed cohesion policy: a place-based approach to meeting European Union challenges and expectations. Independent report prepared at the request of the Commissioner for Regional Policy. D. Hübner*. Brussels: European Communities
- Barzotto, M., Corradini, C., Fai, F., Labory, S., & Tomlinson, P. R. (2019). *Revitalising lagging regions: Smart Specialisation and industry 4.0*. Abingdon: Routledge.
- Barzotto, M., Corradini, C., Fai, F., Labory, S., & Tomlinson, P. R. (2020). Smart specialisation, Industry 4.0 and lagging regions: some directions for policy. *Regional Studies, Regional Science*, 7(1), 318-332. doi:10.1080/21681376.2020.1803124
- Beer, A., Barnes, T., & Horne, S. (2021). Place-based industrial strategy and economic trajectory: Advancing agency-based approaches. *Regional Studies*, 1-14. doi:10.1080/00343404.2021.1947485
- Berti, M., & Pitelis, C. N. (2022). Open Team Production, the New Cooperative Firm, and Hybrid Advantage. *Academy of Management Review*, 47(2), 309-330. doi:<https://doi.org/10.5465/amr.2019.0416>
- Chang, H.-J. (2002). *Kicking Away the Ladder: Development Strategy in Historical Perspective: Policies and Institutions for Economic Development in Historical Perspective*. London: Anthem Press.

- Coffey, D., Thornley, C., & Tomlinson, P. R. (2022). Industrial policy, productivity and place: London as a 'role model' and High Speed 2 (HS2). *Regional Studies*, 1-13. doi:10.1080/00343404.2022.2110226
- Corradini, C., Morris, D., & Vanino, E. (2022). Towards a regional approach for skills policy. *Regional Studies*, 1-12. doi:10.1080/00343404.2022.2031950
- Crafts, N. (2009). Transport Infrastructure Investment: Implications for Growth and Productivity. *Oxford Review of Economic Policy*, 25(3), 327-343. doi:<https://doi.org/10.1093/oxrep/grp021>
- Day, C. J., & Merkert, R. (2021). Unlocking public procurement as a tool for place-based industrial strategy. *Regional Studies*, 1-14. doi:10.1080/00343404.2021.1956682
- De Propriis, L., & Bailey, D. (2021). Pathways of regional transformation and Industry 4.0. *Regional Studies*, 55(10-11), 1617-1629. doi:<https://doi.org/10.1080/00343404.2021.1960962>
- Dimos, C., Fai, F. M., & Tomlinson, P. R. (2021). The attractiveness of university and corporate anchor tenants in the conception of a new cluster. *Regional Studies*, 55(8), 1473-1486. doi:<https://doi.org/10.1080/00343404.2021.1889490>
- Duncan, R. B. (1976). The Ambidextrous Organization: Designing Dual Structures for Innovation. In The Management of Organization Design, Vol. 1. Strategies and Implementation, edited by R. H. Kilmann, L. R. Pondy, D. P. Slevin, 167-188. New York: North-Holland
- European Union. (2014). *Investment for jobs and growth. Promoting development and good governance in EU regions and cities. Sixth report on economic, social and territorial cohesion*. Retrieved from Brussels: http://ec.europa.eu/regional_policy/cohesion_report (Accessed 25 October 2022)
- Fai, F.M & Tomlinson, P.R. (2019) 'Developing a Place-Based Industrial Strategy: the case of England's LEPs', *L'industrie*, 4/2019, p.736-760, <https://doi.org/10.1430/95939>
- Fai, F., Tomlinson, P. R., & Branston, J. R. (2022). Actors, Knowledge and Path Transformations in a Declining Cluster. *European Urban and Regional Studies*, 29(4), 498-514. <https://doi.org/10.1177/09697764221105765>
- Flanagan, K., Uyarra, E., & Wanzenböck, I. (2022). Towards a problem-oriented regional industrial policy: possibilities for public intervention in framing, valuation and market formation. *Regional Studies*, 1-13. doi:10.1080/00343404.2021.2016680
- Grillitsch, M., & Sotarauta, M. (2020). Trinity of change agency, regional development paths and opportunity spaces. *Progress in Human Geography*, 44(4), 704-723. doi:<https://doi.org/10.1177/0309132519853870>
- Harris, R., & Moffat, J. (2021). The geographical dimension of productivity in Great Britain, 2011-18: the sources of the London productivity advantage. *Regional Studies*, 56(10), 1713-1728. doi:<https://doi.org/10.1080/00343404.2021.2004308>
- Harrison, J., Delgado, M., Derudder, B., Anguelovski, I., Montero, S., Bailey, D., & De Propriis, L. (2020). Pushing regional studies beyond its borders. *Regional Studies*, 54(1), 129-139.
- HMG. (2022). Levelling Up the United Kingdom (Department for Levelling Up, Housing and Communities). Retrieved from <https://www.gov.uk/government/publications/levelling-up-the-united-kingdom> (Assessed 25 October 2022)
- Johnston, A., Wells, P., & Woodhouse, D. (2022). Examining the roles of universities in place-based industrial strategy: which characteristics drive knowledge creation in priority technologies? *Regional Studies*, 1-12. doi:10.1080/00343404.2021.1956683
- Kaldor, N. (1970). The Case for Regional Policies. *Scottish Journal of Political Economy*, 17(3), 337-348.
- Klein, P. G., Mahoney, J. T., McGahan, A. M., & Pitelis, C. N. (2010). Toward a theory of public entrepreneurship. *European Management Review*, 7(1), 1-15. doi:<https://doi.org/10.1057/emr.2010.1>
- List, F. (1841). *The National System of Political Economy*. S. S. Lloyd (trans.). London: Longmans (1904).

- McCann, P. (2020). Perceptions of regional inequality and the geography of discontent: Insights from the UK. *Regional Studies*, 54(2), 256-267. doi:<https://doi.org/10.1080/00343404.2019.1619928>
- McCann, P., & Ortega-Argilés, R. (2021). The UK 'geography of discontent': narratives, Brexit and inter-regional 'levelling up'. *Cambridge Journal of Regions, Economy and Society*, 14(3), 545-564. doi:<https://doi.org/10.1093/cjres/rsab017>
- McCann, P., Ortega-Argilés, R., Sevinc, D., & Cepeda-Zorrilla, M. (2021). Rebalancing UK regional and industrial policy post-Brexit and post-Covid-19: lessons learned and priorities for the future. *Regional Studies*, 1-13. doi:10.1080/00343404.2021.1922663
- Merton, R. K. (1968). The Matthew Effect in Science: The reward and communication systems of science are considered. *Science* 159(3810), 56-63. doi:<https://www.science.org/doi/pdf/10.1126/science.159.3810.56>
- Morgan, K. (2019). The future of place-based innovation policy (as if 'lagging regions' really mattered). In M. Barzotto, C. Corradini, F. M. Fai, S. Labory, & P. R. Tomlinson (Eds.), *Regional Studies Policy Impact Books* (Vol. 1, pp. 79-89). UK: Taylor & Francis.
- Moulaert, F., Jessop, B., & Mehmood, A. (2016). Agency, structure, institutions, discourse (ASID) in urban and regional development. *International Journal of Urban Sciences*, 20(2), 167-187. doi:<https://doi.org/10.1080/12265934.2016.1182054>
- Myrdal, G. (1957). *Economic theory and under-developed regions*. London: Duckworth.
- Pike, A., Dawley, S., & Tomaney, J. (2010). Resilience, adaptation and adaptability. *Cambridge Journal of Regions, Economy and Society*, 3, 59-70. doi:doi:10.1093/cjres/rsq001
- Pitelis, C. N. (1994). Industrial Strategy: For Britain, in Europe and the World. *Journal of Economic Studies*, 21(5), 3-92. doi:<https://doi.org/10.1108/01443589410070806>
- Pitelis, C. N., & Teece, D. J. (2016). Dynamic Capabilities, Developmental Industrial Strategy and The Strategic SCA of Nations. Available at SSRN: <https://ssrn.com/abstract=2749110>.
- Qamar, A., Collinson, S., & Green, A. (2022). Covid-19 disruption, resilience and industrial policy: the automotive sector in the West Midlands. *Regional Studies*. doi: 10.1080/00343404.2022.2126449
- Rosenberg, N. (1963). Technological Change in the Machine Tool Industry, 1840-1910. *Journal of Economic History*, 414-443. doi:<http://www.jstor.com/stable/2116207>
- Rosli, A., & Rossi, F. (2015). Assessing the impact of knowledge transfer policies: an international comparison of models and indicators of universities' knowledge transfer performance. In U. Hilpert (Ed.), *Routledge Handbook of Politics and Technology* (pp. 462-478). UK: Taylor & Francis.
- Rossi, F., Baines, N., & Smith, H. L. (2021). Which regional conditions facilitate university spinouts retention and attraction? *Regional Studies*, 1-17. doi:10.1080/00343404.2021.1959909
- Rowe, J., Peredo, A. M., Sullivan, M., & Restakis, J. (2017). Co-operative development, policy, and power in a period of contested neoliberalism: The case of Evergreen Co-operative Corporation in Cleveland, Ohio. *Socialist Studies*, 12(1), 54-77. doi:<http://dc.msvu.ca:8080/xmlui/bitstream/handle/10587/1858/Socialist%20Studies%20-%20Rowe%20et%20al%20-%20Evergreen%20Co-op.pdf?sequence=2&isAllowed=y>
- Sunley, P., Evenhuis, E., Harris, J., Harris, R., Martin, R., & Pike, A. (2021). Renewing industrial regions? Advanced manufacturing and industrial policy in Britain. *Regional Studies*, 1-15. doi:10.1080/00343404.2021.1983163
- Vasilakos, N., Pitelis, A., Horsewood, N. & Pitelis, C (2022). Place-based Public Investment in Regional Infrastructure, The Locational Choice of Firms and Regional Performance: The Case of India *Regional Studies* In-press.
- Xiong, J., Hu, Z., Yan, J., Yuan, Z., & Chakraborty, S (2023). 'The horizontal and vertical coordination of policy mixes for industrial upgrading in China: an ambidexterity perspective', *Regional Studies*, In-press

'For to everyone who has, more will be given, and he will have abundance; but from him who has not, even what he has will be taken away' (Matthew 25:29) (see Merton, 1968).