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A framework for understanding transformation FDI

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Executive Summary

This paper was commissioned by the Office for Investment and the Department for Business and Trade, to aid their developing strategy on how inward investment promotion can contribute to so called levelling up. The purpose of this paper is there to explore the potential for inward investment into the UK to contribute to reducing regional inequality. We present a framework which explores how inward investment can be used to “move the dial” in lagging nations and regions of the UK, not merely offering more of the same in terms of output, productivity and employment opportunities, or alternatively not simply attracting activity that is subsequently rather divorced from the rest of the local economy.

We present a model that is based on the understanding of the interaction between multinational firms and the host economy, but with insights from supply chain analysis, economic geography and analysis of the trade-offs involved in delivering levelling up.

We go on to explore a series of policy prescriptions and interventions, which we outline in detail in the conclusion. In summary however these involve developing:

- A better understanding of the nature of FDI that can really move the regional dial on productivity.
- An understanding of how and why the extent to which FDI can move the dial in productivity may vary between regions of the UK.
- How national and regional efforts concerning investment promotion, skills interventions and business support are required.
- An understanding of the importance of absorptive capacity, and the fostering of local supply chains to maximise productivity spillovers.

Finally, we offer a series of metrics that may be used to evaluate the prospects of a given inward investment project to contribute to levelling up, that cover both the nature of the investment, and the nature of the host economy.

Glossary of terms

In order to explore this further, we therefore define a series of concepts to frame our discussion:

Foreign direct investment (FDI). This is generally understood to be a movement of capital that seeks to own or create income by generating assets overseas. This includes expansion or creation of new business (greenfield FDI) and mergers & acquisitions (M&As). Our discussion here is framed in terms of greenfield FDI, because it is this that introduces new capital, knowledge and demand. That is not to dismiss acquisitions, as they can also be important in fostering business growth, or injecting capital and knowledge into businesses.

Transformational FDI. We explore what we mean by this term in some detail below, but the key point is that it must have the capacity to “move the dial” on productivity for its location, that it needs to be a step change compared with current activity, rather than simply add to existing capacity.

Productivity. Here we are using the term productivity in its generic sense. We simply refer to productivity growth as being the ability of the firm to increase output with the same level of inputs. While in empirical papers productivity is typically measures as labour productivity or total factor productivity, this distinction is not important for our broad discussion.

Firm Specific Assets. This is a term used in the study of FDI, to capture the collective knowledge or technology that a firm possesses which the firm is able to exploit and is not generally available.

1. Introduction – the nature of the problem

The purpose of this note is to explore how the attraction of inward investment can be used as part of the UK's efforts on levelling up. Specifically, we explore the literature on inward investment and economic development, and highlight what lessons this offers for levelling up. Specifically, this requires that inward investment offers a location an opportunity to not do “more of the same” but to move up the value chain and hence improve productivity and earnings. We offer a framework, built on earlier work conducted as part of the Productivity Institute, that explores the mechanism required for FDI to be transformational in this way. We do this by taking a perspective from both national policy on investment promotion and innovation for example, as well as local or regional policy which focuses on skills or sector prioritization, for example. In turn, we offer some analysis of how one may evaluate the prospects of a given investment contributing to levelling up, as well as highlighting areas where further exploration may be needed.

The White Paper “*Levelling Up the United Kingdom*” points out that the medium-term mission of the UK government is to ‘boost productivity, pay, jobs and living standards by growing the private sector, especially in those places where they are lagging’. If one takes such a definition of levelling up into the context of FDI, then this poses a number of questions related to inward investment policy, many of which have been around for at least 30 years.

In order to understand “levelling up” one has to first understand the problem. While it is easy to define “lagging regions” in terms of certain key metrics, these are often taken from labour market indicators – unemployment, earnings or the macro equivalent of GDP per head. These are however symptoms rather than the cause, with the cause being low productivity. There is a famous quote by Paul Krugman that “Productivity isn't everything, but in the long run, it's almost everything.” Krugman's main point is that ultimately, how much more efficient workers of an economy become at producing goods and services can determine how much our living

standards rise from year to year. If higher productivity is the goal, then one must first consider what this is capturing, and what drives productivity. There are many explanations of the causes and consequences of low productivity, explored in a lot of detail in the various [Productivity Institute Insight Papers](#), which we do not intend to go into in detail here. However, for our purposes, we focus on how inward investment, or policies around its attraction, can address low long-term rates of low productivity. For inward investment to be transformational in terms of levelling up, this is the key question.

Policy recommendation: Determine the distinction between the symptoms of a region lagging behind (unemployment, low levels of demand for higher skills, etc.) and the underlying causes (low productivity, low innovation, etc.). The Productivity Institute’s regional analysis can assist with this.

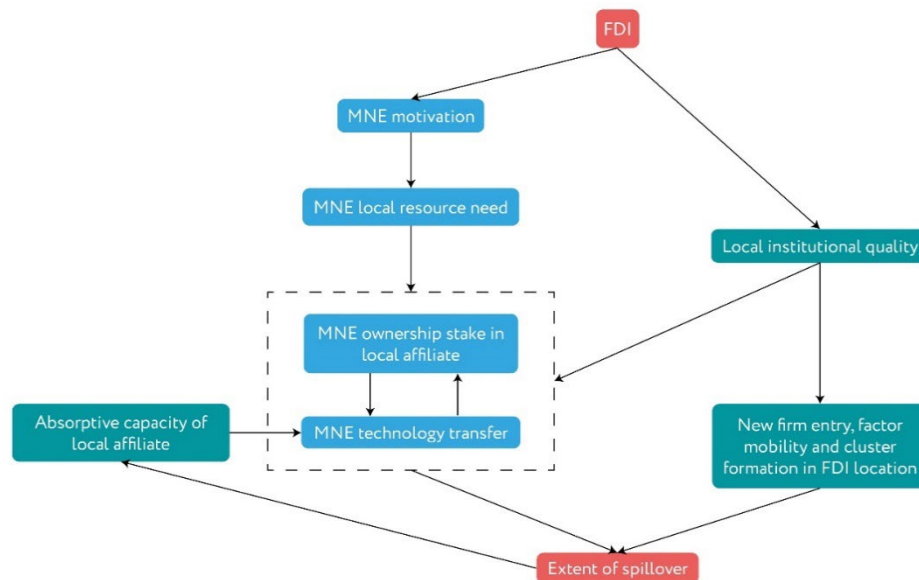
2. [A framework by which one can better inform such decisions](#)

The emphasis needs to be on [attracting or stimulating new investment](#) that otherwise would not happen. Foreign investment is often seen as the “easier option” here, in that it is typically easier to attract new investment in than to stimulate this endogenously from the indigenous sector.

The figure below offers a schematic that demonstrates the mechanisms by which inward investment generates productivity growth through externalities. Along with the direct effects, this puts productivity at the centre of investment decision and, more specifically, helps answer the four questions that were posed above. Firstly, it highlights the relationships between FDI and the drivers of productivity, in terms of ownership structures, for example, and in turn the incentives to engage in knowledge transfer between the parent and the affiliate. The relationships are highlighted in Figure 1 below, which demonstrates the importance of local absorptive capacity, including local university’s capacity in assimilating this knowledge and

facilitating development in the indigenous sector, combined to generate spillovers in productivity.

Figure 1. A conceptual framework



Taken from Bhaumik, S., Driffield, N., Song, M., & Vahter, P. 2018. Spillovers from FDI in emerging market economies. In R. Grosse, & K. Meyer (Eds), *The Oxford Handbook of Management in Emerging Markets*: 399-426. Oxford: Oxford University Press.

Policy recommendation: Understand motive for potential inward investors.

3. Inward investment and productivity

The literature concerning the role that inward investment can play in boosting productivity is discussed in detail by [Driffield et al. \(2021\)](#)ⁱ. There are essentially two mechanisms by which inward investment is assumed to improve productivity (or innovation) in a given location. The first is simply the direct “batting average” effect, that new (foreign) investors are typically more capital and skill intensive, more innovative, and therefore more productive than the average incumbent firms. The second is that the knowledge embedded in the investment somehow is transferred to local firms, either through innovation spillovers, labour mobility, or through formal mechanisms such as buyer-supplier relationships. This builds on a well understood literature that seeks to bring together analysis of FDI motive, local conditions, supply chains

and labour market analysisⁱⁱ. Developing this, it is important to recognise that there is an inherent trade off when seeking to attract investment. Typically, investment in a given location is motivated by one of the two factors: either locations attract investment due to lower costs; or they attract investment because of greater prospects for innovation and, therefore, productivity growth. The challenge with the former is how to ensure that one is not simply involved in a race to the bottom in terms of labour costs. The challenge with the latter is how access to knowledge can be scaled to move beyond blue skies research and into activities that benefit the wider economy, rather than frontier technology that is then exploited elsewhere.

Policy recommendation: Use available interventions to focus on the “quality of FDI” (in terms for example of knowledge and capital intensity, and demand for skilled labour), and its contribution to productivity rather than quantity and contribution to employment.

4. The trade off - The challenge for levelling up

With only a very few exceptions, employment and technological development are generally mutually exclusive – one either has investment that generates a few well-paid high-tech jobs, or one generates larger numbers of more basic jobs. One can think for example of say biotech, and logistics at either end of that continuum.

In common with any area of industrial strategy, there are four fundamental questions regarding the attraction of inward investment:

- Do locations prioritise areas of strength with above average productivity, or seek to catalyse new, potentially high growth areas by leveraging research and frontier technologies? If the former, we might expect place-based innovation policy to encourage more general interactions between businesses and universities – potentially strengthening sites that are

already internationally competitive. If the latter, then the challenges are likely to be around scaling-up nascent activity.

- Do locations seek to crowd in new investment, or seek to nurture investment that is already there? Prioritising new investment is likely to meet the government's short-term objectives for increased direct investment, but well-designed interventions that nurture existing investment could enhance resilience, potentially leading to productivity gains and other innovations over the medium to longer term.
- Do locations put the emphasis on the creation of knowledge, which can be exploited internationally? In the absence of a strategy to boost the supply of skills, this risks the knowledge being exploited elsewhere, but focusing on skills without innovation is unlikely to lead to sustained activity.
- Do locations seek to generate employment by attracting new activities or supporting traditional sectors? If one seeks to build on existing strengths, then the emphasis needs to be on working with existing businesses and addressing the market failure that has hitherto prevented better cooperation between business and research at the local level. The answers here focus on local institutions filling gaps in supply chains, and industrial strategy identifying, for example, missing links in supply chains.

This implies that locations face a trade off when seeking to attract FDI. Do they for example seek FDI that will deliver employment creation (or the protection of jobs) or that will deliver improvement in innovation rates. This is by no means trivial, and at both a local and national level can become subject to the democratic process, both in terms of protecting existing employment, and the trade-off between jobs now, and innovation in the long term. This was, for example, one of the problems that Local Enterprise Partnerships faced.

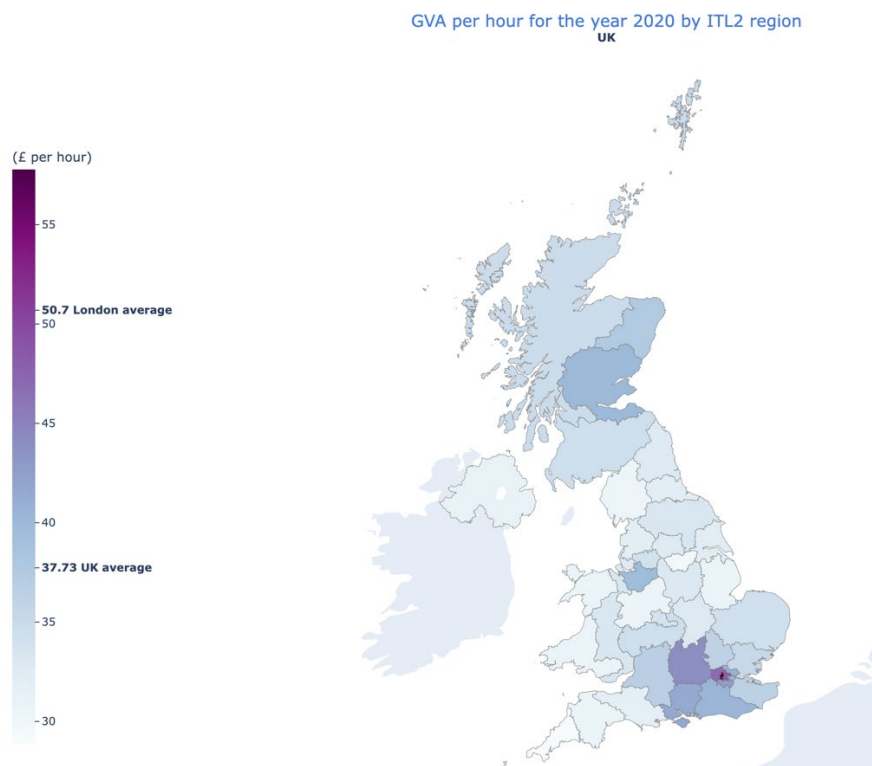
Policy recommendation: Understand this trade-off for all the regions separately and align investment attraction with local economic development strategy.

5. The scale of the problem

The differences in productivity, and therefore in earnings across the [UK regions](#) are startling. Equally, for some thirty years inward investment policy in the UK has been synonymous with industrial and regional policy. This is true both in terms of attracting FDI as part of the wider initiatives for the UK to be at the frontier of certain technologies, but also using FDI as a solution to long term unemployment in these areas still suffering from industrial decline.

For reasons that are well known, the focus of these debates is often concerning productivity, and in particular the direct and indirect gains in productivity that can be acquired by attracting inward investment. This is discussed in detail in a [TPI working paper](#), so we do not go into these debates in detail.

Figure 2. [GVA per hour for the ITL2 UK regions in 2020](#)ⁱⁱⁱ



Notes: UK reference productivity is the weighted average productivity of all the ITL2 regions included in the map. Aggregations based on TPI calculations.

5.1 Within or across regions?

While regional data at this level of aggregation highlights the startling contrast between the South East and the rest of the UK, one can argue that levelling up should also consider inequality within regions. Just as there are high performing areas within the North and Midlands – Solihull in the West Midlands or parts of Cheshire in the North West for example, there are also areas of deprivation within the South East and London. There is far more data available on regional comparisons in the TPI data lab available here: <https://www.productivity.ac.uk/the-productivity-lab/overview-regional-databases/>.

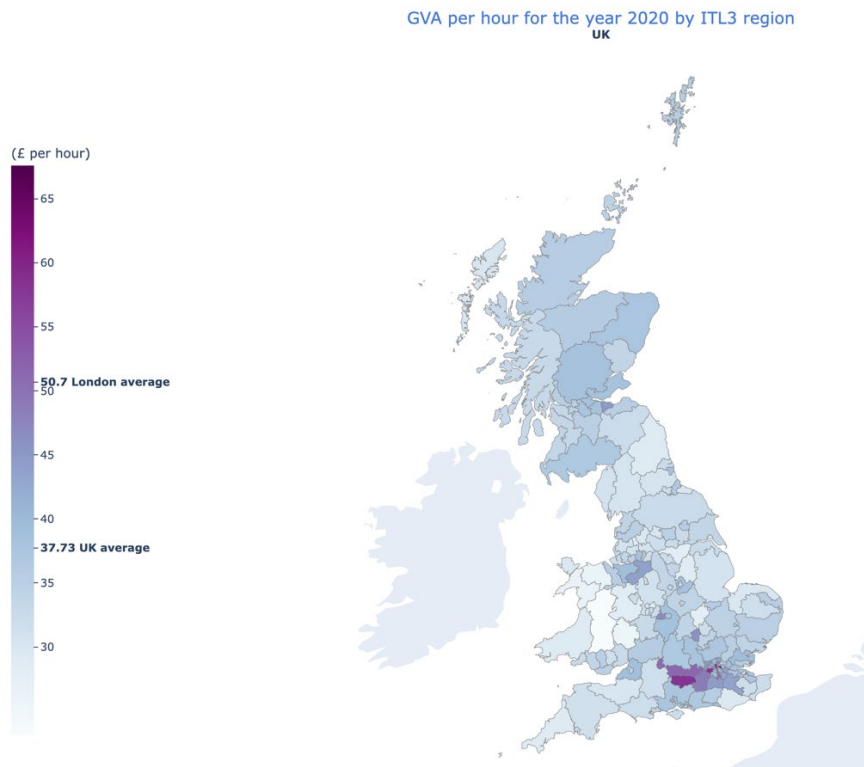
This draws together a number of official (ONS) domestic and international sources of regional variations for the UK. Unsurprisingly, measures based on productivity, earnings, and innovation (as well as exporting) are highly correlated. On earnings however, what is noticeable is the variation that one sees in earnings across relatively small distances.

A key consideration therefore is the most useful level of aggregation, as illustrated by a more disaggregate picture. In general, ITL3 gives a more realistic representation of the scale of the problem, and maps (imperfectly) on to travel to work areas (TTWAs). TTWAs are important constructs in this debate, as they represent the extent to which people can access employment not in their immediate vicinity, and this benefits from new investment.

While it is a generalisation, it is only a slight one to argue that due to (especially public) infrastructure differences, TTWAs tend to be larger in the South than the North and Midlands. It should also however be pointed out that the Mayoral Combined Authorities (MCAs) are generally well served within their own areas, but typically poorly connected. Previous work in this area has highlighted the challenges posed by commuting in the East Midlands for example, or between, for instance, parts of the Liverpool City Region and Greater Manchester, compared with similar distances in the South East. On balance, the importance of labour market conditions to understand the potential benefits of inward investment suggests that there should

be a focus on TTWAs as the unit of analysis, but with the understanding that a crucial element of levelling up is to make these as large and as efficient as possible.

Figure 3. [GVA per hour for the ITL3 UK regions in 2020](#)^{iv}



Notes: UK reference productivity is the weighted average productivity of all the ITL3 regions included in the map. Aggregations based on TPI calculations.

5.2 A two-speed economy?

Places in need of levelling up tend to have low levels of these factor endowments, including skill levels, capital intensity, business start-ups, and investment in R&D and innovation. In addition, however they have lower levels of infrastructure. As a result, potentially the biggest challenge for levelling up, as we discussed in the www.lipsit.ac.uk project, is that the UK is made up of broadly two types of local economies, with two types of equilibria. The first, not solely in London and the South East, but also in richer localities throughout the country, are those locations with high levels of innovation, high levels of skills and therefore higher productivity. Those locations in turn attract more high-tech FDI, as well as more venture capital

for example to support local ecosystems. These map directly onto the earnings differences mentioned above, but obvious examples include the areas around Oxford and Cambridge. While there are many other examples of high-tech clusters, including for example automotive in the West Midlands, or life sciences in Manchester, they tend not to attract the same level of venture capital funding. One challenge is that typically, such locations are already suffering skill shortages, and the biggest single issue with inward investment is that high tech investment increases the demand for skilled labour, which is in the absence of an increase in the supply of skills, increases inequality and the likelihood of a two speed economy (Becker et al., 2020). The second type of location are ones that one may characterise as “low skill equilibria” locations. It is not that they have high levels of inactivity but lower levels of innovation, skills and productivity. As such, the inward investment, while generating employment and being higher value added than many local firms, is attracted to such places because of the resources available, typically less skilled labour, and lower costs in terms of rent, etc.

Thus, in terms of FDI, we see a dichotomy between that FDI which generates employment, but typically in relatively low value activities, and that which brings with it new technology, and employs people in high-tech activities with high wages, but in relatively small numbers. The challenge for policy makers is to ensure that the latter type of FDI becomes embedded in the local economy, uses local supply chains as much as possible including using business support for this to help firms pivot towards new opportunities.

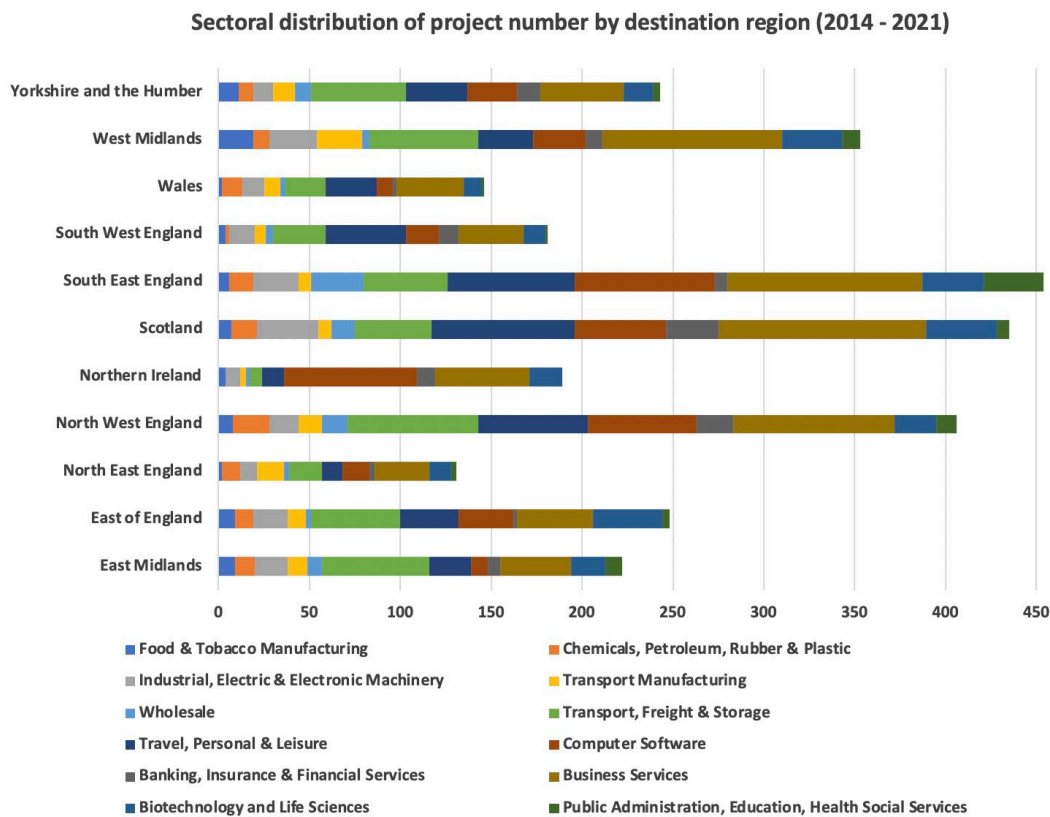
Policy Recommendation Encourage inward investors to become embedded in the local economy, developing local supply chains, and encouraging collaboration on skills development and innovation.

5.3 Spatial differences in productivity

Regarding what this means for inward investment, these spatial differences are discussed in detail in our TPI briefings on the latest trends in FDI^v. For illustration, the distribution of project number of each NUTS1 region according to the primary code of sector classification provided by the data source of Bureau van Dijk (BvD) is displayed in Figure 4, in which 12 top project BvD sectors of inward greenfield investments are selected. Overall, Business Services attracts most of the greenfield FDI, followed by Computer Software, Travel, Personal & Leisure, and Transport, Freight & Storage. This illustrates the bi-modal nature of the relationship between inward investment and productivity, with these sectors being two of the highest, and two of the lowest productivity sectors in the UK.

Fastest-growing industries with relatively high productivity, for example, Biotechnology & Life Sciences, Computer Software, and Business Services, are unequally spread at the subnational level. Undoubtedly, Greater London is the most attractive place for projects related to Business Services, achieving a much greater reach than Scotland, South East England, and West Midlands, whereas Computer Software sector primarily contributes to the investments in Greater London, South East England, and Northern Ireland.

Figure 4. Number of projects of top 12 BvD sectors by NUTS1 destination region, 2014-2021



Source: Orbis Crossborder Investment database and authors' own calculation

Note: South East England does not include Greater London, which is excluded for better focus on the rest of the regions.

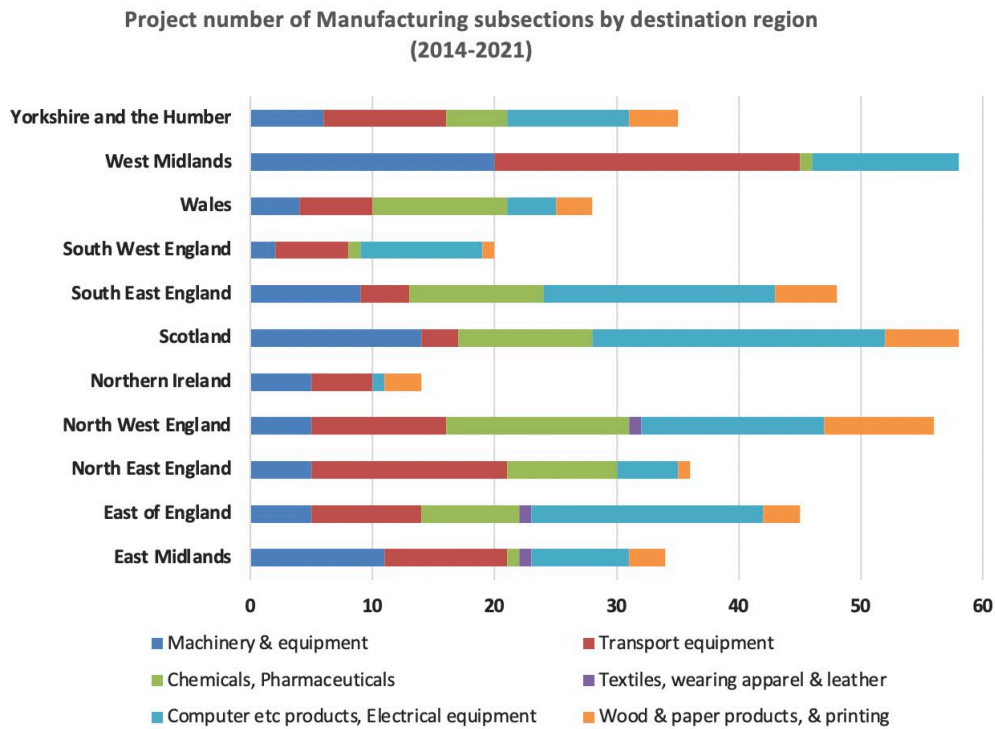
Policy recommendation: Identify the underlying causes of the low skills equilibria and identify the combinations of interventions to address these issues.

6. Inward investment, productivity and levelling up

In order to explore further the link between inward investment and productivity, it is informative we explore the locations of the most productive and least productive FDI.

We use labour productivity^{vi} measured by the indices of output per hour worked^{vii} provided by Office for National Statistics (ONS). We then map the number of greenfield projects for the selected sectors across the UK NUTS1 regions, based on the average of indices for each sector between 2011 and 2020.

Figure 4a. Number of projects of top/bottom three productive Manufacturing subsections by NUTS1 region, 2014-2021



Source: Orbis Crossborder Investment database and authors' own calculation

One can see immediately that the high concentrations of high productivity FDI are closely related to pre-existing strengths. For example, Machinery & equipment, Transport equipment, and Chemicals, Pharmaceuticals are the top three productive sectors. The West Midlands, North West England, North East England, and Scotland outperform the rest of the regions in terms of attracting greenfield projects targeting the top productive sectors. In contrast, the lowest productivity sectors are Textiles and Wood & paper, with Scotland, North West England, with FDI concentrated in Scotland and the North Of England.

Perhaps the most interesting sector for our purposes is the computer and electricals sector, which on average in the UK has low productivity, with high concentrations of assembly operations in low wage areas, and pockets of high tech activity in the South East and East of

England. In many ways this encapsulates the levelling up problem, and illustrates the difficulties in breaking this cycle for policy makers.

At the most basic level, one could argue that typically inward investment strategy is concerned with attracting firms with more proprietary knowledge arising from technology, marketing, brand name, capital, access to financing, process efficiencies, size (economy of scale and scope), and managerial expertise based on the traditional IB literature^{viii}. Such assets in turn will generate not only higher productivity but also higher intensities of productivity spillovers. This then turns on what the region's value proposition is for those investments, and whether these are simply "more of the same" for the region, or a game changer. The key message is that one needs to assess a locations' capacity to attract investments and subsequently to maximise the benefits of such investments, which then focuses on spillovers into the wider economy. While this offers a useful framework, with which we largely agree, current policy, both at the national and local level essentially takes a sector-based approach, with locations focusing on sectors in which they believe they have strengths. We argue that one may need a more nuanced, targeted activity based or even firm level approach, in order to maximise the potential for inward investment to be transformative in terms of productivity and therefore earnings in a location.

Returning to Figure 1, this also highlights the potential for public policy in this area. One could argue that the areas for intervention can be grouped into improving absorptive capacity, or enhancing linkages between inward investors and local firms. The former includes for example policies on skills as well as on support for innovation, start-ups (potentially including venture capital), and, as discussed above, transport to widen TTWAs. The latter includes policies to encourage local content to increase the use of local supply chains, and even encourage local firms to reposition themselves to fill such gaps. One can see therefore that inward investment policy and policies designed to improve the local ecosystem go hand in hand.

Policy recommendation: Improve absorptive capacity at the regional level focusing on inequality of the distribution of both public and private innovation spending.

7. How can inward investment become more transformational?

The levelling up challenge seeks to address the problem of a low skill low productivity equilibrium in certain locations. One can consider this as one of the supply and demand in the labour market. This is the case that on the one hand people become more skilled which allows them to access higher productivity jobs, but at the same time the demand for those skills, in terms of the availability of those jobs, increases (in turn increasing the incentives to attain skills and improve ones' aspirations). It is easy to see therefore how inward investment can play a role in increasing the returns to skills and therefore the incentives to acquire them.

The challenge here has been recognised for as long time, and one has to start with the correct diagnosis. Typically, a lag in economic development at the local or regional level has been associated with higher levels of unemployment, with then the solution being to attract jobs to the location, with the type of investment or the type of jobs being secondary. This has led to what one may call a two-speed economy, with lagging regions attracting investment requiring larger amounts of relatively unskilled labour, but lower levels of new technology (Newman et al., 2023)^{ix}, while the high-tech investment goes to a limited number of locations, which are already suffering from skill shortages (Becker et al., 2020).

However, if one takes such lack of development as being a symptom of low levels of innovation, then one can better understand how to define transformational FDI. We assert therefore that for FDI to be transformational, it needs to do two things – one on the demand side and one on the supply side.

1. Increase the demand for skilled labour in the location
2. Interact with other stakeholders to amplify the opportunities available to local people, or the returns to the individual for acquiring skills

In addition, one needs to think about both the direct effects within the firm and the indirect effects across the sector or across other sectors locally or regionally.

It is important to stress that there is no “bad” FDI here, but to be truly transformational one needs to think in terms of two necessary conditions. Firstly, where FDI introduces new technology which then increases the demand for skills within the firm. Secondly, that this FDI is then linked into the local economy, and in turn positive productivity and labour demand effects ripple out into the local economy.

It is similarly important to stress that there is no simple answer to this, or a “one size fits all” response to this in terms of particular sectors that deliver these effects, but rather a series of considerations regarding the nature of the FDI, and the nature of the host economy. This is discussed in detail in our [TPI “white paper” on FDI and productivity](#).

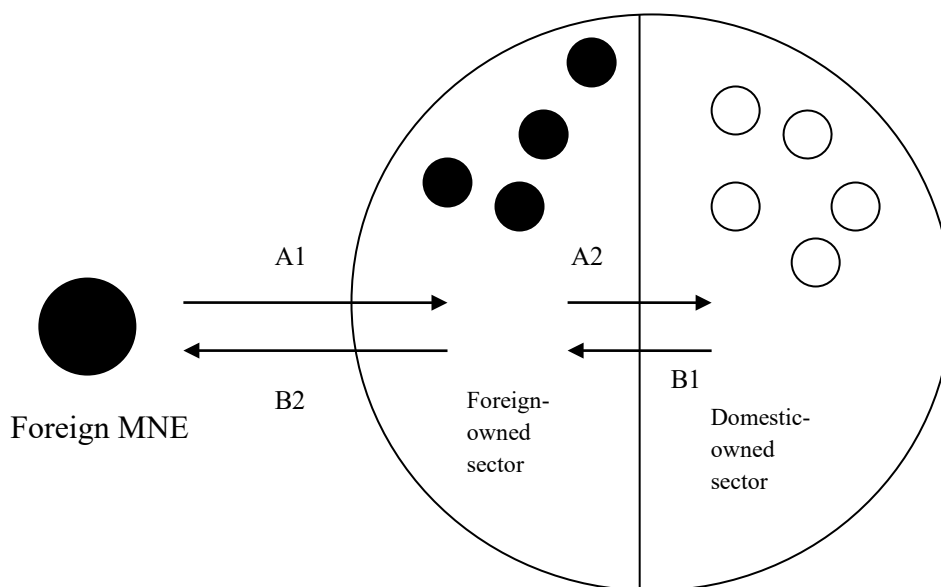
Policy recommendation: For each location, determine the firms or sectors that are most likely to shift the local productivity paradigm.

8. The two necessary conditions for FDI contributing to levelling up

The first is that the inward investment is bringing with it some form of technology or knowledge that is not already present in the given location.

The crucial second process that follows the FDI entry involves some of this knowledge or technology being somehow transferred to local domestic firms through a series of mechanisms.

Figure 5. FDI spillover processes



Source: Adapted from Driffield, Love, and Menghinello, 2010.

If one starts with the premise that firm-specific advantages are inherent in MNEs, then the necessary condition for spillovers to occur is that at least some of MNE's knowledge or technological advantage is transferred into its affiliates abroad, which is A1 in Figure 5. The next condition is that at least some of this knowledge is then transferred into the local sector, whether this is through formal measures such as supplier arrangements, or through informal mechanisms such as spillovers or labour mobility (A2). These processes are discussed in more detail in Driffield and Love (2007)^x. Of course, there is also the possibility that FDI occurs not so much to transfer knowledge into the affiliate, but rather to acquire knowledge from the local environment (the processes labelled B in Figure 5). This is one reason we observe variations in the levels of productivity growth resulting from inward investment.

As mentioned above, knowledge transfer processes may include formal agreements between foreign subsidiaries and local firms. Licensing, training agreements, and technology sharing

along the supply chains are often put in place by inward investors as mechanisms for improving the quality and resilience of their local supply chains.

The creation of supply chain linkages is seen as another important channel through which local firms access the knowledge and technologies that accompany foreign investors. Indeed, a range of studies have suggested that buyer-supplier partnerships involving foreign firms are a mechanism for productivity spillovers and technology diffusion.

There are a number of reasons we may expect these positive effects to vary:

- **FDI motive** – Firms seeking to exploit their new technology in new markets are more likely to engage in international technology transfer between parent and affiliate, and as such they will generate more productivity growth locally. Their spillovers will be greater than those of investors who are seeking to either access technology that is in the host location or find lower cost inputs (Driffield and Love, 2007).
- **Supply chain linkages between inward investors and local firms** – The greater the transactions linkages between the two, the greater the knowledge transfer.
- **Absorptive capacity** – The ability of the domestic sector to assimilate any spillovers
- **Institutions and intellectual property rights protection** – The better these are, the more they encourage international technology transfer by the MNE and innovation in the host economy.
- **Agglomeration and the co-creation of knowledge** - This emphasises, for example, the importance of co-location, with an emphasis on clusters of high-tech sectors.

One interpretation of this is that lagging regions need to attract more high-tech FDI. The problem is that this is easier said than done. One must therefore consider policies to encourage better integration of inward investors into the local economy and to attract firms that have

incentives, for example, to transfer knowledge to their UK affiliates and then embed such knowledge in the local economy.

The existing literature on linkages shows that their scale and scope are a function of both the demand for them from the inward investors, and also the ability of the local economy to supply them. Countries like Malaysia (and to an extent Germany^{xi} and Italy) have sought to link inward investment promotion to local content requirements, something that the UK has never really sought to do, for fear that forcing this may create market distortions and hinder productivity growth. However, as discussed above, if one seeks to upskill the local economy more generally, then suppliers become more competitive, and therefore more likely to obtain contracts. This however typically requires financing. More generally, one needs to consider what the “market failure” is that prevents such linkages, and sometimes it is as simple as information as to what is available. UK inward investment promotion agencies are good at promoting the potential for local supply chains at the point of the investment decision, but as the National Audit Office (NAO) report^{xii} highlights, this is often not joined up to more general efforts on innovation or skills, due to differing speeds of devolution, for example between investment promotion, skills delivery, business support and cluster development for example.

Policy recommendation: Simplify and align national and local investment promotion activities to suit local needs.

9. Existing strengths or new activity?

The location then has two options – to seek to build on existing strengths, and to use inward investment to attempt to move up value chains. There are examples internationally of this, notably South Korea, but also some evidence of this in the [Coventry/Warwickshire](#) region. The case of Korea, and their use of FDI, both inward and outward to move certain key sectors, such as semi-conductors, electronics, or automotive up international value chains, or even to establish their own value chains, is discussed in detail in Buckley et al. (2022)^{xiii}, and also in

Wang et al. (2023)^{xiv}. Here inward investment was initially seen as a source of capital and knowledge, which was then harnessed through local content requirements into the local economy. As the sector developed, low value-added activities were then moved to neighbouring low-cost locations such as Vietnam or Indonesia, with an emphasis on high tech investment at home^{xv}. If one seeks to build on existing strengths, then in order for inward investment to do more than just “more of the same” the emphasis needs to be on moving supply chains up the value chain, working with existing businesses, and addressing the market failure that has hitherto prevented better cooperation between business and research at the local level. In addition, this requires a focus on filling gaps in supply chains and industrial strategy by identifying, for example, the missing links in supply chains. This is why recent debates, such as those concerning giga factories or green technology, become so crucial. One advantage of these initiatives is that they will encourage local policy makers, business, and universities to view investments in green technology not merely as investment opportunities in their own right, but as facilitators of other activities and investment opportunities as new sectors emerge from these collaborations.

The second type of inward investment generates employment in larger numbers, but in more mundane activities. The challenge, and where FDI can be more transformative, is to “upskill” such investment, encouraging this to move up the value chain.

Seeking to develop relationships in new areas will rely on attracting investment both from abroad but also potentially from elsewhere in the UK. It is crucial to understand what the potential investor is seeking and how quickly collaborations between local higher education, further education and the private sector can fill any gaps, particularly skills gaps. This requires an understanding that [education and training is, at least in part, a public good](#), and that sectors as a whole need collaboration rather than competition over skilled labour.

In terms of expressing this trade-off, one can think of this in terms of a two-by-two matrix illustrating the interaction between the firm level FDI factors and the nature of the local economy.

Figure 6 The trade-off between employment growth and productivity growth

	Low absorptive capacity	High absorptive capacity
FDI introduces new knowledge	High tech FDI but not linked to local economy (e.g., R&D facilities outside of the usual locations)	High tech FDI and fosters linkages (e.g., Biotech in pre-existing clusters)
FDI attracted by existing resources	Low additionality – more of the same (e.g., Logistics)	Spillovers limited to tech effects or simple demand effects (e.g., Manufacturing in traditional locations)

Policy recommendation: Identify the optimal combination of transformational / high value FDI into existing strengths and new activities for each region

10. The conditions necessary for transformational FDI

This emphasises that for FDI to be transformative there are three necessary conditions:

1. That the FDI introduces new knowledge, which increases the demand for skilled labour.
2. That the local economy has the capacity to supply such skilled labour.
3. That the local economy has the absorptive capacity to maximise the wider benefits.

Thus, transformative FDI can be thought of as the ideal interaction between the firm level FDI that a region can attract, and the ability to absorb the new knowledge that accompanies it, and to foster linkages.

It is also important however to emphasise that this transformative effect is unlikely to occur in isolation from other policies. One important element is that the investment is also what one

may call “aspirational” which is that people in the location can perceive the benefits to acquiring the skills that are in greater demand. This will involve aligning inward investment with local higher or further education provision for example. Similarly, to maximise these benefits, policy needs to foster linkages, with local investment promotion agencies (IPAs) or “growth companies” fostering relationships between inward investors and local suppliers. Equally, it places the emphasis on larger travel to work areas, such that firms can draw on wider pools of available labour.

One can think therefore of two obvious related interventions to illustrate this point. Firstly, linking devolved skills policy (targeting certain sectors) to local investment promotion strategy. Ideally this would ensure the supply of skills, both in the sectors in which locations are seeking to attract of the investment, and in activities that support those. A second example would be investment in transport infrastructure, to make travel to work areas larger, thus facilitating larger agglomeration economies, and allowing a larger number of people to access the new jobs. This would also facilitate the greening of supply chains, and lower transport costs.

An illustration of the nature of the problem

For illustration, we provide four ‘bubble diagrams’ for the main FDI sectors for four combined authorities. The purpose of these figures is to illustrate the relation between jobs growth and productivity, and the relationship between these two dimensions and FDI. These figures illustrate the relationship at a local level between the growth in value added of a sector and the growth in employment, for 4 selected MCAs. While sectors that provide jobs growth may be welcome in terms of new job creation, if they represent “more of the same” or do not provide additional GVA growth, then the growth of these sectors is unlikely to be transformative. On the other hand, if they generate value added growth without employment growth, then the secondary effects in terms of being a boost to the region is likely to be limited.

In the four figures below, the x axis stands for the growth rate of employment of the sectors, while the y axis represents of the growth of GVA of those sectors, with the size of the bubble denoting the number of jobs created by the investment in a given sector. By presenting the growth in employment against the growth of GVA of the sectors, we can identify the main FDI sectors for the selected LEPs. This indicates the relative importance of such sector to the regional economy, as well as giving an indication of relative performance.

These graphs can help to show the relative importance of the main sectors across the regions. For example, accommodation and food service activities are likely to be more important in the Tees Valley, as are professional, scientific, and technical activities. Overall, Figure 6 shows that the sectors in which the Tees Valley attracts FDI are those which tend to be more unskilled labour intensive, compared with information and communication that attract inward investment in West Yorkshire (in Figure 8) and North of Tyne (in Figure 9).

Clearly this highlights the importance of the accommodation and food service activities for Liverpool City Region in Figure 7, but it also, for example, suggests that inward investment in electricity, gas, steam, and air conditioning supply as well as transportation and storage sectors contribute less to productivity, though of course these sectors provide employment for less skilled workers. Indeed, this illustrates neatly a finding from the academic literature, which is that with only a few exceptions, inward investment contributes to productivity, or it generates significant employment opportunities. It is clear that the accommodation and food service activities in Liverpool City Region does both, and to an extent so do financial and insurance activities, but most of other sectors fall into one category or the other. The Liverpool City Region however illustrates some other interesting examples, including professional services and provision of electricity and gas etc. These sectors have demonstrated a (albeit) modest increase in value added while at the same time showing a reduction in employment. This would suggest that such sectors are becoming more capital intensive and more productive. These

sectors however again highlight the trade-off that the locations face, in that such investments are required to transform a region’s productivity and are likely to be beneficial to the region in the long term, but local policy makers are likely to face pressure to protect jobs. The challenge therefore is to harness these increases in productivity and to foster supply chains for these sectors to ensure a wider distribution of the benefits.

Collectively, the figures presented below highlight the scale of the problem. Many of the sectors in which the regions have been successful in attracting FDI show the growth rate of employment and value added of similar magnitudes. In other words, the FDI that those regions attract offers “more of the same”, which suggests that such investment does not improve average productivity within the locations.

Figure 6. Inward investment across the main sectors in Tees Valley

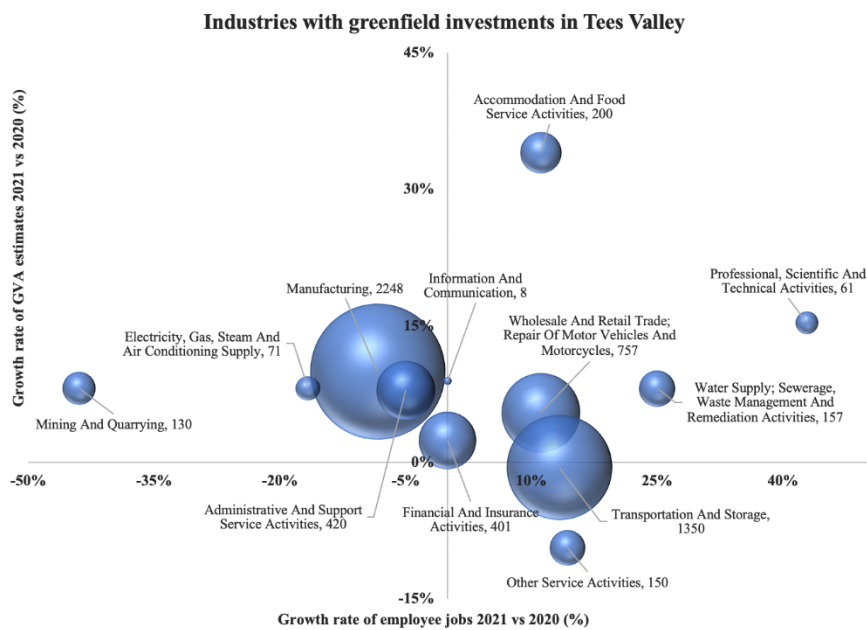


Figure 7. Inward investment across the main sectors in Liverpool City Region

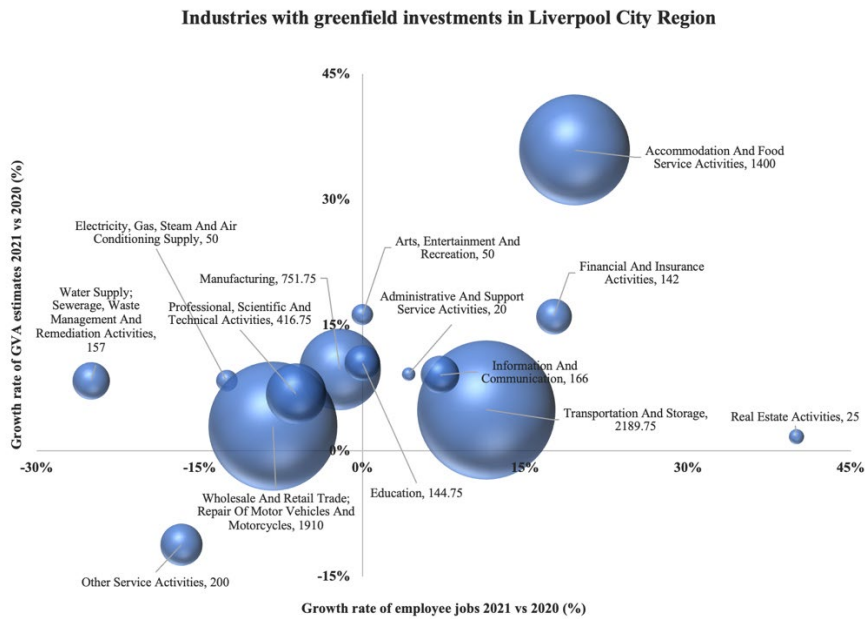


Figure 8. Inward investment across the main sectors in West Yorkshire

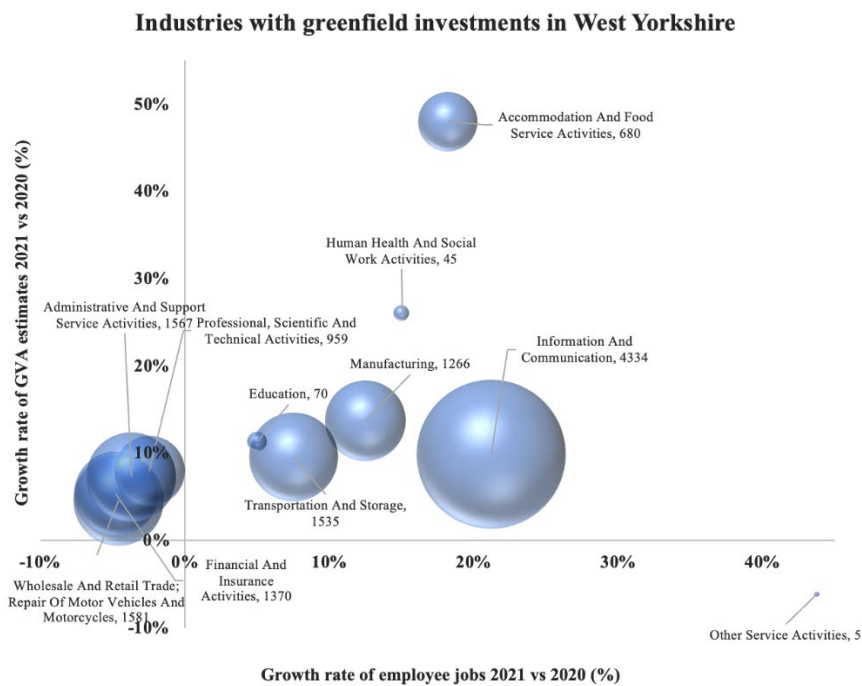
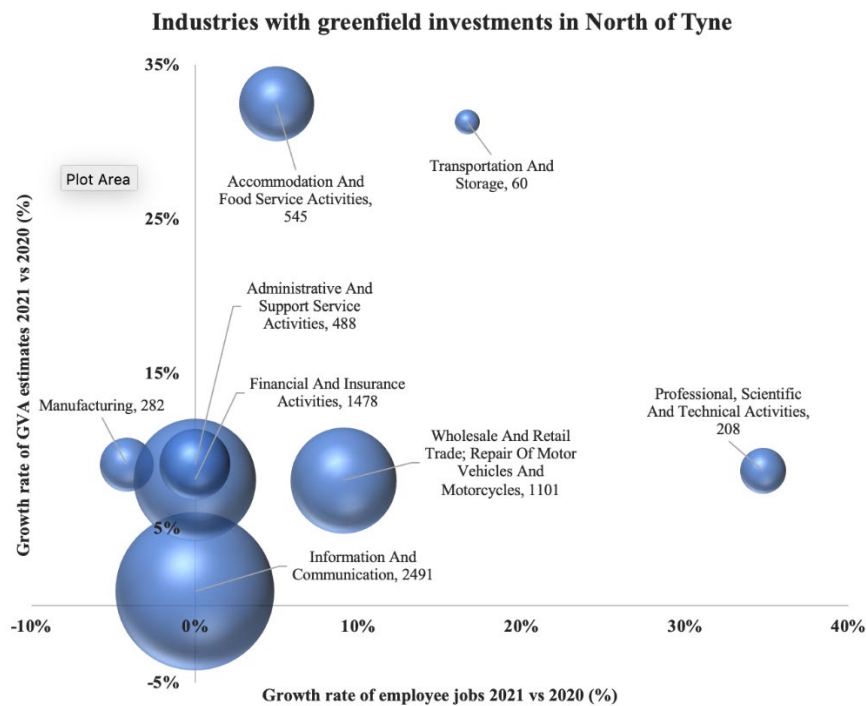


Figure 9. Inward investment across the main sectors in North of Tyne



Policy recommendation: Policy should focus on both each location and region’s capacity to attract investments, and their capacity for linkages of FDI to the local economy.

11. A metric for evaluating levelling up

How does one therefore develop some metrics to evaluate the contribution that FDI makes (or can make) to levelling up? What we would suggest here is a series of both direct and indirect measures, some of which can be applied at the level of the ITL2 or 3 regions.

The first consideration concerns the nature of location of the FDI, and whether the location is below a given threshold for productivity and is therefore a candidate for levelling up.

If not, is the FDI more likely to exacerbate skill shortages if the FDI is located in a high performing location with existing clusters of strength.

Subsequently, one must then consider the extent to which the FDI generates productivity growth directly – that is does value added increase quicker than employment, and on a scale that will be significant for the region overall.

This would include an understanding of both the firm specific assets that may accompany the FDI, and the extent to which these would be further developed locally through innovation, design, etc.

After considering these direct metrics, which are in themselves indicators of levelling up, one can therefore consider for example the likelihood of the FDI generating spillovers, through linkages to the local economy, as well as the absorptive capacity of the local economy. Will the FDI foster skills growth, because of the nature of the labour that is required?

This brings us back to the initial proposition, which is that in order to attract such investment, one has to consider what attracts it, which requires the following considerations:

- Make inward investment promotion part of the wider policies on economic development. For example, the [West Midlands](#) region of the UK has been successful over a considerable period of time in attracting FDI in sectors linked to advanced manufacturing. While one could argue that this is playing to the region's historical strengths, it is more due to an alignment at a local level on support for start-ups, for innovation and for skills to support supply chains in such sectors.
- Inward investment policy cannot exist in isolation from strategies to develop supply chains and boost absorptive capacity. This means that investment promotion must be aligned with local (and national) initiatives on skills, innovation, and productivity. Taking an example from the US, this may mean aligning local investment promotion with the [Inflation Reduction Act](#), with localities seeking to encourage investments in green technology or future mobility solutions. Similarly, the case of [Fintech in Northern](#)

[Ireland](#), as explored in a [report](#) by Driffield and Lavoratori (2020)^{xvi} highlights how a location can link inward investment to more general industrial strategy, identifying an opportunity and seeking to support both inward investment and indigenous sector development. In terms of establishing a value proposition, and maximizing both the attractiveness of a location, as well as the likely spillovers, this suggests the need to focus on sectors that are strong in the region and have a proven competitive advantage. A targeted approach around certain activities or sectors ought to focus on a location's strengths and align the location's value proposition with demand conditions rather than the supply side. An example of this is the work that went into the decision for Goldman Sachs to establish a new global office in Birmingham. West Midlands Growth Company (WMGC) invested significant time and resource to understand their key decision factors that offered commercial and employer brand value, including the West Midlands's strong diversity credentials in Financial Services, and provided empirical evidence setting out what the West Midlands could provide in terms of the prevalence, availability and value of a number of key skills identified initially along with operating costs benefits available.

- This may include considerations of where the region is already export or innovation intensive. One interpretation of this, which is potentially a challenge for investment promotion in countries such as the UK, is that investment promotion needs to focus on the areas of strength.
- This also emphasizes the link between investment promotion and industrial strategy. Investment promotion should therefore be linked with local supply chains. For example, identifying cases where local capacity cannot fill the gaps in supply chains, perhaps due to technological gaps or access to finance, and seeking inward investment (or reshoring) to fill those gaps.

Policy recommendation: Develop and monitor metrics to evaluate the contribution that FDI makes to levelling up. These should focus on regional productivity levels, FDI's likely impact on productivity growth, linkages between FDI and the local economy, and FDI's spillovers through productivity, innovation, skills, salaries, and exporting.

12. The role of investment promotion

Conceptually, an important question is whether there is a role for state intervention here. After all one could argue that the need for levelling up is either the result of market failure, in that firms are making sub-optimal investment decisions (ignoring certain locations) or alternatively locations in need of “levelling up” require intervention to boost their value proposition for investors.

Investment promotion is essentially seen as a solution to information asymmetry that causes market failure, that is to say that there are opportunities for profitable investment that firms, due to imperfect information, are not aware of. This can be considered either at the national level, or at the sub-national level, for example the level of MCAs. In this context, one needs therefore to consider the nature of IPAs as institutions, not merely in terms of how they interpret local industrial strategy for example, but how they overcome such information problems. Similarly, Monaghan et al. (2014)^{xvii} explore the extent to which local institutions can help firms overcome liability of foreignness or outsidership, building on the well-known framework of Johansen and Vahlne (2013)^{xviii}. As Monaghan et al. (2014) note however, the “courting” of a multinational firm requires interaction between a myriad of overlapping national and regional agencies.

A common response to this problem is to view this through the lens of grants. For example, Devereux et al. (2007)^{xix} or Guimaraes et al. (2003)^{xx} demonstrate that investment grants significantly influence the location of FDI. However, while IPAs are often a central mediator

in this process, grants are typically subject to the metagovernance restrictions imposed by the central government (Newman et al., 2023).

One therefore needs to consider the role of IPAs more generally, and their role in policy. For example, Charlton and Davis (2007)^{xxi} find evidence of a positive effect of IPAs on the volume of investments towards specific industries targeted by the agencies in each country, while similar results are reported by Harding and Javorcik (2011)^{xxii}, who assess the impact of national IPAs on FDI inflows in targeted sectors and compare investment flows in each sector before and after a targeting strategy is implemented. This suggests that inward investment promotion needs to be part of the wider policies on economic development and to align this with national efforts on investment promotion. This also implies that investment promotion must be aligned with local (and national) initiatives on skills, innovation, and productivity.

Clearly there is a role for such interventions within the levelling up agenda, with locations better communicating opportunities, and emphasising the links to pre-existing strengths. There are strengths in all regions and in all sectors, with firms well placed to take advantage of the opportunities offered by inward investors, but such firms may not be well known. Supporting such firms to export, either directly or through existing value chains may become integral to making them more visible to inward investors.

There is a similar literature developed at a similar time, see for example Driffield (2004)^{xxiii} which seeks to link productivity effects from FDI to subsidies. In general, this finds that spillovers are lower in what were then termed “assisted areas” than in “non-assisted areas”, though this is in part due to lower levels of absorptive capacity. Overall, one can make a case for inward investment incentives as part of levelling up, in terms of influencing location decisions, though the long-term case must still be strong, and they must be accompanied by business support for local firms and skills interventions.

In terms of informing policy, this literature falls short particularly in providing useful insights for policy formulation regarding what the tipping points (in terms of subsidies crowding in investment) or even elasticities (in terms of returns per pound of spending) are with respect to the beneficial effect of state subsidy on FDI attraction, retention, or gains from it. Rather we propose directing attention towards supply chains, networks, and spillovers, addressing this matter from two perspectives. The first involves identifying local firms locally capable of engaging with inward investment, particularly those which are more productive or innovative, or those which are already exporting. Such firms have the potential to interact with the supply chains fostered by inward investors and are more likely to possess the capacity to pivot to leverage new opportunities. Notably, spatial proximity and co-location also play a role in this context. Castellani et al (2024)^{xxiv} suggest that these two factors contribute to the benefits captured by local domestic suppliers and customers, with this conclusion being particularly true of spillovers from foreign affiliates in the service sector. It highlights the significance of geographic proximity in facilitating exchanges and knowledge sharing between businesses, which can lead to various advantages such as access to specialised skills, innovation, and market insights.

Policy recommendation: Identify domestic businesses who can engage with foreign businesses and support them to gain from FDI through linkages and spillovers.

13. The potential for inward FDI to be transformative

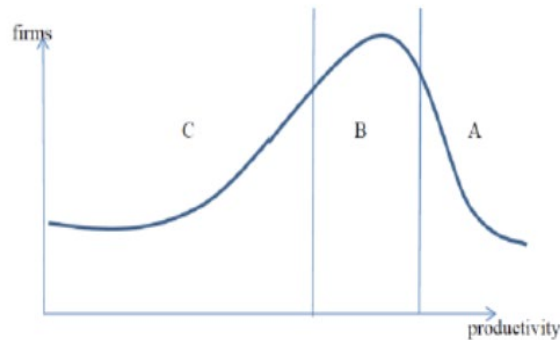
If inward investment is to be transformative then it needs to provide better jobs and deliver better productivity for the people who live in the locations. This cannot just be about delivering more of the same, or merely attracting high productivity activities into the location, that then operate in isolation from the rest of the economy.

We start therefore by considering the nature of the investment and argue that there are 4 key metrics concerning the investment, which are the likely levels of productivity, innovation, skill intensity, and therefore earnings that the inward investment is likely to generate, compared with the prevailing local conditions. There is a case for adding a fifth and arguing that exporting is a distinct objective in its own right. The international trade literature demonstrates that tradeable sectors contribute more to a region's ability to "level up" than non-tradable sectors. However, as exporting is strongly correlated with productivity and innovation (and it is generally seen as an outcome of these two in that more productive and innovative forms are more likely to do exporting), we retain focus on the first four.

Subsequently, evaluation of the potential FDI should consider the likely nature of the interactions with the host economy from two perspectives. Firstly, the interactions with local labour markets – is the investment likely to increase demand for the types of labour for which there is already a local shortage, and secondly what is the nature of expected interactions with existing local firms, through buyer supplier relationships for example. As part of this, one also needs to consider the motive for the investment. Is the investment for example motivated by the desire to exploit firm specific proprietary knowledge in the UK (thus generating the prospect of spillovers), is it focussed on asset or resource acquisition in the UK, or is it focussed on knowledge acquisition? It has long been understood that the first of the scenarios generates the greatest productivity gains.

Building on this, one also has to understand the nature of the local economy and its prospects for growth, and this is in part a function of the types of firms that are present. Driffield et al. (2021) synthesise the literature into the following argument: when thinking about inward investors interacting with such a distribution, one needs to consider that there are three distinct types of firms.

Figure 10. Firm productivity distribution



Type A firms may already be close to the technology frontier, such that their scope for learning from other firms is limited. Type C firms, on the other hand, may have plenty of scope for improvement but they can lack the absorptive capacity or resources (such as skilled labour or access to finance) to facilitate the growth through spillovers. Type B firms, that is to say those at some distance from the frontier but with the capacity to develop, may be best placed to gain from FDI. Often such firms are those that are performing above average but in medium or even low-tech sectors. Thus, transformative FDI must have the scope to engage with such firms, and to improve their productivity and innovation (and in turn earnings). Focusing on skills, this also means considering labour mobility, and whether skills are transferrable between sectors.

In turn, one can consider whether the dominant sectors in a region are those where the region is already linked to frontier technology, for example through exporting (or even importing) and participation in global value chains. Equally, one should also consider the scope for the location being able to “move up” these value chains in terms of producing higher value products or services.

Policy recommendation: consider the use of inward investment incentives to influence foreign businesses' location decisions, but only where the long-term case for investment is strong, and accompanied by the support for local firms and skills interventions.

Understanding the time scales of the benefits

The timescales here are not short. Most estimates suggest that it is as many as three years between the decision to invest in a location and the direct benefits starting to become apparent. The indirect benefits, in terms of spillovers for example may take two more years. This is of course contingent on the efforts put in place to maximise these benefits, encouraging for example start-ups. One policy focus should therefore be how to shorten the duration of these positive effects. The trade off discussed above, which may involve moving the focus away from job creation, may be unpopular at local levels. Attention should therefore be given to the speed of the likely beneficial effects as well as maximising their overall magnitude. In addition, one should consider the timescale of labour market interventions, particularly skills delivery. Often local agencies (formerly LEPS but also Chambers of Commerce and other firm led organisations as well as local skills providers) know of skills shortages well in advance of national intelligence. This implies that devolution of skills speeds up the extent to which local labour markets can respond to inward investment in a way that improves local productivity. One could make similar points regarding innovation policy, and the targeting of support for innovation.

Policy recommendation: Collaboration between HMG and local partners to develop and coordinate a series of local investment promotion strategies, to attract transformational FDI which either: a) builds on regions' genuine existing strengths; or b) moves up value chains. It should identify areas where local capacity cannot fill the gaps in supply chains, perhaps due to technological gaps or access to finance, and then seek inward investment to fill those gaps.

Policy recommendations and conclusions

In order for FDI to be transformational in terms of levelling up, one has, in the case of lagging regions, to break the low skill low productivity equilibrium. While the attraction of inward investment can be part of this, in terms for example of attracting firms that require both advanced and intermediate skills, both directly and through supply chains and “back office” functions. This however has to be linked to improving the “absorptive capacity” in host location, supporting innovation and skills development and facilitating linkages to inward investors. However, one needs to see this as part of the challenge of improving the locations value proposition, and FDI attraction in isolation is unlikely to have the desired effect.

For FDI to be transformational, there are therefore a series of necessary conditions – the FDI must be:

- Of higher value activity than the average for the location.
- Have the capacity for generating linkages to other supporting sectors locally.
- Consistent with local labour markets and skills policy in terms of providing both better jobs in the short term and opportunities in the medium term.
- Build on existing strengths, but in a way that allows such strengths to pivot or transition – for example transitioning from technology around the internal combustion engine into clean technology.
- Facilitate or encourage collaboration between regions – for example where supply chains cross North East and Scotland or East/West Midlands.
- Linked to national policy around innovation and skills, for example in the attraction of giga factories, maximising the benefits of other policies and investments, such as catapults, innovation accelerators or investment zones.

- Finally, it should be aspirational – providing motivation for young people, in terms of being seen as offering good work and prospects into the future.

In order to deliver this, we offer the following recommendations:

1. To promote levelling up, HMG should give priority to attracting transformational FDI, which meets the following criteria:
 - a. FDI introduces new knowledge, which increases the demand for skilled labour.
 - b. The local economy has the capacity to supply this type of skilled labour.
 - c. The local economy has the absorptive capacity to maximise the benefits brought by FDI.
2. To maximise the impact of transformational FDI, HMG policy should focus both on the ability of each location and region in terms of attracting investment and on the linkages between FDI and the local economy.
3. HMG should improve the regions' provisions for inward investors, linking UK IPAs' investment promotion strategy, investor feedback, and national and local/delegated innovation and skills policy. They should also facilitate collaboration between local higher education, further education, and the national private sector to fill local skills gaps, including through labour mobility between different sectors.
4. To increase the impact of transformational FDI, HMG need to improve infrastructure to expand Travel to Work Areas (TTWAs), particularly in the North and Midlands. This can improve access to employment for local workers, expand the pool of labour available to overseas companies, and facilitate greater agglomeration economies.

5. HMG should facilitate links between inward investors and local businesses, by a) increasing connections, promoting relationships with local suppliers, and making use of local supply chains; b) supporting local businesses to reposition themselves to fill supply chain gaps.
6. HMG should identify domestic businesses that can engage with foreign businesses and help them benefit from FDI through linkages, spin-offs, and labour mobility. For example, identify and support productive companies in the sectors that align with the supply chains of FDI companies, or help these companies internationalise, through exporting, cross-border joint ventures or other forms of FDI, to make them more visible to foreign investors.
7. HMG may also work with local partners to develop and co-ordinate a range of local investment promotion strategies to attract transformational FDI that: a) builds on existing strengths of the regions; or b) facilitates the region to move up value chains. It should identify areas where local capabilities cannot fill gaps in the supply chains, perhaps due to technology gaps or access to finance, and then seek inward investment to fill these gaps.
8. HMG should develop and monitor metrics to assess the contribution of FDI to levelling up. These indicators should focus on regional productivity levels, the likely impact of FDI on productivity growth, the links between FDI and the local economy, and the impact of FDI on productivity, innovation, skills, wages, and exports.
9. HMG should consider the use of investment incentives to influence the location decisions of foreign companies, but only where the case for long-term investment is strong and is accompanied by the support for local businesses and skills interventions.

Further research

It should be stressed that what is proposed here is not easy, and also indicates where further research is required. While the paper has set out a framework with which one can evaluate the likelihood of a given investment contributing to levelling up, it is also important to recognise that there are areas where we may need better evidence to consider policy trade-offs, or to understand the nature of the relationships between inward investment and levelling up, especially in terms of mediating effects. These include:

- The relative importance of local firm level effects (absorptive capacity) over sectoral level effects
- The relative efficacy of different forms of interventions
- How to foster linkages and the role that local policy can play
- How to better link to local labour market interventions
- How to better make use of interventions such as catapults and innovation accelerators
- The trade-off between exclusive and inclusive growth (prioritising productivity or employment)
- The role of local institutions in providing governance for this

At its heart, this outlines an agenda for aligning the understanding of lagging regions with firm level analysis on FDI motivation and the nature of firm specific knowledge in driving this. As such, it combines the understanding of regional development policy and practice, with firm level strategy, as the only way to recognise how to deliver a transformational inward investment promotion strategy.

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- ⁱ Driffield, N., Lavoratori, K., & Temouri, Y. (2021). Inward investment and UK productivity. Available at: <https://www.productivity.ac.uk/research/inward-investment-and-uk-productivity/>
- ⁱⁱ See for example: Driffield, N., & Love, J. (2007). Linking FDI motivation and host economy productivity effects: conceptual and empirical analysis. *Journal of International Business Studies*, 38(2): 460-473.
- Driffield, N. Love, J., & Taylor, K (2009). Productivity and Labour Demand Effects of Inward and Outward FDI on UK Industry. *Manchester School*, 77(2): 171-203.
- Becker, B., Driffield, N., Lancheros, S., & Love, J. (2020). FDI in hot labour markets: the implications of the war for talent. *Journal of International Business Policy*, 3, 107-133.
- ⁱⁱⁱ To illustrate, we present the regional variation in ITL2 productivity levels relative to the national UK ITL2 productivity level average, measured as gross value added per hour worked. This figure shows the regional heterogeneity in productivity levels relative to the UK's ITL2 regional average for the whole country (£37.73, based on ONS 2022) in 2020.
- For more about the latest UK sub-national statistical productivity data, please refer to The Productivity Lab (<https://www.productivity.ac.uk/the-productivity-lab/>)
- ^{iv} More detailed regional information at the ITL3 level is shown in Figure 3 to delve deeper into the relative productivity performance within sub-regions in the UK.
- ^v For more information, please refer to: <https://www.productivity.ac.uk/research/the-uks-foreign-investment-position-post-brexite-and-covid-briefing-2/>
- ^{vi} For more information, details can be found via: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/labourproductivity/datasets/labourproductivitytables110and1>
- ^{vii} Mean value of output per hour worked is calculated by computing the average of the indices between 2011-2020.
- ^{viii} Typically, the FDI literature groups these concepts together and refers to them as “Firm Specific Assets”.
- ^{ix} Newman, J., Collinson, S., Driffield, N., Gilbert, N., & Hoole, C. (2023). Mechanisms of metagovernance as structural challenges to levelling up in England. *Regional Studies*, 58(4): 876-892.
- ^x Driffield, N., & Love, J. (2007). Linking FDI motivation and host economy productivity effects: conceptual and empirical analysis. *Journal of international business studies*, 38: 460-473.
- ^{xi} See for example Driffield, N., & Temouri, Y. (2014). Inward investment and the Drivers of Post Recession Recovery in Germany. *The Journal of Economics and Statistics*, 234(6): 775-799.
- ^{xii} For more information, please refer to: <https://www.nao.org.uk/reports/supporting-investment-into-the-uk/>
Also see: <https://committees.parliament.uk/committee/367/international-trade-committee/news/157682/government-needs-proper-plan-to-level-up-foreign-investment-across-uk/>
- ^{xiii} Buckley, P., Driffield, N., & Kim, J. (2022). The Role of Outward FDI in Creating Korean Global Factories. *Management International Review*, 62: 27-52.
- ^{xiv} Wang, E., Driffield, N., Clegg, J., Miles, L., Alford, M., & Kim, J. (2023). What does it take to build an inclusive governance of global value chains? A framework for intervention. *AIB insights*, 23(2): 1-6.
- ^{xv} One could argue that Germany adopted a similar strategy, engaging in FDI to countries such as Poland and Turkey, though of course Germany essentially acquired a relatively low wage area of its own at re-integration.
- ^{xvi} Driffield, N., & Lavoratori, K. (2020) Spillovers from inward investment – a comparison of Northern Ireland with the rest of the UK. Report for Department for the Economy, Northern Ireland. Available at <https://www.economy-ni.gov.uk/publications/spillovers-inward-investment-comparison-northern-ireland-rest-uk>
- ^{xvii} Monaghan, S., Gunnigle, P., & Lavelle, J. (2014). “Courting the multinational”: Subnational institutional capacity and foreign market insidership. *Journal of International Business Studies*, 45: 131-150.
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^{xxiii} Driffield, N. (2004). Regional policy and spillovers from FDI in the UK. *The Annals of Regional Science*, 38: 579-594.

^{xxiv} Castellani, D., Driffield, N. & Lavoratori, K. (2024). The source of heterogeneous externalities: evidence from foreign multinationals in the UK. *Regional Studies*, 1-16.