



# Regional Productivity Differences, Skills and Inclusive Growth: Survey Findings.

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**Chloe Billing, Magda Cepeda Zorrilla, Simon Collinson, Anne Green, Fengjie Pan**

## 1. Introduction

Different levels of productivity and per-head GVA (Gross Value Added) are at the centre of growing regional disparities in the UK. GVA per head in the Midlands is one of the lowest in the UK, related to higher than national average unemployment and lower than average skills levels and investment in the region. In the West Midlands Combined Authority, GVA per head is £23,903, below the UK average of £27,555 - leading to a £15.1bn output gap. This partly creates inequalities of opportunity and investment and increasing differences in the ability of the region to attract, develop and sustain businesses that create sufficient wealth to balance the costs of supporting the region. The lag in regional and local productivity is because of a combination of factors, including a shortage of skills, local industry structures, levels of investment and management practices.

Our project is examining the West Midlands region, working with both businesses and policy makers to identify the factors constraining productivity in different industry sectors, linking this to macro-economic data at the regional and national levels. It is investigating how skills and regional labour markets act as productivity constraints at the firm level, across different corporate functions and different industry sectors (including Advanced Manufacturing, Business, Professional and Financial Services, Retail and Hospitality). This involves examining the specific misalignments at the regional level between the supply of and demand for particular kinds of labour skills and ways in which this constrains productivity improvement at the firm level.

Increasing productivity remains a direct method of increasing wages, particularly for middle-income workers. However, there is also a relationship between employment growth and lower productivity. Additionally, there is no guarantee that gains from productivity will be evenly distributed across regional and national economies. Therefore, we are also exploring the key trade-offs between productivity improvements and inclusive growth goals and whether it is possible to achieve both.



## 1.1 Productivity Definition

Productivity is a critical determinant of national and regional living standards. At its simplest, the UK economy is a system that converts inputs (labour and capital) into the output of goods and services. Productivity measures this rate of conversion in multiple ways, with variations depending on the context (Belt, 2019). One main measure is multi-factor or total factor productivity, which is concerned with how productively combined inputs (i.e. capital, labour, and other factors) generate gross output. Another measure is labour productivity (measured by GVA), which shows how productively labour generates output or value-added, while capital productivity relates to how productively capital is used.

There are two main sets of related debates around productivity and policy in the UK. The first concerns productivity stagnation since the Global Financial Crisis. This stagnation in productivity over the period since 2008 contrasts with the way in which productivity rebounded after previous recessions in the early 1980s and early 1990s. This stagnation or 'flat-lining' is referred to as the "productivity puzzle". The second debate focuses on the longer-term development of productivity in the UK vis-à-vis other comparable competitor countries. Various reasons have been forwarded to explain the UK's relatively weak productivity performance. These include the scarring of the Global Financial Crisis, which damaged economic potential and productivity growth; a slowdown in investment (so reducing the capital: labour ratio; monetary policy and bank forbearance) slowing down a natural process of 'creative destruction'; the slowing of innovation and the diffusion of innovation; and inaccuracies in measurement. Nevertheless, a full explanation remains incomplete. For example, there are questions over to what extent the decline in productivity levels is associated with specific sectors. Our project explores how regional labour markets – especially skills - act as productivity constraints across different functions and industry sectors.

## 1.2 Skills and Productivity

Skills refer to both cognitive and non-cognitive abilities. Cognitive or 'technical' skills concern the ability to understand complex ideas and effectively adapt to an environment, they are specific to a particular job, occupation or sector. Non-cognitive skills are characterised by social, emotional and behavioural attributes and determine work habits and verbal/non-verbal communication. In exploring the links between skills and productivity, our project started from the understanding that an investment in skills is likely to have a positive effect on productivity levels and economic performance, as shown by the very extensive academic and policy literature (Abreu, 2018).

On the other hand, genuine skill constraints can negatively affect labour productivity and hamper the ability to innovate and adopt technological developments. Previous analysis of UK skills constraints highlights that aggregate measures of human capital like educational attainment have not slowed down, but the skills mismatch has increased (Goldin et al, 2018). A skill mismatch is "a discrepancy between skills that job seekers have and the skills that employers need" (Department for Education, 2018). Evidence suggests that in recent years the UK has faced persistent skill mismatches. In 2017, UK employers struggled to fill 23% of vacancies due to a lack of skills, qualifications or experience among applicants (Nesta, 2019). Despite the importance of this issue, there is a lack of timely and detailed information on skill mismatches in the UK. Our project helps address this gap.



### 1.3 Productivity and Embeddedness

Any firm with most of its assets, employees, sales and suppliers in one region is highly dependent on the economic endowments of that region. For example, local skill shortages, transport bottlenecks, or a downturn in demand will have a higher impact on its ability to improve productivity and grow, because it has fewer operations located elsewhere to benefit from better conditions in other regions. This high dependency is characteristic of many small firms. Larger firms usually span regions and often countries and are able to combine the best inputs and market conditions to optimise productivity and competitiveness. JLR in the West Midlands is unusual in this respect; it is highly concentrated in the region, with significant implications for policy.

From a regional policymaker’s viewpoint any attempt to boost productivity should consider a focus on those firms that are highly embedded in and dependent on the region. This ensures that the contributing factors limiting firm-level productivity are predominantly local and can be influenced by a regional policy body. It also means that any resulting productivity improvements will have a larger impact on regional productivity and growth through the related multiplier effects. Therefore, our project also looks closely at the degree to which the firms across our four sectors are regionally embedded.

## 2. Survey

This first phase of our research was to survey 300 firms in the West Midlands region, across the business professional and financial services; advanced manufacturing; retail; and hospitality sectors. The survey involved a 25-minute telephone interview, undertaken on behalf of the project team by IFF Research. The respondents were high-ranking individuals (c-level) with an overview of HR. The company sizes ranges from 10 employees plus to 200 plus, with quotas interviewed across three size brackets: ‘10-49’, ‘50-199’ and ‘200+’. The broad topics we covered in the survey were: (1) firmographics; (2) occupational structure; (3) productivity indicators; (4) skills – current structure, current constraints; (5) innovation; and (6) local embeddedness.

### 2.1 Productivity Indicators for our four sectors

<u>Business, Professional and Financial Services (BPFS)</u>	<ul style="list-style-type: none"> <li>• £24.5bn of the West Midlands Combined Authority (WMCA) region’s GVA is attributed to the BPFS sector, which accounts for 28.2% of the whole economy. This makes it the largest sector in the WMCA area.</li> <li>• There are 406,000 jobs attributed to BPFS in the WMCA area (20% of overall employment).</li> <li>• Since 2010, Jobs in BPFS has grown 25% in the WMCA, higher than the 16% growth for the sector in the UK overall.</li> </ul>
<u>Advanced Manufacturing</u>	<ul style="list-style-type: none"> <li>• £12.1bn of the WMC’s GVA is attributed to Advanced Manufacturing, which accounts for 14.1% of the region’s economy.</li> <li>• Advanced manufacturing is the second largest sector behind BPFS, accounting for 209,000 jobs and 10.5% of overall employment.</li> <li>• Since 2010, GVA in Advanced Manufacturing has grown over 30% in the WMCA, far higher than the 5% growth for the sector in the UK overall.</li> </ul>



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<u>Retail and Hospitality</u>	<ul style="list-style-type: none"> <li>• Retail is identified as an ‘enabling sector’ for the West Midlands Combined Authority - Contributing 11.1bn in GVA.</li> <li>• £3.5bn GVA attributed to tourism in the WMCA, with a 2030 ambition of £6.0bn.</li> <li>• There are 163,000 jobs in the sector locally.</li> </ul>

Source: WMCA Industrial Strategy Sector Pack, 2019

### 3. Preliminary Survey Findings

#### 3.1 ‘What do you understand productivity to mean?’

Recent research (for example, Green et al., 2018; Roper et al., 2019) has highlighted a ‘disconnect’ between the understanding of policymakers and employers in relation to productivity. Green et al. (2018) found that firms had only a partial understanding of productivity and often attached greater importance to metrics such as quality, customer experience, and profitability. Roper et al. (2019) found that in some sectors productivity tended to be thought about in terms of operating efficiency, while in others it was regarded as a meaningless concept. The lack of engagement of some employers with the concept of productivity is important because it means that policies and policy messages about productivity may fail resonate with employers in the way that they are intended to (Belt, 2019).

Given the policy concern with productivity and the ‘disconnect’ in understanding outlined above, it was considered important that the survey provided an opportunity to focus on what respondents understood ‘productivity’ to mean. Given that responses were open-ended it has been necessary to group responses according to themes. The most common response among all respondents related to ‘Efficient’/‘Efficiency’ with one in four respondents highlighting this. Examples include: “efficiency of task completion”, “efficiency in producing goods” and “enabling efficiency in all contexts and levels”. The next most common themes were:

- ‘Output’ (mentioned by 15% of respondents – examples are “outputs per cost input” and “outputting as much as you can at the lowest cost at good standard”);
- ‘Working’/‘work hours’ (mentioned by 13% of respondents – exemplified by “monetary value on working hours per staff member”, “the amount of billable hours we can bill clients for” and “working smart and not harder”); and ‘
- Staff’/‘people’/‘workforce’ (identified by 10% of respondents).

The next most frequent themes related to ‘Production’, ‘Profit/revenue/income/return’; ‘Product/products/stuff/goods’, ‘Sales’ and ‘Time/timescales/speed’.







'Customer satisfaction', 'Quality of product/service', 'Timely service delivery', 'Value of sales' and 'Profits' were identified by a larger share of businesses as 'very important'. 'Labour efficiency' had similar rankings to 'productivity', while a smaller proportion of businesses ranked 'Cost of inputs' as 'very important'.

### 3.2 Regional Embeddedness

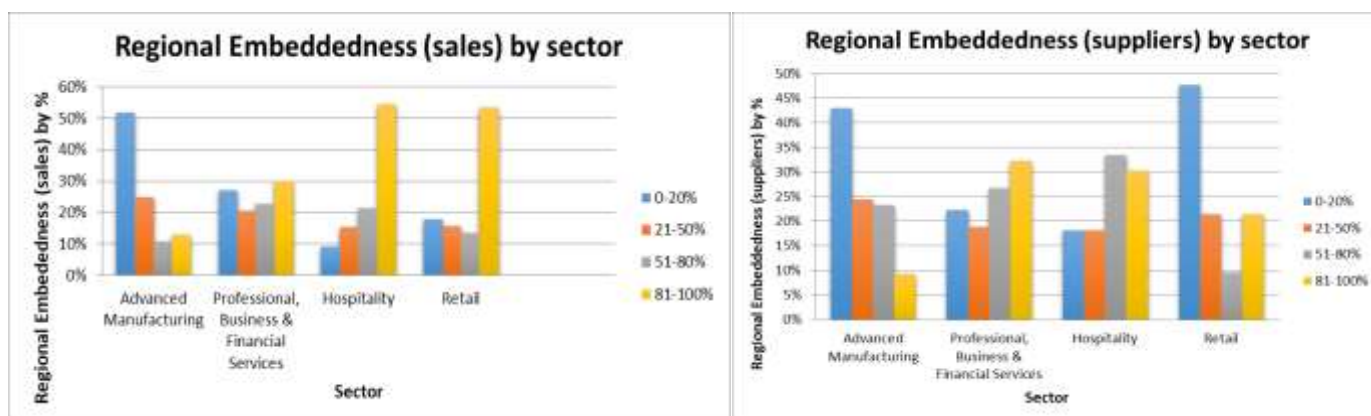
Embeddedness refers to the degree to which a particular firm is rooted in a particular region, measured in terms of the proportion of its assets, employment, sales and procurement are focused in one region (or nation). This matters for a number of reasons. It provides an indication of the firm's geographic spread and locational diversity, which in turn allows comparisons with other firms in the same industry sector or across sectors. This provides strategic management insights but it also provides insights for policymakers. Regional policymakers are concerned with using policy levers and targeted investments to promote economic growth within specific geographies (LEPs, combined authorities, city councils, etc.). But this is usually done without taking into account the very different levels of embeddedness of firms that benefit from these interventions. We focus on the geographic spread of sales (outputs) and suppliers (inputs). If these are high we know that the firm or sector in question has larger multiplier effects in, and a greater economic importance to, the region in which it is located.

#### Our Findings

Our survey shows, as one would expect, hospitality services and retailers predominantly sell their services and products in the region (over 50% sell 81-100% of their outputs regionally). Retailers, however, sourced from a larger number of suppliers outside of the region, with over 45% of firms buying less than 20% of their inputs from regionally-based suppliers.

The findings from advanced manufacturing firms and professional business and financial services (BPFS) firms are more surprising. Across the survey, advanced manufacturing firms are the least embedded in the region, in terms of both supplier inputs and sales (as shown in Figure 2 and 3 below). Over 50% of firms sell less than 20% of their outputs locally (just 11% sell over 80% locally) and over 40% buy less than 20% of their inputs from the region (less than 10% buy over 80% locally). This finding counters some of the accepted wisdom about the importance of manufacturing to specific regions. We do know from other research, however, that the employees and supply chains of some large manufacturing firms, such as JLR, are very concentrated in one or a few regions.

**Figures 2 and 3:** Survey responses on Regional Embeddedness by Sales and Suppliers (by sector)



Source: Authors, 2019

There is a striking contrast with the BPFS sector, where 30% of firms sell over 80% of their outputs in the region and over 30% buy over 80% of their inputs locally. BPFS firms in the West Midlands are more regionally embedded than advanced manufacturing firms. This also contrasts with some reports which suggest that the local BPFS sector is a ‘back-office’ operation serving London. Our survey reveals a different pattern.

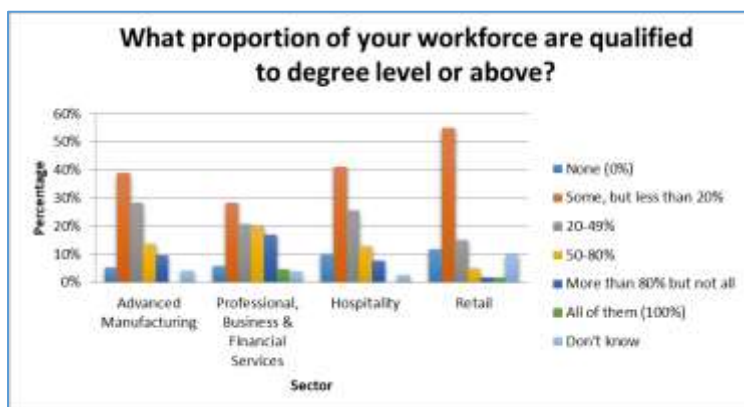
Advanced manufacturing firms are, as expected, the most international out of the four industry sectors studied, in terms of both inputs and outputs. This has implications for trade policy (where the focus is arguably already appropriately on the manufacturing sector) but also for regional growth promotion on the basis of likely regional multiplier effects.

### 3.3 Skills

The West Midlands performs relatively poorly on several key skills indicators (where qualification attainment is often used as a proxy) and the employment rate is lower than the national average. 34% of our survey respondents stated that difficulties in accessing talent/skills shortages were constraining their ability to increase their productivity. The difficulties in accessing talent/skills shortages were constraining productivity improvements most in the advanced manufacturing sector (41% of respondents) and least in the retail sector (18%).

Our findings also highlighted the variation in skills needs between sectors. For example, Figure 4 shows the proportion of workers in the establishments surveyed qualified to degree level. There are clear differences by sector. In the BPFS 42% of respondents indicated that 50% or more of their employees were educated to degree level. For Advanced Manufacturing the proportion was 23%, for Hospitality it was 20% and for Retail it was 8%.

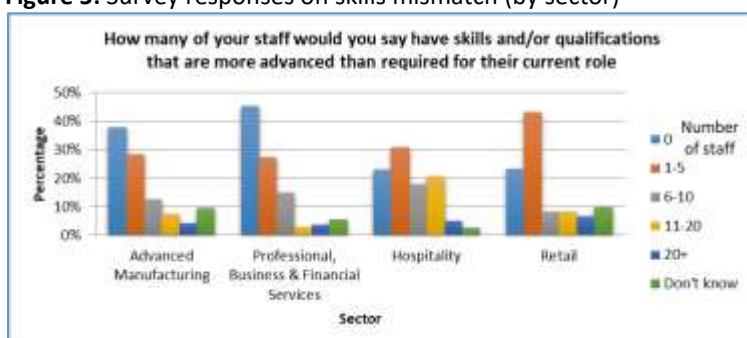
Figure 4: Survey responses on proportion of workforce qualified to degree level (by sector)



Source: Authors, 2019.

Possessing high level skills – or indeed skills at an intermediate level or specific technical skills – does not mean that those skills are necessarily utilised. Figure 5 illustrates that across all four sectors a substantial proportion of respondents were able to identify one or more staff members that had skills and/or qualifications that are more advanced than required for their current role. This was particularly the case in the retail and hospitality sectors. In these sectors, it is likely that some of these employees with underutilised skills see their work in the sector as ‘stop-gap’ and/ or a secondary activity while pursuing other priorities (e.g. continuing their education, looking after the home and family) before moving on to other jobs where they more fully utilise their skills sets. Where this is not the case and the situation is involuntary, the issue of skills underutilisation is more problematic, as skills can atrophy through lack of use and job satisfaction can diminish. From a business perspective, skills underutilisation can mean a loss in productive potential. Hence better skill utilisation is important for improving overall productivity and it is a matter of policy concern that evidence from the Employer Skills Survey indicates that the proportion of employers reporting employees with underutilised skills is increasing over time. So while skills policy focus rightly on skills development (in order that workers are able to rise to the changing demands of employers), policy for improving overall productivity needs to consider the demand for, as well as the supply of, skills.

Figure 5: Survey responses on skills mismatch (by sector)



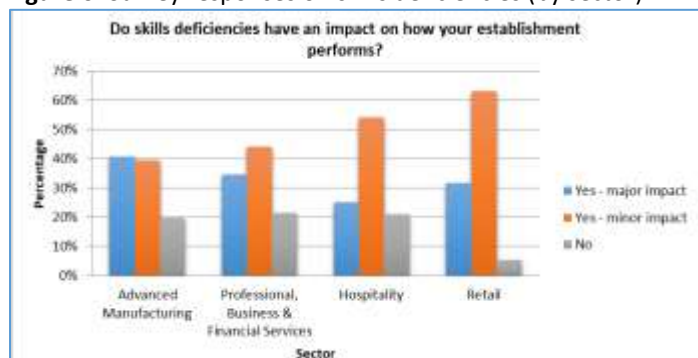
Source: Authors, 2019.

The literature on skills mismatches and productivity tends to focus on skills deficiencies. Such deficiencies may be on the external labour market and are manifest as skills shortage vacancies or they may emerge as skills gaps in the internal labour market when existing staff do not possess all of the skills required to do their



job. Skills deficiencies have implications for performance and productivity. Figure 6 shows that across the four sectors, 41% of Advanced Manufacturing respondents, 35% of respondents in Professional, business and financial services, 32% of respondents in Retail and 25% of those in Hospitality identified skills deficiencies as having a major impact on how the establishment performs. In the Retail and Hospitality sectors in excess of half of all respondents identified skills deficiencies as having a minor impact on establishment performance.

**Figure 6:** Survey responses on skills deficiencies (by sector)



**Source:** Authors, 2019.

Across the four sectors the skills most frequently identified as needing improvement (either by improving skills amongst current staff or through new recruitment) were:

- specialist skills or knowledge needed to perform a particular role;
- knowledge of products and services offered by the organisation and similar organisations;
- solving complex problems requiring a solution specific to the situation; and
- computer literacy/ basic IT skills.

This list underlines the importance of specific specialist skills (which organisations need to identify and source) alongside a threshold level of digital skills that are needed across several sectors and occupations. If the West Midlands is to become a more productive and a more inclusive economy, policy attention needs to focus on addressing these specific recruitment difficulties and skills deficiencies faced by employers.

### 3.4 Innovation

Recent analysis in the academic and policy literature also highlights the role of both new-to-the-market innovations and – less radical - new-to-the-firm innovations in driving regional productivity growth (Roper, 2018). In our survey, 28% of respondents strongly agreed and 61% agreed with the statement that ‘Improvements in innovation lead to improvements in productivity’.

According to the national UK Innovation Survey (2017) the West Midlands is well above average, coming fourth out of nine English regions, with over half of our firms seen as ‘innovation active. However, the proportion of innovation activity in businesses in the West Midlands lags behind the South West, Eastern and South East region of the UK. Therefore, as well as embeddedness and skills, our survey also measured innovation activity and its constraints.

A surprising finding from our survey is that a higher percentage of both hospitality and retail firms report that they have ‘introduced a significant innovation in the last 12 months’ than firms in the advanced manufacturing and BPFs sectors (Figure 7). Almost 60% of firms in the retail sector and over 60% in the hospitality sector responded positively to this question, compared to just over 50% in the advanced manufacturing sector and under 50% in the BPFs sector. This requires further research to understand what kinds of innovation these firms have introduced and to compare with other data on R&D, product and process development.

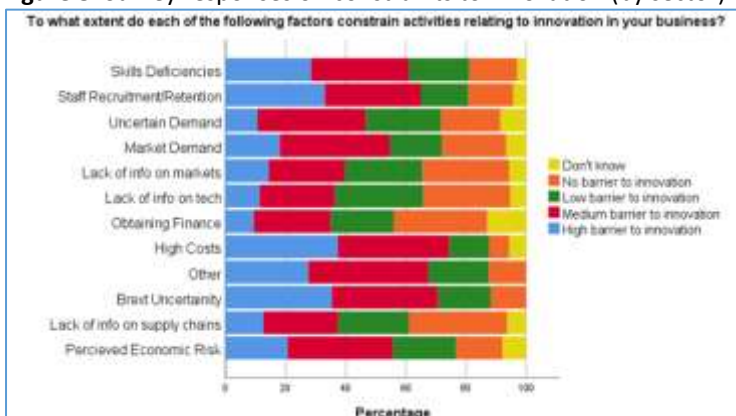
Figure 7: Survey responses on innovation in the last 12 months (by sector)



Source: Authors, 2019.

The surveyed firms reported a range of barriers to innovation limiting their ability to improve products and services or the way these are produced/sold (Figure 8). Collectively, the firms rated ‘cost factors’ as the most pressing constraint, as do UK firms generally. The retail (53.3%) and hospitality (53.8) firms in particular, identified this as a high barrier to innovation, compared to 27.4% in advanced manufacturing and 31.1% in BPFs firms.

Figure 8: Survey responses on constraints to innovation (by sector)



Source: Author, 2019.

Staff recruitment/retention presents a medium to high barrier to innovation for 65% of the total firms surveyed, whilst ‘skills deficiencies’ present a medium to high barrier to innovation for 61% of the total firms surveyed. This makes skills the third most pressing constraint for West Midlands firms, after Brexit



uncertainty. Interestingly, in the UK Innovation Survey (2017) (UKIS), firms rated these skill-related factors lower generally, with skills ranked fifth as a national constraint on innovation.

Conversely, 9.3% of the West Midlands firms surveyed identified 'obtaining finance' as a high barrier to innovation, whereas in the UKIS (2017) 14% of all broader innovators cited 'availability of finance' as a significant constraint. Meanwhile, 42.9% of the advanced manufacturing respondents and 40% of the retail firms said that Brexit uncertainties present a high barrier to innovation, compared to 33.3% in the BPFs sector. High costs and lack of information on supply chains and technology are cited as more important barriers for BPFs firms.

#### 4. Next Steps

We are currently conducting a more advanced SPSS analysis of our survey findings – for which we will be releasing our results on shortly. The next phase of our research is to conduct a series of in-depth interviews with representatives from each of the four sectors to continue to explore the observations highlighted in this report. If you are interested in taking part in our study or would like to keep updated with our results then please contact: [C.A.Billing@bham.ac.uk](mailto:C.A.Billing@bham.ac.uk)

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