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Explaining productivity in a poor productivity region

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Abstract

Productivity is the preferred measure of firm-level efficiency and perceived to reflect resource use rates. Semi-structured interviews with restaurant managers in a tourism-dominated low productivity rural area reveal that they are motivated to supply products that they believe in and to sustain a quality of life that meets their needs rather than striving to achieve higher productivity. Pricing strategies, managerial objectives and local market characteristics are found to radically influence the area's productivity value. An area's productivity value might not be an indicator of resource use rates or productive efficiency, and could instead reflect resident managers' motivations towards money and the presence of opportunities to achieve scale economies.

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JELs: D24; L11; R11.

Keywords: Productivity; Pricing strategies; Managerial objectives; Greed

Introduction

Productivity is perceived to be a useful, pertinent and effective measure of productive efficiency with the analogy that firms with higher productivity waste less time, effort, energy and materials than firms with lower productivity. Layers of government design policies to stimulate productivity while firms are assumed to target and are encouraged to enhance productivity. The importance of productivity is heightened when a Nobel Prize winner claims that "Productivity isn't everything, but in the long run it is almost everything. A country's ability to improve standards of living over time depends almost entirely on its ability to raise its output per worker" (Krugman, 1992, p. 9).

Governments recognise that some areas within its jurisdiction have measurably low productivity. Quantifiable evidence of persistent spatial variations in productivity can be

found across many countries including the United States (Wu and Gopinath, 2008), Britain (HMT, 2001), Spain (Gómez-Antonio and Fingleton, 2012) and China and Brazil (You, 2012). For the UK, Webber and Horswell (2009) provide evidence of spatial variations in productivity using district-level averages of firm-level data and show that West Somerset had a productivity value that was two standard deviations below average in 2005, that it was deteriorating, and that it was the lowest of all the English and Welsh districts.

An essential consideration when identifying whether and why productivity growth has occurred is the measure of productivity, and this is typically a change in the amount of gross value added. At the firm-level, this depends critically on two components: the scale of production and the mark-up price, and thus micro analyses of productivity should have a strong and explicit focus on pricing strategies. This paper explores the connection between productivity and pricing strategies from the firm's perspective in West Somerset and seeks to answer the following questions:

1. How do firms set and change prices in this area?
2. Are there local market or socially-influenced considerations that lie behind pricing strategies?
3. Are there managerial objectives that permeate through to an area's productivity values?

We conducted 23 in-depth semi-structured interviews with managers in a cross-section of firms in West Somerset in order to ascertain the reasons for their area's apparent weak productivity. The interview schedule included specific questions about pricing policies which allowed us to tease out information about managerial objectives, socially-influenced procedures and market structure, and subsequent analysis of this information reveals why the area's productivity is measurably poor. We argue here that productivity is not necessarily an effective measure of either resource use rates or productive efficiency and contend that a deeper and better understanding of productivity should include area-specific contextual factors rather than simply examining correlations of variables across space. Before governments implement policies to enhance productivity they should comprehend what its productivity estimates really reflect.

After presenting a review of the literature, we proceed to present the context of this study, our data collection strategy and empirical findings. The final sections discuss results and draw conclusions.

Literature review

Country-level economic growth models depict that specific factors, and typically supply-side variables, such as education (Barro, 1997; Marrocu and Paci), health (Knowles and Owen, 1997), innovation (Cainelli *et al.* 2006), geography (Bloom and Sachs, 1998), trade (Rodriguez and Rodrik, 2001), finance and entrepreneurship (King and Levine, 1993; Kenney and Patten, 2005) and institutional settings (Knack and Keefer, 1995) contribute to the enhancement of productivity. Empirical estimations of supply-side growth models within countries reveal similar factors being important at different geographical scales (Fingleton, 2010) and implicitly suggest that demand side factors are less important.

When geography is included within country-specific growth models that typically use micro-data, there is almost invariably the realisation that spatially-associated factors, such as agglomeration (Brühlhart and Sbergami, 2009) and distance decay functions (Funke and Niebuhr, 2005), are important determinants of productivity and growth. Such analyses assume that spatial heterogeneity and spatial autocorrelation represent meaningful concerns

and do not arise simply out of incorrect functional forms. Recent but less recognised determinants of productivity growth could have a spatial dimension. For instance, although Foster *et al.* (2006) find that *all* of the productivity growth in the US retail sector can be attributable to more productive firms entering the market that replace less productive firms who leave the market, it is unclear whether this has a geographical dimension that *reflects* this churn or whether there are geographically-related factors that *cause* this churn.

Most governments focus their economic policies on enhancing productivity, and the UK is no different. Empirical studies of productivity growth that use firm-level data (see, for example, Harris and Moffat, 2015, and Dal Borgo *et al.*, 2013) are frequently used to support, shape and fine tune national growth policies. UK government economic policies target productivity at various geographical scales from the national to the regional to the local enterprise partnership. The urban-rural issue has been omnipresent in this productivity debate, but few studies have been able to elucidate what is behind it. Curry and Webber (2012) suggest that the urban-rural productivity divide may simply reflect differing industrial mixes, which are themselves a reflection of the human and physical geography of the local and national arena. With the incessant struggle to achieve increasing levels of productivity, and because most of the population, by definition, do not reside in rural areas, the UK government decided in 2002 not to charge rural districts with pursuing productivity objectives; however, this refocusing of effort on more densely populated areas may simply be a reflection of a lack of understanding of the origins and causes of the spatial productivity divide; it may also reflect a suspicion that firms in rural areas suffer from factors that adversely affect their productivity and efficiency, even though there is no clear evidence that firms in rural areas are necessarily productively inefficient.

Measuring productivity efficiency at the firm-level is difficult due to two contrasting issues. First, there is the matter of measuring output in terms of volumes or value; in many industries, output volumes have a clearer association with the quantity of resource inputs (such as tonnes of inputs of steel and units of cars off a production line), whereas output values can be related to fashion, advertising and market power (such as mobile phones and films). Firms can use pricing practices to give consumers the impression that their higher priced product is of a higher quality, and therefore make it more desirable and valuable. Because companies are required to submit accounting returns which then feed into our data sets as revenues and costs, it is usual for researchers to analyse productivity using output in value terms. Indeed, Foster *et al.* (2006) emphasise that the inability of researchers to use firm-level price data in their analyses means that “the typical measure of productivity using establishment-level data is really a measure of real revenue per unit of input using an industry-level deflator rather than physical output per unit of input.”¹

The second issue to consider here is whether to use gross output or output per number of inputs, such as labour, capital, land or materials. Although they will all generate different indicators of productivity, their appropriateness will vary across industries and firms. Differences in the choice of techniques (such as different ratios of full time equivalent workers to a hectare of land) even amongst firms within a small geographically determined market area can reveal strong asymmetries in productivity (Rigby and Essletzbichler, 2006) when individual inputs are used as the denominator. Total factor productivity estimates have a long history in neoclassical, supply-side empirical growth studies but the quantity and quality of capital stock embedded in the local economy (such as road networks) is difficult to capture effectively given its multidimensional effects that vary in importance across sectors, and hence labour productivity has been the productivity measure of choice in regional studies

¹ Although Freeman (2008, p.5) argues that “value and volume measures can both be used, there is normally a strong connection between the two,” the appropriateness of this assertion is likely to vary across sectors and sub-sectors.

(Rigby and Essletzbichler, 2000). Decompositions show that estimates using total factor and labour productivity indicators generate consistent results (Foster *et al.*, 1998) but higher values of labour productivity are likely to reflect not only improvements in labour efficiency but also improvements in the quality, mix and/or efficiency of complementary factors of production (Rigby and Essletzbichler, 2000). The composition of these improvements will vary depending on managerial preferences and may be influenced by local capital stocks, fashions or tastes (such as a preference for greater sustainability). Such complexities question whether productivity disparities reflect measurement issues rather than efficiency or effectiveness.

It is most common to measure productivity as gross value added, and these values hinge crucially on the average gap between costs and revenue, which in turn depends on firm-level pricing policies set within a market, and the volume of sales, which is contingent on the possibility of and ability to benefit from scale economies. It is common to find studies that use a deflator to control for inter-industry selling prices,² but these deflators are averages across industries and do not reflect strategically important local pricing strategies that may differentiate goods within a specific geographically-defined marketplace. A primary reason for low measurable productivity is therefore a low quantity of sales, which may be unavoidable in sparsely-populated rural areas. A second reason is that prices charged do not necessarily maximise revenue and/or profits and are the result of managerial objectives that may be institutionally and/or locally driven.

Pricing strategies

Orthodox neoclassical economic theory portrays the image that firms are profit maximisers. However, it is well known that some firms have other objectives and that pricing strategies vary across firms. These spatial issues affect the shape and size of the market boundary of a monopolistically competitive firm. Two issues are relevant here: first the price level and second the rate of change in price. The second issue is pertinently summarised by Blinder (1991, p.90) who notes that “virtually every theory of price rigidity describes a chain of reasoning which allegedly leads the firm to conclude that a change in price is inadvisable.” The literature on pricing strategies is voluminous although the standard economic textbook reason for price stickiness is the theory of menu costs (Sheshinski and Weiss, 1977; Mankiw, 1985). A second reason for a lack of price change is due to a lack of price coordination between firms (Ball and Romer, 1991; Cooper and John, 1988; Stiglitz, 1984) whereby a firm does not change its prices just in case their consumers leave to purchase a competitor’s products or for fear that their competitors lower their prices too. Implicit contracts between firms and consumers (Azariadis, 1975; Gordon, 1974; Azariadis and Stiglitz, 1983; Okun, 1981) and nominal contracts between firms and their suppliers (Fischer, 1977; Taylor, 1979) have also been established as reasons for sticky prices. Similarly, social norms impact on the strategies of managerial decisions and produce the spatial structure of companies (Marshall, 1982), and hence local socially-influenced considerations could lie behind managerial objectives and pricing strategies.

Other theories of price stability relate to non-price competition (Stigler, 1968), associations between quality and price (Lichtenstein and Burton, 1989), signalling issues from producers to consumers (Spence, 1973) or from consumers screening producers (Stiglitz, 1975), and difficulties in knowing the true costs of production in large companies (Gordon, 1981). The focus of some more recent research on pricing behaviours emphasise the

² In the US, studies like (Rigby and Essletzbichler, 2000) take the deflators from the Bartelsman-Gray productivity database of the National Bureau of Economic Research.

importance of psychological price points (Kahneman and Tversky, 1979), left-digit anchoring effects (Thomas and Morwitz, 2005), smaller fonts sizes (e.g. \$19.⁹⁵) to trivialise smaller units (Coulter *et al.*, 2012), and the practice of fractional pricing (e.g. €17.31) which is used to suggest to consumers that goods are marked at their lowest possible price. So prevalent are these theories that Gordon (1991) questions whether they are alternatives or complements and whether some effects work in tandem.

Angel Gurría (2016), the Secretary-General of the OECD, argued that “Productivity growth – a central ingredient in the pursuit of well-being – has been decelerating in a vast majority of countries” and accordingly, the UK government’s March 2016 budget announced measures that they believed would enhance their productivity growth.³ However, these measures are innocuous for most firms’ pricing policies and scale opportunities, and are unlikely to assist rural businesses as UK government support is focused on private sector-led growth and job creation in city hubs. Greater understanding of how pricing strategies evolve spatially is important from both academic and policy-makers’ perspectives because they underpin changes in productivity values that are perceived to be indicators of improvements in wellbeing and physical resource efficiency.

A number of questions remain unanswered in the literature that are vitally important if we are going to improve our understanding of the spatial pattern in productivity and comprehend why productivity can be measurably poor in particular areas. This research examines the source of low productivity values in an area with exceptionally low measurable aggregate productivity, and specifically seeks to understand how firms in this area set and change prices, whether there are local market or socially-influenced considerations that lie behind pricing strategies, and whether managerial objectives permeate through to an area’s low average productivity values. Understanding of these issues is vital if we are going to improve our understanding of the spatial productivity divide and critically evaluate whether productivity should remain one of the policy maker’s objectives.

Context

Rice *et al.* (2006) reveal a sub-regional (NUTS2) spatial productivity divide across Great Britain. Webber and Horswell (2009) dug deeper by using firm-level productivity data aggregated across local authority districts of England and Wales. They present a spatial productivity divide with much of rural South West England and most of Wales experiencing relatively low productivity. Four districts stand out from their research as being particularly unproductive, each of which was at least two standard deviations below the sample mean. Penwith, Caradon (both are now abolished due to 2009 changes in local government), Conwy and West Somerset all have similar industrial compositions with some of their major towns (Penzance, St. Ives, Looe, Llandudno and Minehead) being dominated by the tourism industry. Part of the reason for low productivity may be the quality of the labour force and the dominant industries; table 1 presents descriptive statistics of West Somerset comparing it with Conwy and Great Britain as a whole,⁴ and West Somerset seems to have a more economically active and educated population with larger proportions than average working in

³ These were “i) reducing distortive taxes by continuing to lower both income tax and business taxes, ii) improving education by accelerating fairer schools funding and committing to full academisation of schools in England, iii) promoting enterprise through business rate cuts for small businesses, cutting Capital Gains Tax and extending entrepreneurs’ relief to external investors in unlisted trading companies, iv) delivering long-term infrastructure improvements, by giving the green light to major projects recommended by the National Infrastructure Commission including Crossrail 2, and High Speed 3 between Leeds and Manchester and v) improving economic decision-making by devolving power to cities and regions, including new devolution deals for the East and West of England.”

⁴ There is no comparable data for Penwith and Caradon as they are now abolished.

energy, accommodation and food services but smaller proportions than average working in finance and public administration. In contrast, Conwy appears quite similar to the GB average albeit with larger proportions of workers in the education and social work sectors. West Somerset not only had the lowest productivity of any district in both 1998 and 2005, but was also diverging from the sample average. West Somerset therefore appears to be an appropriate area to focus an investigation attempting to understanding why productivity can be measurably low.

<Table 1>

West Somerset is the least populous district in England (ONS, 2009) and covers a total area of 740 square miles – see figure 1. The largest town in West Somerset is Minehead, which is a seaside resort with a strong tourism focus. It is Somerset’s busiest holiday resort, promoted as the gateway to Exmoor national park, with blue flag accredited sandy beaches and good opportunities for water sports. Minehead also marks the start of England’s South West Coast Path, boasts a temperate climate, is generally milder than the rest of UK and has an average annual sunshine total of 1,600 hours. It has a strong cultural base with a hobby horse, orchard-visiting wassailing, and associations with William Wordsworth, Samuel Taylor Coleridge and Arthur C. Clarke. Minehead is relatively inaccessible being 25 (27) road miles from Taunton (Bridgwater). To the North is the Bristol Channel (which is part of the Severn Estuary) and to the West and South is Exmoor National Park. Bristol is considered by residents to be the main local city-hub which is located 64 miles to the north-east.

<Figure 1>

Minehead has not grown excessively relative to other towns: the Domesday Book listed it as a very large population relative to other settlements with 61 households, 1 cob, 16 cattle, 10 pigs and 300 sheep. Since then the town’s population has increased to about 13,000 (ONS, 2011). It has an aging population and few job opportunities for skilled workers, except self-employment. The district has a fragile economy and a lack of industrial diversity, with 55 percent of employment in the tourism-related low paid sector. Minehead is the location of one of Butlin’s holiday camps (1963-present), which boasts 9,200 beds and hosts various events such as Spring Harvest (3 weeks per annum attracting 55,000 people to the area), hen and stag parties, music festivals, a darts world championship, high-quality triathlon events and the world’s strongest man competition. There is strong seasonality in the tourism industry here, with activities in many firms being intensive during a six-week school summer holiday window. The vast majority of visitors are young families staying for a week, and the chance of their repeat visitation to tourism facilities, including restaurants and cafés, is low. Nevertheless, there is a chance of repeat custom in tourism-related facilities and not least by locals experiencing local fare, such as in restaurants and cafés, often out of season.

Given that the main activities of the tourism sector in West Somerset district are outdoor-based and vary across a wide expanse of coastal, moorland, National Trust, heritage and nature trails that appeal to a wide range of tourists’ age, income profiles and backgrounds, with some facilities charging entry fees but many others offering the experience for free, an appropriate way of linking consumers and analysing firm-level productivity is to focus on necessities, such as food and drink. We therefore chose to focus our investigation on restaurants and cafés.

Method

If pricing strategies are behind low regional productivity values then one option is to use a methodology that exposes qualitative differences in managerial decisions in depth; we chose to utilise semi-structured interviews. This research adopts a qualitative research strategy with an expert sample of restaurant managers in order to explore emerging themes. Given the nature of the research topic, it was considered appropriate to focus on obtaining rich data from as many managers as possible.

Contact was initially made with the West Somerset District Council who assisted by providing us with a dataset of local restaurants and cafés. This dataset was then cross-checked and augmented with reference to the tripadvisor website (www.tripadvisor.com). A full list of 121 restaurants and cafés from across the sector was created and used as a target sample. A short promotional article was written and published in a local newspaper in the hope that restaurant managers would not see our contact with them coming out of the blue.

Due to time and practical limitations, a two-week window of opportunity for interviews was established, and this window coincided with the start of the six-week intensive holiday season. Telephone contact was made with as many restaurant and café managers as possible, with several telephone attempts sometimes necessary. Once contact had been made the next stage was to explore interest in participating in the research and identify a mutually convenient time to schedule an interview. Interviews invariably took place early in the morning before opening times or in the afternoon between lunch and evening meal sessions.

A week after the publication of the newspaper article we proceeded to make contact with all managers in the dataset and were able to negotiate appointments with 23 managers, which represents a response rate of 19 percent. The sample of restaurants and cafés was spread across and beyond Minehead but within the West Somerset district. The research does not aim to provide quantitative and generalizable estimates, but instead in-depth understanding of the underlying causes of low productivity values in a low productivity area. Included in the sample were high-end, high-quality food restaurants, cafés serving meals (we excluded those only serving small snacks), public houses, fast food restaurants and takeaways. The approach was ambitious in attaining 23 interviews for the study and somewhat more expansive than recommendations made by others; for example Gilbert (2005, p.61) argues that ‘where the researcher’s aim is to generate theory, a wider understanding of social processes or social actions, the representativeness of the sample may be less important and the best sampling strategy is often focused or judgemental sampling.’ In order to understand the full range of issues in appropriate depth, interviews were considered to be more appropriate than questionnaires. Surveys were dismissed because they are less able to capture complexities such as the inter-relationships between factors, the relative weighting of factors in decisions and the potential cumulative influence of factors (Lightbody, 2009).

Semi-structured interviews lasted between 30 and 100 minutes, depending on interest and the length of time that the respondent wanted to speak. Although the interview schedule included a list and order of questions to ensure comparable coverage and with boxes for the interviewer to quickly tick if one of the expected answers was provided, the schedule was also flexible enough to stimulate and permit conversation and enable greater focus on the manager’s individual circumstances. Interviews began with a general discussion of the type and history of the restaurant/café, proceeded to discuss social pressures from competitors and consumers in specific activities like food recycling, progressed to specific questions about their own production processes, and finally we asked detailed questions about their price setting behaviours. Although this investigation combined two research strands (recycling behaviours and pricing strategies), it was deemed appropriate to discuss pricing strategies in the second half of the interview as we wanted to make sure the managers were as relaxed as possible through the discussion of potentially non-competitive issues before discussing

information that could be deemed to be more strategic and directly linked to market competition and market share. All interviewees were assured of anonymity and hence only brief biographical details were recorded. Specifically, the research was designed to assess why productivity in this area is exceptionally low by ascertaining through discussion:

- managerial motivations
- managerial objectives
- market structures
- setting and changing prices and
- social influences on managerial decisions.

The vast majority of firms in the local area are locally-owned, and this is reflected in our sample at greater than 90 percent. Although there are a couple of food outlet chains present in the West Somerset district, none of those managers were amenable to interview, and this may bias our findings. The average number of years of managerial ownership was greater than five years and the majority of the sample that had been going for less than five years were firms that were taken over when it was sold due to retirement, so the presence of the firm in the local market was typically already established. Only one of the managers interviewed was not also the proprietor of the business. None of our sample employed more than ten full-time equivalent employees and the vast majority of firms employed less than five full-time equivalent workers (including the manager), as shown in table 2.

<Table 2>

Although we do not know what percentage of the sales volume is generated during the six-week high season, we do know that the opening hours fluctuate around the calendar year. Some close at the end of the school holidays in October and do not reopen until Easter; others remain open throughout the year but have longer hours during the summer and perhaps only open during the weekends in the winter to cater for local customers; still others remain open all year round in order to provide a year-long service to their local regular customers. Sales volumes were without exception higher during the six-week high season, but the drop-off in sales volumes varied from one firm to the next.

Given the presence of over a hundred places to eat in a small area and the fact that a large majority of consumers have a low chance of repeat visits and no prior knowledge or experience of eating at any of the restaurants and cafés, the restaurant market could be assumed to be perfectly competitive.

Results

This section presents information collected on pricing behaviours in the low productivity district of West Somerset. The first question we asked about prices was whether they were based on average costs plus mark-up or something else. Given the productivity measure is based on the presumption of profit maximising behaviour, we did accommodate the possibility of responses that would highlight a pricing strategy that was consistent with profit maximisation. However, only one manager even vaguely suggested that profit maximisation was an objective and that prices were set accordingly. Although none of the other twenty-two managers stated that they set prices in order to profit maximise, the prices set by the profit maximiser were not significantly different than prices set by other firms.

Our results suggest that 74 percent of restaurant managers in the district followed an average costs plus a mark-up pricing strategy and 35 percent of managers set their prices to

reflect what they thought customers wanted to pay. When asked about the source of the information about what customers wanted or expected to pay, answers were vague and imprecise although one manager stated it was what they would expect to pay. Only one manager stated that they based their prices on what they charged last year, and that was in part because they had “no mortgage or staff costs” to accommodate in their pricing decisions. A couple of managers stated that they employed a pricing strategy that was based on thirds (1/3rd input costs, 1/3rd staff and overheads, 1/3rd profits). Underscoring the variety in price setting behaviours were consistent references to motivations beyond profit maximising such as in relation to extra-work activities; for instance, one manager stated that they “just want to make enough to go on my horse and keep locals happy,” and this orientation towards the manager’s personal life appeared to be at the crux of their business activities. Only one manager made an explicit distinction between the six-week intensive tourism window and their revenue when they stated that they used “competitive pricing out of season but in season price according to what the market will bear.”

A key concern for any manager will be what other managers within the same market charge for their products. However, we found that only 26 percent of managers stated that they based their pricing decisions on what other restaurants and cafés charged. When we asked them whether they adjusted their prices when one of their competitors changed theirs, 74 percent stated that they never change their prices in response to a change in their competitors’ prices, and the stated reasons for this were that they “never check” and that they perceived that they had “no comparable competition.” They emphasised that their business is sustainable, they are unperturbed using their current pricing strategy, and that the market was differentiated sufficiently to give them a clearly-defined market space.

A further 13 percent of managers stated that they would rarely change their prices in response to a change in their competitors’ prices and that they “may take a look, but wouldn’t make a knee jerk reaction.” When asked about what their competitors might charge, one manager stated that they “don’t really know ... except for coffee. We had a big review of coffee prices when we realised that *everyone else* was charging *a lot* more.”

Many of the managers believed that they were in a unique position in the market such that they had few immediate competitors, and so we sought to identify the reason for this belief. We asked whether the manager thought that there was a price premium to eat at their restaurant, which indeed there could have been due to a wide range of countryside, coastal and town centre locations. However, 61 percent stated that there was no price premium to eating at their restaurant; those managers who did state that there was a price premium associated this with customer service (9%) and/or high quality food (22%) which was typically associated with fresh and local produce, facilities or interior design. It was usual for managers to state that a price premium was to do with the experience of eating at their restaurant, such that their food was “special and good, and we care about what we do.” The vast majority of managers focus their attentions on making sure they do what they do really well, irrespective of what other restaurant managers might do. These managers clearly do not see their restaurant or café to be in competition with other restaurants or cafés, even though it is likely that tourists take the view that one restaurant may be a close substitute for another.

We proceeded to ask managers whether their prices are ever adjusted in response to changes in demand. The majority, 70 percent, stated that they never adjust their prices in response to changes in demand; when we enquired why this was the case we collated a range of responses, including:

- i) the need to re-programme the till⁵
- ii) a lack of real benefit (monetary or otherwise) of a price change
- iii) they are “not greedy”
- iv) the view that changing the price is “not a fair way of trading” and instead review their prices “every couple of years”
- v) life-style factors: they “never think about it. As long as it pays enough for me to play golf then I’m happy.”

Nine percent of managers stated that they rarely change their prices in response to changes in demand, and these were only in response to either customer feedback or for individual items that were not selling well. Thirteen percent of managers suggested that they sometimes change their prices in response to changes in demand but this was only when “a daily special wasn’t selling, and not on menu items due to cost of reprinting menus” (again in terms of effort and opportunity costs of time rather than monetary costs incurred), “if there is a successful special or cake I would put the price up” (note that this was the only manager who answered any question with a price *increase* statement), and the suggestion that if demand goes up for their products then prices could come down as they would be able to demand better deals from their suppliers.

When asked whether their prices were ever adjusted to yield lower profits or losses for a certain period of time to attract more customers, the majority (87%) stated either “no” or “rarely.” Only 13 percent of managers indicated something on the positive scale, such as “in winter we’d have special nights (for locals),” or “in January each year I give double loyalty stamps.” Others stated a difference in the service that they provide over the year, such as “cricketers specials in the summer,” “winter stargazing suppers,”⁶ or “3 for 2 on particular products on Thursday nights if quiet.” This focus on good service to the local community rather than on increasing prices, profits or productivity was very prominent in interviews.

So, due to this price inflexibility, we asked managers to explain why they kept their prices fixed. Responses included “Customers expect to pay the same price day-in-day-out,” the “inconvenience of re-printing menus,” that “customers want and staff need continuity”⁷ and that they needed to “keep regulars happy and build up a local customer base.” Very prominent in managers’ statements on a range of issues was that they are “not greedy.” Although this could have been a desire not to be seen to be greedy to the interviewer, the frequency of this response and the conviction with which it was stated suggested to the interviewers that this was more likely to represent a focus of the manager on providing a service to the local community rather than ensuring that they became wealthy, or simply because their priorities lay elsewhere (such as on the golf course or riding a horse). There was one exception to this conclusion in our sample: one manager revealed that he had enough customers and was making a sustainable profit but when he found out that he was selling a frequently purchased product for a higher price than his immediate competitor he then chose to significantly reduce the price of that product even though the effect was to reduce his profits and measurable productivity without any change in the number of customers.

We asked managers what would be their response to decreasing demand, and the vast majority stated that they “wouldn’t change anything” because they “never needed to” or because they “haven’t experienced it” or that they would “ride out the cycle ... (as they) have

⁵ This is not an issue about monetary costs but instead an issue about opportunity costs, specifically that it would take the manager time to reprogramme the till which would take them away from more valuable alternative activities like playing golf or riding their horse.

⁶ Parts of Exmoor have been designated as a Dark Sky Reserve.

⁷ In some restaurants and cafés without automated tills, staff were expected to price up the bill for the customer. Price retention was perceived as a method to expedite this process.

been here for 30 years.” Some managers stated that they would use specials (i.e. typically lower-priced smaller portion sizes of something already on the main menu) or price offers, while some stated that they had not found advertising successful in the past as it “did not increase demand for their products.” They stated that they may consider dropping something from the menu if there was low demand for it or they might try to make the dish taste better. No managers even remotely suggested that they would decrease the quality of their fare; in contrast managers frequently emphasised that they were very proud of what they offered customers with recurrent emphasis on quality or locally-sourced ingredients.

When asked what managers would do if they needed to cut costs, 48 percent stated that they would cut staff hours but also emphasised that there was “only so much you can do without compromising your offering;” they stated that they would work harder and replace their staff’s hours with their own.⁸ Some stated that they would look at adjusting their opening hours, reduce the range on the menu, consider reducing portion sizes, reduce the number of free-bees that they give away (e.g. extra rashers of bacon for repeat customers), grow more of their own vegetables as inputs, negotiate more with suppliers and/or shop around to get cheaper input costs without compromising quality. Only one manager suggested that they would look at their use of incidentals, such as foil, Clingfilm, washing up liquid and plant garnishes. We found no clear evidence of productive inefficiencies or productive ineffectiveness, and instead received clearly articulated information on the need to maintain low food wastage levels simply because greater food waste equates to higher costs; this seemed second nature to most managers rather than a specific objective. Given that prices were never adjusted to attract more customers and that cost cutting appears to be done only as a last resort / survival issue, paradoxically any commensurate increase in productivity (with scale held constant) would only be present if there were concerns over the firm’s survival.

Discussion: focusing in on prices

West Somerset has the lowest recorded productivity of any English and Welsh district. Does this necessarily imply that firms in West Somerset are wasting more time, effort, energy and materials than firms located elsewhere? Through an interview process it became clear that restaurants and cafés in the tourism-focused district of West Somerset did not fit the orthodox view of a firm.⁹ The neoclassical economics argument that low productivity could be the result of excessive competition that squeezes profit margins and reduces supernormal profits to zero could be behind the very low productivity in the area. However, although consumers may view these restaurants and cafés as being in competition with each other, managers clearly did not see this as being the case. Most restaurant managers perceived that their restaurant had few direct competitors due to the range of distinguishing qualities (such as service quality and quality of food) and that the local market could be better described as being monopolistically competitive.

This begs the question why these firms do not attempt to collectively or individually increase prices and profit margins by raising prices, especially as consumers are predominantly tourists and unlikely to be repeat visitors. The crux of this decision does not seem to be based on any of the aforementioned pricing theories (e.g. Blinder, 1991) and instead seems to be based on either the need for managers not to appear to be greedy or because the managers are indeed not greedy. The benefits to the manager of following this

⁸ This seemed to be a particularly important concern given the impending introduction of the living wage in the UK and the associated higher labour costs.

⁹ It is in line with institutional and post-Keynesian price theories and theory of the firm; see Lee (1998).

pricing strategy were psychological and not financial; there are benefits to others too, such as more affordable holidays.

A theme that repeated itself across several interviews was the need to charge fair prices, meaning that the managers did not believe in charging high prices simply because they could. One explanation of this could be the presence of strong local institutional pressures, but our evidence also suggests that most of the managers were not aware of the prices their competitors were charging and that such knowledge would not influence their pricing strategies anyway. It appears that managers draw on their own accumulated experience about what has worked in the past when shaping their pricing decisions in the present, and that there appears to be no desire to change pricing policies in order to increase profits or enhance productivity. One theme that runs through all the interviews was that enhancing profits or productivity was not on the managers' agendas and instead the issues that appeared to be important were to:

- i) supply the best possible quality fare (i.e. extrinsic motivations)
- ii) provide a product that they could be proud of (i.e. intrinsic motivations)
- iii) prioritise extra-occupational activities, such as playing golf or horse riding (i.e. intrinsic, extrinsic or social motivations) and
- iv) offer a service to the local community which reflects positively on them (i.e. extrinsic motivations).

One could expect these motivations to be positively spatially autocorrelated although the geographical scale of these spatial patterns may depend on whether an area is rural and/or the degree of anonymity within a local economy.¹⁰ This type of contextual information provides a richer and deeper explanation of productivity values that are not obtainable from simple data on productivity averages, suggesting that drawing lines through strings of data may not always provide deep and meaningful guidance to policy-makers interested in influencing an area's productivity values.

Bernstein (2009) argues that firms often charge the wrong prices because they do not pay enough attention to changing their prices, and that one reason for this is that they do not know their competitors prices and their market share. We found that restaurant managers in West Somerset may be able to charge a higher price, and therefore have a measurably higher productivity level, but there is a reluctance to change prices principally because they are not driven to profit maximise.

The need to generate high productivity levels is embedded in the rhetoric of modern day life, and yet Kennedy (1968) famously argued in one of his presidential addresses that our output measures count "air pollution and cigarette advertising, and ambulances to clear our highways of carnage ... It counts napalm and the cost of a nuclear warhead, and armoured cars for police who fight riots in our streets... (It) does not allow for the health of our children, or the joy of their play ... it measures everything except that which makes life worthwhile." Further, Stiglitz *et al.* claimed that "the time is ripe for our measurement system to *shift emphasis from measuring economic production to measuring people's well-being ...* Moreover, it has long been clear that GDP is an inadequate metric to gauge well-being over time particularly in its economic, environmental, and social dimensions..." (2009, p.12, original emphasis retained).

The restaurant managers' perspective and the lack of focus on profit maximisation, output maximisation or revenue maximisation via high prices should be considered

¹⁰ Further research should seek to identify whether the strengths of local institutional settings associated with managerial behavioural expectations and intrinsic and extrinsic motivations evolve across space.

commendable. These managers appear to be running what may be termed ‘lifestyle firms,’ with a focus on the pride they receive from providing a product that they believe in. The lack of focus on maximising profitability may be associated with other anomalies in the region, such as particularly high life expectancy for women (only 9 English and Wales districts have longer life expectancy at age 65; ONS, 2015), particularly high levels of well-being (West Somerset is the fourth happiest district to live in; ONS, 2015), and low values of pollution (although this is partly a result of the geographical location next to the Atlantic ocean with relatively clean sea air). This lack of orientation by managers towards money may result in visibly poor area-level productivity but this might be an advantage with consumers having greater disposable incomes available to spend on other items. Current productivity measures can reflect poorly on and do a disservice to an area while providing a blinkered view of contributions to the economy and wellbeing.

This research has focuses on a localised and highly seasonal tourism sector in a rural, semi-isolated location. Although the results were never geared towards being generalisable the article does offer in-depth understanding of the underlying causes of low productivity values in a low productivity area. Of particular emphasis is that if managers are not motivated to raise prices or achieve greater sales and are instead focused on providing high quality goods and services then the analysis of GVA productivity data to reveal productive efficiency or productive effectiveness may provide inaccurate, inappropriate and misleading results. Improvements in productive competitiveness may simply be achieved by increasing the mark-up and/or scale of sales, and growing city economies are likely to be able to achieve this much better than isolated rural economies. It would therefore be wrong to assume or to expect productivity measures to reflect productive efficiency or productive effectiveness.

Conclusion

Productivity is the chosen measure of economic competitiveness and seen as a prime indicator of productive efficiency and productive effectiveness. Governments focus a high proportion of their policies towards the enhancement of productivity with the belief that greater productivity is associated with higher living standards and well-being. Different geographical areas generate productivity values that are greater or less than the average and policy-makers are attempting to tailor their policies to be more effective.

Prior empirical research identifies within country productivity disparities. For the UK, Webber and Horswell (2009) identify West Somerset as the district with the lowest measurable productivity of all districts in England and Wales. This article has sought to identify why that district has the lowest productivity using in-depth semi-structured interviews with managers of 23 firms in the district’s dominant tourism sector, and specifically managers of restaurants and cafés. This research finds that few if any of our managers were motivated by higher profits. Managers in our sample were motivated overwhelmingly by aspirations to supply a product that they believe in and to sustain a quality of life that meets their institutionally-, socially- and/or autonomously-shaped needs, rather than being motivated to achieve higher productivity.

Our managers’ social identities appear to prioritise self-fulfilling (or perhaps conspicuous, as we do not have evidence that this is not the case) leisure activities, rather than prices, productivity, income and wealth. There is a potential neo-liberal paradox: on the one hand, the local marketplace frames firms as self-determining actors with responsibility for their own success, but on the other hand the price and market mechanisms encourage the provision of a service that ultimately undermines autonomous market positioning such that the choices of firms are necessarily interdependent. This research identifies pricing strategies, managerial objectives, market characteristics and socially-informed managerial decisions that

strongly influenced their measurable productivity rates. We did not identify, however, any clear indicators of productive inefficiency or productive ineffectiveness.

Further research is needed to understand the extent to which pricing strategies identified in West Somerset are peculiar to the restaurant sector and to this district, and research is needed to comprehend the extent to which other sectors and other locations experience similar well-being and life-style focused production decisions and the extent to which they underpin their region's productivity measure. The extent that these firms can follow their pricing strategies may be a reflection of their supply chains and the local market circumstances that shape firm behaviour and bind them together.

This potential neoliberal paradox and the ability of productivity measures to be blinkered towards the apparent promotion and celebration of greed are consistent with our findings for this sample of restaurants set within a tourism-dominated low productivity district of England. Future research should be geared towards identifying if these qualities are specific to this district and whether similar issues exist in other tourism dependent areas or even, more broadly, across other sectors where well-being and life-style considerations are also important, such as recreation and alternative health which can both have a rural focus. What is important, however, is that these qualities do not necessarily relate to productive effectiveness and efficiency as is expected from the rhetoric underscoring productivity debates. Indeed, the underlying rhetoric of the productivity debate is questioned here and this needs to be reflected upon in order to assess whether productivity targets should remain dominant and/or whether they should be more nuanced and context-specific or whether other socially-relevant targets that build on an area's successes or ameliorate its weakness, such as aesthetic values, opportunities or obstacles, should be foci of policymakers.

Productivity indicators are built on the assumption that firms and economies have the same objective of growing the economy in line with the neoclassical perspective of profit maximisation and this analysis calls into question whether the conventional measure of productivity should be an important measure of an area's performance and whether it is a credible target for local economies. Such indicators do not explicitly recognise that low productivity (as conventionally measured) in one area can lead to higher expenditure and growth in another area. We need to have a perspective on productivity that recognises the inter-relations between the productivity and well-being of one region and the productivity and well-being in another area. This highlights the need for other more appropriate productivity indicators that are better aligned to the circular economy which governments, such as the UK, are advocating we move towards; one such indicator is the rate of physical resource use per unit of physical output which must be sub-sector specific.

An area's productivity value might not be an indicator of resource use rates or productive efficiency at all, and might instead reflect managers' motivations towards money and the presence of local opportunities to achieve economies of scale. Given the high quality of life in the West Somerset district (measured in terms of well-being and life expectancy), reorienting managers' objectives towards enhancing their productivity values may actually reduce standards of living, which is contrary to Krugman's (1992) postulation.

References

- Azariadis, C. (1975) Implicit contracts and underemployment equilibria, *Journal of Political Economy*, 1183-02
- Azariadis, C. and Stiglitz, J. E. (1983) 'Implicit contracts and fixed price equilibria,' *Quarterly Journal of Economics* 98, 2-22
- Ball, L. and D. Romer (1991) Sticky prices as coordination failure, *American Economic Review* 81(3), 539-52
- Barro, R. J. (1997) *Determinants of economic growth: a cross-country empirical study*, MIT Press, Cambridge
- Bernstein, J. (2009) *Use suppliers' pricing mistakes*, downloaded from <http://www.controlglobal.com/articles/2009/SuppliersMistakes0906/> on 11/07/2016

- Blinder, A. S. (1991) Why are prices sticky? Preliminary results from an interview study, *American Economic Review* 81, 89-96
- Bloom, D. E. and J. D. Sachs (1998) Geography, demography and economic growth in Africa, *Brookings Papers on Economic Activity* 2, 207-295
- Brühlhart, M. and F. Sbergami (2009) Agglomeration and growth: cross-country evidence, *Journal of Urban Economics* 65(1), 48-63
- Cainelli, G., R. Ebangelista and M. Savona (2006) Innovation and economic performance in services: a firm-level analysis, *Cambridge Journal of Economics* 30(3), 435-458
- Cooper, R. and A. John (1988) "Coordinating coordination failures in Keynesian models," *Quarterly Journal of Economics* 103(3), 441-463
- Coulter, K. S., C. Pilsik and K. B. Monroe (2012) Comma n' cents in pricing: the effects of auditory representation encoding on price magnitude perceptions, *Journal of Consumer Psychology* 22, 395-407
- Curry, N. and D. J. Webber (2012) Economic performance in rural England, *Regional Studies* 46(3), 279-291
- Dal Borgo, M., P. Goodridge, J. Haskel and A. Pesole (2013) Productivity and growth in UK industries: an intangible investment approach, *Oxford Bulletin of Economics and Statistics* 75(6), 806-834.
- Fingleton, B. (2010) *European regional growth*, Springer
- Fischer, S. (1977) Long-term contracts, rational expectations and the optimal money supply rule, *Journal of Political Economy* 85(1), 191-205
- Foster, L., J. Haltiwanger and C. J. Krizan (1998) Aggregate productivity growth: lessons from microeconomic evidence, Chapter 8 in Hulten, C.R., E. R. Dean and M. J. Harper (eds) *New Developments in Productivity Analysis*, University of Chicago Press
- Foster, L., J. Haltiwanger and C. J. Krizan (2006) Market selection, reallocation and restructuring in the US retail trade sector in the 1990s, *The Review of Economics and Statistics* 88(4), 748-758
- Freeman, R. (2008) *Labour productivity indicators*, OECD
- Funke, M. and A. Niebuhr (2005) Threshold effects and regional economic growth: evidence from West Germany, *Economic Modelling* 22(1), 61-80
- Gilbert, N. (2005) *Researching social life* (2nd Edition), Sage Publications, London
- Gómez-Antonio, M. and B. Fingleton (2012) Regional productivity variation and the impact of public capital stock: an analysis with spatial interaction, with reference to Spain, *Applied Economics* 44, 3665-3677
- Gordon, D. F. (1974) A neoclassical theory of Keynesian unemployment, *Economic Inquiry* 12, 431-59
- Gordon, D. F. (1991) Comment on Blinder, A. Why are prices sticky? Preliminary results from an interview study, *American Economic Review* 81, 89-96
- Gordon, R.. (1981) Output fluctuations and gradual price adjustment, *Journal of Economic Literature*, 493-530
- Gurria, A. (2016) *Shanghai G20: Remarks at high-level seminar on structural reform*, downloaded from <https://www.oecd.org/g20/topics/framework-strong-sustainable-balanced-growth/shanghai-g20-remarks-at-high-level-seminar-on-structural-reform.htm> on 11/07/2016
- Harris, R. and J. Moffat (2015) Total factor productivity growth in local enterprise partnerships regions in Britain, 1997-2008, *Regional Studies* 49(6), 1019-1041
- HM Treasury, 2001. Treasury report "Productivity in the UK: the Regional Dimension"
- Kahneman, D. and A. Tversk (1979) Prospect theory: an analysis of decision under risk, *Econometrica* 47(2), 263-292
- Kennedy, R. F. (1968) *Speech to the University of Kansas*, 18 March, available at <http://www.jfklibrary.org/Research/Research-Aids/Ready-Reference/RFK-Speeches/Remarks-of-Robert-F-Kennedy-at-the-University-of-Kansas-March-18-1968.aspx>
- Kenney, M. and D. Patton (2005) Entrepreneurial geographies: support networks in three high-technology industries, *Economic Geography* 81(2), 201-228
- King, R. G. and R. Levine (1993) Finance, entrepreneurship and growth: theory and evidence, *Journal of Monetary Economics* 32(3), 513-542.
- Knack, S. and P. Keefer (1995) Institutions and economic performance: cross-country tests using alternative institutional measures, *Economics and Politics* 7(3), 207-227.
- Knowles, S. and Owen, P. D. (1997) Education and health in an effective-labour empirical growth model, *Economic Record* 73, 314-328
- Krugman, P. (1992) *The age of diminished expectations*, MIT Press, Cambridge MA.
- Lee, F. S. (1998) *Post-Keynesian price theory*, Cambridge University Press.
- Lichtenstein, D. R. and S. Burton (1989) The relationship between perceived and objective price-quality, *Journal of Marketing Research* 26(4), 429-443
- Lightbody, M. G. (2009) Turnover decisions of women accountants: using personal histories to understand the relative influence of domestic obligations, *Accounting History* 14(1-2), 55-78
- Mankiw, N. G. (1985) Small menu costs and large business cycles: A macroeconomic model of monopoly, *Quarterly Journal of Economics*, 529-538.

- Marrocu, E. and R. Paci (2012) Education and creativity what matters most for economic performance? *Economic Geography* 88(4), 369-401
- Marshall, J. N. (1982) Organisational theory and industrial location, *Environment and Planning A*, 1667-1683.
- Okun, A. (1981) *Prices and quantities: a macroeconomic analysis*, Brookings Institution: Washington DC
- ONS (2009) *Population estimates*, ONS
- ONS (2011) *Census 2011*, Office for National Statistics, Titchfield. www.ons.gov.uk/census
- ONS (2015) *Measuring national well-being: life in the UK*, ONS
- Rice, P., A. J. and E. Patacchini (2006) Spatial determinants of productivity: Analysis for the regions of Great Britain, *Regional Science and Urban Economics* 36(6), 727-752
- Rigby, D. L. and J. Essletzbichler (2000) Impacts of industry mix, technological change, selection and plant entry/exit on regional productivity growth, *Regional Studies* 34(4), 333-342
- Rigby, D. L. and J. Essletzbichler (2006) Technology variety, technological change and a geography of production techniques, *Journal of Economic Geography* 6(1), 45-70
- Rodriguez, F. and D. Rodrik (2001) Trade policy and economic growth: a skeptic's guide to the cross-national evidence, NBER Macroeconomics Annual 2000, MIT Press
- Sheshinski, E. and Y. Weiss (1977) Inflation and costs of price adjustment, *Review of Economic Studies*, 287-03
- Spence, M. A. (1973), Job market signalling, *Quarterly Journal of Economics*, 87, 355-74.
- Stigler, G. J. (1968) Price and Non-Price Competition, *Journal of Political Economy* 76(1) 149-154
- Stiglitz, J. E. (1975), The theory of "screening", education, and the distribution of income, *American Economic Review* 65(3), 283-300.
- Stiglitz, J. E. (1984) Price rigidities and market structure, *American Economic Review* 74, 350-355
- Stiglitz, J. E., A. K. Sen, J-P. Fitoussi (2009) *The measurement of economic performance and social progress revisited*, OFCE, France.
- Taylor, J. B. (1979) Staggered wage setting in a macro model, *American Economic Review* 69(2) 108-113
- Thomas, M. and V. Morwitz (2005) Penny wise and pound foolish: the left-digit effect in price cognition, *Journal of Consumer Research*, 32, 54-64
- Webber, D. J. and M. Horswell (2009) Winners and losers: spatial variations in labour productivity in England and Wales, *University of the West of England working paper* 0912.
- Wu, J.J. and M. Gopinath (2008) What causes spatial variations in economic development in the United States? *American Journal of Agricultural Economics* 90(2), 392-408
- UK Government Budget Report (2016) (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/508193/HMT_Budget_2016_Web_Accessible.pdf)
- You, L. (2012) A tale of two countries: spatial and temporal patterns of rice productivity in China and Brazil, *China Economic Review* 23(3), 690-703.

Figure 1: Location of West Somerset

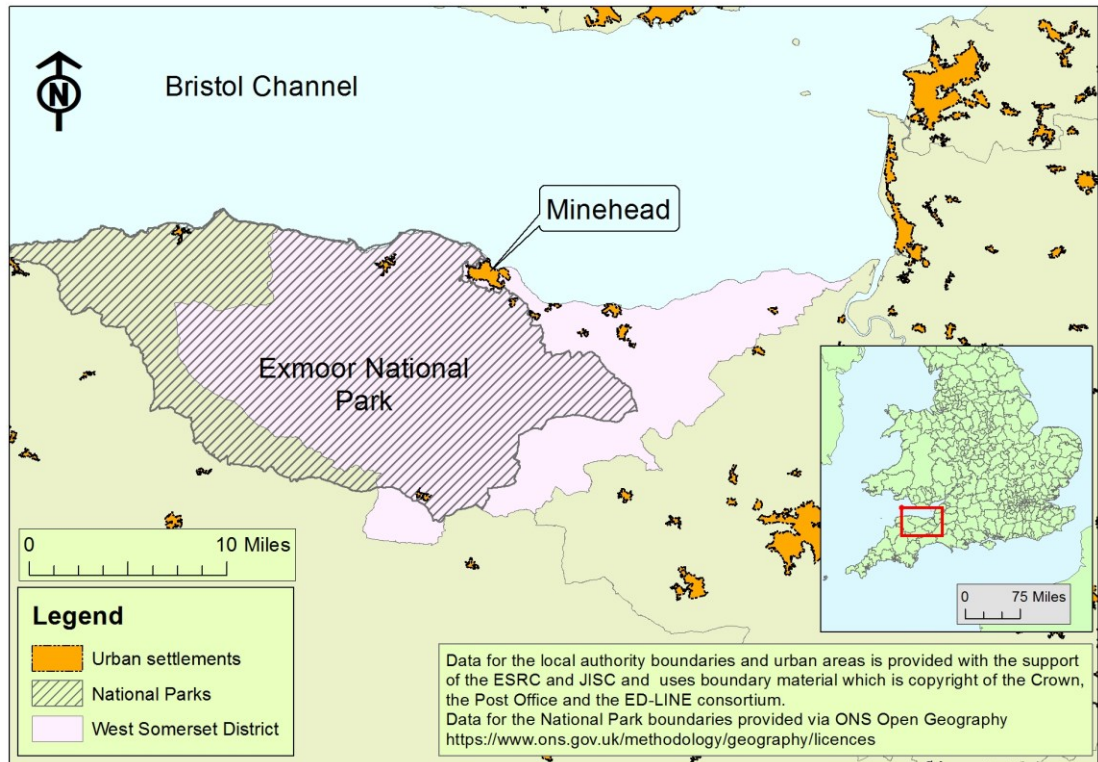


Table 1: Descriptive statistics for 2016

	England & Wales	West Somerset	Conwy
Population (2016)	63,785,000	34,300	116,500
Proportion economically active	77.8%	84.3%	76.2%
Proportion with degree, higher degree or HND	38.2%	45.2%	37.1%
Proportion of micro businesses (0-9 employees)	89.2%	89.0%	88.9%
<i>Employee jobs by industry</i>			
Mining and quarrying	0.2%	0.0%	0.1%
Manufacturing	8.3%	5.0%	2.9%
Electricity, gas, steam and air conditioning supply	0.4%	6.7%	0.9%
Water supply, sewerage, waste management	0.7%	1.7%	0.5%
Construction	4.6%	5.0%	4.7%
Wholesale & retail, repair of motor vehicles	15.8%	14.6%	18.6%
Transportation and storage	4.7%	3.3%	2.9%
Accommodation and food service activities	7.2%	20.8%	14.0%
Information and communication	4.2%	1.0%	1.2%
Financial and insurance activities	3.6%	0.4%	1.2%
Real estate activities	1.7%	1.7%	1.2%
Professional, scientific and technical activities	8.4%	3.8%	4.7%
Administrative and support service activities	8.9%	3.8%	3.5%
Public admin. and defence, social security	4.4%	1.2%	5.8%
Education	9.2%	8.3%	14.0%
Human health and social work activities	13.3%	12.5%	16.3%
Arts, entertainment and recreation	2.4%	2.5%	5.2%
Other service activities	2.0%	2.5%	1.4%

Source: Office for National Statistics (2017)

Table 2: description of sample

		Number of employees	
		Less than 5	Between 5 and 10
Length of ownership	Less than 2 years	4	1
	2 – 4 years	2	1
	5 – 9 years	6	0
	10+ years	5	4