

Culture and Place-Based Development: A Socio-Economic Analysis

Robert Huggins¹ and Piers Thompson²

¹Centre for Economic Geography
School of Planning and Geography
Cardiff University
Cardiff, CF10 3WA, UK.
HugginsR@cardiff.ac.uk

²Nottingham Business School,
Nottingham Trent University,
Nottingham, NG1 4BU, UK.
piers.thompson@ntu.ac.uk

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ABSTRACT

Cultural factors are often absent from analyses of economic change and development, divorcing the nature of social places from the economic spaces within which they are situated. In response to this, the paper seeks to both conceptualise and operationalise a framework of place-based culture. It develops a framework capturing the economic culture and community culture of places, and examines the relationship between the two, as a means of developing a broader understanding of the notion of culture than is usually considered by the extant literature. Empirically, the paper utilises Wales as a reference region, with its culture compared to other regions of the UK, along with an analysis of cultural differences found across its localities. Overall, considerable variability is found in the cultural characteristics across both regions and across localities, with the type of community culture embedded in places often found to be associated with the prevailing economic culture in these places, suggesting a strong symbiotic association.

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INTRODUCTION

The greater focus on growth and development at the sub-national level is impacting on the way that factors such as ‘culture’ and ‘identity’ are conceptualised within the political economy of places (THRIFT, 2000; BISCOE, 2001; KEATING et al., 2003; SYSSNER, 2009). This has led to calls for further analyses of regional and local culture, identity and mentality that capture concepts such as the ‘regional self’ (SYSSNER, 2009). Such analysis is considered to require a more detailed understanding of the nature of culture, and cultural change at both regional and local level, especially its significance for the development of these places (JACKSON, 1991; BISCOE, 2001; KOCKEL, 2002). Due to their relative intangibility, cultural factors are often absent from analyses of economic change and development, divorcing the nature of social places from the economic spaces within which they are situated.

In response to these calls, this paper seeks to both conceptualise and operationalise a framework of place-based – at the regional and local level – culture. To achieve this, the paper has three key objectives. First, to critically review the substantive and emerging literature in order to establish a means of defining and conceptualising the notion of place-based culture and its potential relationship with the development of these places. Second, to establish methods and measures for analysing cultural differences across regions and localities; and third to apply these methods and measures in order to generate and analyse empirical findings.

The rationale for place-based analyses of development are now fairly well-rehearsed, with sub-national spatial levels becoming increasingly important – at least relative to nations as whole – as the locus of development in the ‘age of globalisation’ (STORPER, 1997; CAMAGNI, 2002; SCOTT and STORPER, 2003; KRUGMAN, 2005; RADCLIFFE, 2006; FRITSCH and SCHMUDE, 2006; HASSINK and KLAERDING; 2012). However, the reason why some places develop more than others, and why some once successful places have failed to change in step with apparently similar places remains a matter of keen debate (WESTLUND and BOLTON, 2003; KITSON et al., 2004).

The focus on defining and conceptualising place-based culture is a reaction to the fact that although some research suggests that culture does have a causal effect on development (KOCKEL, 2002; KEATING et al., 2003; GUIISO et al., 2006; FAROLE et al., 2011; TABELLINI, 2010), most of the extant literature seeking to make the link between the cultural traits and economic performance of places has generally drawn on either the concept of social capital or institutions. Due to the adoption of the terms in many different ways,

social capital cannot be said to be a concept that robustly captures the cultural traits of places in a systematic and comparable manner (PUTNAM, 1993; 2000; FUKUYAMA, 1995; SCHNEIDER et al., 2000; BEUGELSDIJK and VAN SCHAİK, 2005). Similarly, the concept of institutions, which seeks to capture the economic and political ‘rules of the games’ (FAROLE et al., 2011), principally across nations (NORTH, 1990; 2005; ACEMOGLU and ROBINSON, 2012), does not fully address the extent to which cultural factors impinge on the adoption of these rules, or influence the establishment of such rules, within particular places. Furthermore, whilst some studies have addressed cultural aspects that can be considered to relate to either the economic systems of places or their more societal community-based systems (PUTNAM, 1993; SHANE, 1993; HAUSER et al., 2007), few studies have sought to examine both in tandem or to examine their interrelationship.

In order to address this gap, this paper develops a broad framework to capture what are termed the economic culture and community culture of places, and to examine the relationship between the two. Economic culture refers to traits relating to factors such as entrepreneurship, innovation, risk-taking, and more generally economic motivations and opportunity-development (FAYOLLE et al., 2010). Community culture, on the other hand, refers to the broader societal traits and relations that underpin places in terms of prevailing mindsets and the overall ‘way of life’ within particular places. As others have indicated, the notion of ‘community’ is a slippery concept, and can relate to societal grouping that may, or may not, be place-based (MILLER, 1992; STORPER, 2008). Such communities may also be strongly tied or rooted to prevailing economic culture or activity, e.g. communities of practice (STORPER, 2008). However, the notion of ‘community culture’ used in this paper refers principally to the social structure and features of group life within regions and localities that can generally be considered to be beyond the economic life of such places, although this not to say that one does not influence the other. Also, this is not to infer that one community culture is necessarily ‘better’ or ‘superior’ to another – in the sense that BOURDIEU (1986) views some communities as having greater endowments of ‘cultural capital’ – but that they may be differently configured. For example, a key area of contention in regional and local policy circles is the need for either social diversity or cohesion, with diversity considered almost simultaneously to be both a positive and negative factor in ensuring safety within particular communities (RACO, 2007; ROBINSON, 2007).

The empirical sections of the paper utilise Wales as a reference region, with its culture compared to that found in other regions of the UK, along with an analysis of cultural differences found across its localities. The choice of Wales as a reference region represents an

opportunity to explore how the culture of one of the UK's least economically developed regions possesses traits related to its development status, as well as to examine how local cultures differ across a region with a diverse physical and economic geography.

The remainder of this paper is structured as follows. The next section critiques the relevant literature in order to establish a place-based framework to analyse the community culture and economic culture of places, which is followed by a section contextualising the choice of Wales as a reference region. This is followed by a discussion of the methods and measures utilised to analyse culture in the empirical section of the paper. Following a presentation of the key findings of the empirical analysis, there is discussion of the theoretical and policy implications of the study, with the paper finishing with some concluding remarks.

CONCEPTUAL FRAMEWORK

This section elaborates the broad conceptual framework underpinning the paper. In summary, it argues that culture potentially plays an important role in shaping the development trajectories of regions and localities. Furthermore, it suggests that the cultural traits of these places can be conceptualised in terms of both an economic and community culture, which through their interaction determine the nature of place-based development.

Culture and Place-Based Development

In his seminal contribution, TYLOR defines culture as 'that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society' (TYLOR, 1871:1). At its most fundamental level, therefore, the concept of culture generally refers to the way in which people behave, often as a result of their background and group affiliation. Rather than concerning individual behaviour it relates to shared systems of meaning within and across ascribed and acquired social groups (HOFSTEDE, 1980). VAN MAANEN and SCHEIN (1979) suggest that culture can be defined by the values, beliefs and expectations that members of specific social groups come to share, while HOFSTEDE (1980) famously refers to it as the collective programming of the mind, which distinguishes one group or category of people from another. Such collective programming may include various facets and traits, such as language, social organisation and social stratification, education and training, the law, political economy, material culture, values and attitudes, and religion (TÖNNIES, 1957; PEET, 2000; LICHT et al., 2007; RUTTEN and GELISSEN, 2010).

In their examination of the role of culture in economic thinking, BEUGELSDIJK and MASELAND (2011) consider culture to be the collective identity of communities, suggesting that cultural analysis is traceable back to anthropological work such as MAUSS's (1925) cross cultural study of economic processes in *The Gift*. Anthropological approaches have often taken the perspective of highlighting how the culture of under-developed societies itself constrains this development. More economic approaches such as the work of HIRSCHMAN (1965) criticise the cultural constraint approach as being ethnocentrically biased, suggesting the question: can communities and societies have the 'wrong culture'? Others, such as WILLIAMSON (2000), view culture as the ultimate source of constraints. From a spatial perspective, therefore, culture can be considered as an element of the bounded rationality of places. As FAYOLLE et al. (2010) note, at national level, the connection between culture and development can be traced back to the seminal work of LANDES (1953). Others trace it to the work of WEBER (1930), which suggests an endogenous relationship between culture and development (FREDERKING, 2002; TABELLINI, 2010). Along with antecedent routes such as the work of WEBER (1930), BEUGELSDIJK and MASELAND (2011) argue that the strong influence of Marxist approaches to the examination of culture have necessarily led to its politicisation.

In the context of regional and local development in the UK, the work of MASSEY (1984) was important in drawing attention to the link between the geography of industry and work and the wider and underlying structures of society across regions and localities. Clearly couched in the Marxist tradition, MASSEY (1984) sought to understand the connections between economic structure and class relations through a lens rich in the use of Marxist terminology. Although the structure of industry and work in the UK has changed quite rapidly since MASSEY's (1984) original analysis, it remains an important analytical account of the importance of the reproduction of places as socio-economic and socio-cultural spaces and the resulting socio-spatial nature of uneven development. Although MASSEY (1984) does not engage with cultural or institutional theory in the explicit sense that we know it today, her work implicitly connects with these themes through her examination of the reproduction of inequality in the UK context. Nevertheless, there is need to move beyond a view of place-based culture framed largely by class relations.

The evolutionary nature of place-based development may limit the capability of particular places to move away from industries associated with providing a relatively low development trajectory compared with other places. Research at the national level suggests that a key means of escaping a downward evolutionary trajectory is through the development

of the efficient institutions that underlie effective economic development and prosperity (NORTH, 1990; 2005; ACEMOGLU et al., 2005; ACEMOGLU and ROBINSON, 2012). Institutions consist of the underlying 'rules of the game' relating to factors such as the incentive to save and invest, embrace competition, innovation and technological development, property rights, markets, unbiased systems of law and regulation, and the provision of public services (ACEMOGLU and ROBINSON, 2012). Whilst some of these institutions are fixed across nations, such as law, regulation and property rights, others, such as the embracement of competition and innovation, may be subject to local or regional differentiation.

Institutional theorists broadly contend that efficient institutions underlie effective economic development and prosperity (NORTH, 1990; 2005, ACEMOGLU et al., 2005; ACEMOGLU and ROBINSON, 2012). Institutionalists such as ACEMOGLU and ROBINSON (2012) contest the role of culture in development, arguing that whilst institutional differences best explain rates of development, the role of cultural differences is restricted to supporting institutional differences. Although careful to avoid the term, ACEMOGLU and ROBINSON (2012) are largely advocating that the institutions of democratic capitalism are the principal means of achieving prosperity, which could be perceived as a perspective that is ethnocentrically skewed toward the cultural values of nations with a system of relatively strong democratic capitalism. Furthermore, it is not necessarily the case that capitalist economic systems are fixed within a nation, with regional varieties of capitalism often emerging within nation states (CROUCH et al., 2009).

Although institutional thinking has tended to indicate causes of uneven development across regions, it has been argued that it has little to say about the socio-economic divisions across localities within regions, or the way that regions are reproduced through local social groups and institutions (MACLEOD, 1999; MACKINNON and PHELPS, 2001; MARTIN and SUNLEY, 2001; CUMBERS et al., 2003). In a series of works, RODRIGUEZ-POSE, STORPER and colleagues (RODRIGUEZ-POSE and STORPER, 2006; RODRIGUEZ-POSE, 2013; STORPER, 2005; 2008; STORPER et al., 2007; FAROLE et al. 2011) have developed a framework of community - which appears to represent a spatially localised notion of institutions - and society - which conversely represents spatially broader institutions - in order to better place institutionalist approaches central to regional development, in the process highlighting the importance of the geographical context in examining institutional models of economic growth. Both community and society are considered to impact on economic development through the expectations and incentives

provided to economic agents (FAROLE et al., 2011), with (national) society appearing to take the form of some kind of ‘Big Brother’ dampening, for instance, the aspirations of entrepreneurs in particular places:

‘there is clear existence of a problem of society versus community: regional entrepreneurs have low ambitions, not because they lack creativity or knowledge, but because of rational fear of the risks that come from the national (societal) environment, and this lack of generalized confidence is not counterbalanced by the alternative of solid communities that could facilitate coordination’ (STORPER et al., 2007, p. 320).

As the authors acknowledge, how these impacts vary across places is little understood, excepting that community and society effects are likely to reinforce one another (FAROLE et al., 2011), with institutions likely to be endogenously related to place-based development (RODRÍGUEZ-POSE, 2013).

Although there has been significant attention paid to the link between institutions and development, analyses of the overall consequences of culture for economic performance are still very much in their infancy, with much of the available evidence remaining scattered and diverse (ZYSMAN, 1994; HARRISON and HUNTINGTON, 2000; GLAESER et al., 2004; NORTH, 2005; BEUGELSDIJK and MASELAND, 2011). Part of the tension within both cultural and institutional analysis is reconciling the connection between the impact of economic and social structure and the agency of individuals operating within these structures, which GIDDENS (1984) has sought to tackle through structuration theory. Another approach is methodological individualism, whereby macrolevel outcomes are retraceable to individual decision-making (HODGSON, 2007). Such approaches stem from the work of MCCLELLAND (1967), which suggests a link between the extent to which individuals are motivated to achieve and the ensuing rates of development of the societies in which these individuals operate. In this vein, BEUGELSDIJK and MASELAND (2011) argue that the link between entrepreneurship and economic development is a useful one, with entrepreneurship taking the role of mediator between culture and development, corresponding with an aggregate psychological traits perspective. Scholars of entrepreneurship have similarly sought to connect entrepreneurship with wider patterns of economic development (ACS et al., 2008).

The link and intersection between economic life and social cultural relations at the place-based level has been increasingly discussed, but again without significant empirical analysis (AMIN and THRIFT, 1994; GERTLER, 1997; BEUGELSDIJK and VAN SCHAİK, 2005; HASSINK and KLAERDING, 2012). From the perspective of place-based development, however, the role of culture is central to emerging debates concerning the extent to which intervention should be either place-based or place-neutral (GARCILAZO, 2011; BARCA et al., 2012). Whilst place-neutral advocates promote the role of aspatial 'people-based' policies (GILL, 2010), place-based approaches highlights the importance of the interactions between place-based communities, institutions and geography for development and development policies, requiring researchers 'to explicitly consider the specifics of the local and wider regional context' (BARCA et al., 2012: 140). Advocates of place-based policy approaches argue that a spatially decentralised political base can allow for differentiation in regional economic policies, including entrepreneurship, and in a normative sense policy should seek to encourage diversity and experimentation across regions (MORGAN, 1997; JAMES, 2011). In an idealistic sense, the most appropriate response of policy would be the development of regional institutional systems that fit with an underlying set of cultural values, norms, and preferences (RUTTEN and GELISSEN, 2010; BEUGELSDIJK and MASELAND, 2011).

As with the economic arguments concerning the continuing and reinforced importance of places as economic 'actors' within a globalising environment, similar arguments can also be applied to the cultural sphere. As HALL (1993: 354) suggests:

'paradoxically, globalization seems also to have led to a strengthening of 'local' allegiances and identities within nation-states; though this may be deceptive, since the strengthening of 'the local' is probably less the revival of the stable identities of 'locally settled communities' of the past, and more that tricky version of 'the local' which operates within, and has been thoroughly reshaped by 'the global' and operates largely within its logic'.

Speculating on the role of culture in promoting regional economic growth, SYSSNER (2009) views it as a concept that is continually evolving, as well as something rooted, fixed and place-bound. There is, however, little underlying research that seeks to integrate both community and economic perspectives in order to provide a cohesive framework for

understanding how the social condition of particular communities relates to the economic development trajectories of the places within which communities are situated.

New concepts and measures of this social condition – for instance, ‘happiness’ – are emerging as useful constructs to better understand not only the social condition of communities, but also the social welfare of development (LAYARD, 2005). Outcomes for citizens can take a number of forms, and while much analysis has concentrated on pure financial outcomes, clearly this does not capture all aspects of welfare. Happiness or well-being provides other measures of outcomes, with the non-financial aspects of well-being being associated with factors such as greater physical and mental health (HUGGINS and THOMPSON, 2012). Place-based development, therefore, cannot be considered to relate only, or even necessarily, to the growth of places, but consists of a more complex conception concerning how places improve and get better with regard to a wide socio-economic tapestry of input and outcome factors (PIKE et al., 2007). In other words, place-based development represents a change for the better for those living and working in particular places.

Economic and Community Culture

When discussing culture, HARVEY (2001) notes that the maintenance of a sense of value depends crucially upon the type of interpersonal relationships occurring in particular places, which alludes to the notion of social capital and more especially the role of trust. Most discussions of social capital proclaim it an unqualified ‘good’, i.e. something to be maximised (ADLER and KWON, 2002; PUTNAM, 1995; DURLAUF and FAFCHAMPS, 2003; KEARNS and FORREST, 2000). However, social capital may also have a ‘downside’ in that strong, long-standing civic groups may stifle development by securing a disproportionate share of resources or inhibiting individual economic advancement by placing heavy personal obligations on members that prevent them from participating in broader social networks (OLSON, 1965; PORTES and LANDOLT, 1996; WOOLCOCK, 1998). As WOOLCOCK (1998) states, the challenge for development theorists and policy-makers alike is to identify the mechanisms that will create, nurture, and sustain the types and combinations of social relationships conducive to building dynamic participatory societies, sustainable equitable economies, and accountable states. Whilst acknowledging the importance of social capital and trust to development, it is equally important to understand the mechanisms that facilitate its creation, which would seem to be firmly rooted in the cultural characteristics of place.

Clearly, the economy interacts with a broad array of sociocultural forces, and is itself a set of material and cultural practices involved in the reproduction of existence (PEET, 1997; 2000). Historically, the apparent divide between the ‘cultural’ and the ‘economic’ stems from an outdated model of European model of civil society dating back to the 19th-century (SHIELDS, 1999). However, as PEET (2000) notes, following WEBER (1947) there is an understanding that economic rationalism consists not only of those factors that are quantitatively calculable, but also those oriented to more ultimate ends, such as ethical values. Nevertheless, the cultural traits of places are increasingly considered to be related to the norms and values underlying the economic systems of these places, especially with regard to the values associated with activities related to entrepreneurship (CASSON, 1993; MUELLER and THOMAS, 2001; FAYOLLE et al., 2010; RUTTEN and GELISSEN, 2010; HUGGINS and WILLIAMS, 2012). These traits can be considered to consist of the economic or business culture of these places, with there being an increasing emphasis on the socio-cultural aspects of the differing performance of regional and local economies, particularly in terms of their growth and innovation capabilities, with studies drawing on a range of interdisciplinary work from economics, geography and sociology (JAMES, 2005; 2011).

Culture shapes what individuals perceive as opportunities, and therefore entrepreneurial alertness is linked to judgment, creativity and interpretation (HOFSTEDE, 1991; LAVOIE, 1991; HAMPDEN-TURNER and TROMPENAARS, 1994; SAUTET and KIRZNER, 2006; HECHAVERRIA and REYNOLDS, 2009). A culture supportive of entrepreneurship may make it possible for economic actors to take advantage of perceived opportunities (CARREE et al., 2002; SAUTET and KIRZNER, 2006; FAROLE et al., 2011; HUGGINS and WILLIAMS, 2012). Places with an entrepreneurially-conducive culture may increase their economic advantage by attracting investment, skills and talent (TUROK, 2004). In particular, places with strong entrepreneurial traditions may reproduce these advantages if they are able to perpetuate them over time and generations (AUDRETSCH and FRITSCH, 2002; BEUGELSDIJK and NOORDERHAVEN, 2004; PARKER, 2004; MUELLER, 2006). FLORA and FLORA (1993) suggest that with local economies facing increasing responsibilities to provide for their own well-being and development, ‘entrepreneurial social infrastructure’ is a necessary ingredient for successfully linking local business communities, particularly as people often appear to learn more from like-minded individuals.

With regard to concept of community culture, it is important not to conflate the conception of ‘community’ with that of ‘place’, which are analytically distinct – although strong communities are often embedded in specific places (MILLER, 1992; STORPER,

2008). Like culture, the meaning of the term community is ambiguous, often referring to either a morally valued way of life or social relations in a discrete geographical setting (AGNEW 1989, MILLER, 1992). In essence, community culture refers to the overarching or dominant mindsets that underlie the way in which places function in a broader societal sense, i.e. the ways and means by which individuals and groups within communities interact and shape their environment. In the sense of place-based community culture, the definition broadly concerns the 'way of life' and the social relations underpinning this within a geographically specific setting.

Places consist of what has been termed 'the location of culture' and 'the space of the people' (BHABHA, 1994). MASSEY (2004) refers to a 'global sense of place' within which localities are formed in part as a product of relations which spread out beyond it. HUDSON (2001) suggests that space refers to the economic evaluation of a location, principally its capacity for profit, with place referring to the social evaluation of location based on meaning. To this extent, therefore, community culture can be considered a place-bound phenomenon, whereas economic culture refers to behaviour and systems within an economic space that may have a mix of both place-bound and more business-bound characteristics. These business-bound characteristics will generally relate to the wider networks within which economic actors operate and function. FLORIDA (2002) has suggested that particular community culture traits of cities influence their performance as economic spaces. This suggests a synergistic relationship between space and place (JOHNSTONE and LIONAIS, 2004). However, whilst deprived communities may have lost much of their economic rationale as space, they may retain the social relations of place (FISCHER, 1977; LEE, 1989; JOHNSTONE and LIONAIS, 2004).

MOULAERT and NUSSBAUMER (2005) refer to the term 'community' to define the nature of human interactions within groups that can be defined according to geographic, sociological, political or economic considerations, whereby 'local communities' are considered as an appropriate level for practices related to improvement through social innovation. In this sense, cultural concepts such as collective action can be conceptualised as a continuum of forms of action coordination, with specific actions deriving much of their impetus from the characteristics of community and place (HABERMAS, 1989; MILLER, 1992).

The notion of community is associated with the nature of social ties and interaction, as well as the nature of the morality and behavioural norms present and practiced within localities (GERSON et al., 1977; SMITH, 1999). In theorising the concept of community

culture, it is useful to consider that key concepts, such as the ‘structure of feeling’ and ‘knowable communities’, have stemmed from the groundbreaking work of the Welsh cultural scholar Raymond Williams who famously stated that ‘culture is ordinary’ (WILLIAMS, 1958; LONGHURST, 1991). Adding culture to the attributes of places has the impact of making rather commonsensical notions of locality and community quite complex concepts (GUPTA and FERGUSON, 1997). Interestingly, WILLIAMS (1989) argued that the culture he encountered during his time at Cambridge University was sadly wanting compared to that of the Welsh ‘Border Country’ in which he was brought up (HALL, 1993).

Figure 1 indicates how community and economic culture may interact. Both economic and community culture may directly impact upon economic and societal well-being outcomes (BEUGELSDIJK and NOORDERHAVEN, 2004). Well-being, for example, may be positively associated with the business community where satisfaction is obtained directly from work-related activities, as opposed to the payment received for these activities. Community culture may improve economic outcomes whereby collective action helps overcome coordination failures (HALL and SOSKICE, 2001). In this sense, community culture may complement, and in some situations substitute, for formal institutions in the process of economic development (NORTH, 1990; RODRÍGUEZ-POSE and STORPER, 2006; FAROLE et al., 2011). It may also: allow the generation of social capital and trust (FUKUYAMA, 2001; PUTNAM, 2000; BOWLES and GINTIS, 2002; BEUGELSDIJK et al., 2004), leading to a reduction in transaction costs (STORPER, 1997); alleviate the dangers of opportunistic behaviour and moral hazard (STREECK, 1992; PUTNAM, 2000); help overcome informational asymmetries (GRANOVETTER, 1985; WADE, 1987); and match individual and aggregate interests (RODRÍGUEZ-POSE, 2001). BOWLES and GINTIS (2002), for instance, refer to the notion of community governance consisting of small group social interactions that, along with the more traditional and acknowledged roles of the market and state, determine economic outcomes.

A ‘stronger’ community culture, however, may in itself not always lead to a stronger economy. An over reliance on community, rather than formal institutions, can open a community up to the dangers of rent seeking by individuals at the expense of the group as a whole, as well as the existence of insider-outside problems whereby the existing community benefits at the expense of those who are not members (TRIGILIA, 1992; FAROLE et al., 2011). Also, whilst trust may be developed with communities, it may not be the type of generalised trust required for economic development (RODRÍGUEZ-POSE and STORPER, 2006). As such, not all close-knit communities will have positive effects on economic

development (RODRÍGUEZ-POSE, 2001; MARTIN and SUNLEY, 2003; STORPER, 2005). Therefore, it is the nature and interaction between community culture and institutions which is likely to be of greatest importance, with both potentially able to offset the weaknesses of the other (NORTH, 1990; RODRÍGUEZ-POSE and STORPER, 2006; FAROLE et al., 2011).

Finally, communities may have to fit with the physical environment within which they are based, whilst cultures may also drive the development of the physical and built environment, either positively or negatively.

Figure 1 About Here

CULTURE IN THE CONTEXT OF WALES

Located on the western edge of the UK, Wales is a region with a population of some 2.9 million people (5% of UK citizens). The economy has traditionally depended upon industries such as farming, mining and quarrying and steel making, which have declined in significance over a number of years. This decline has given rise to a more diverse economy, although the region is still emerging from a fundamental restructuring of its economic base. Overall, the performance of the Welsh economy has lagged that of the UK as a whole over the latter part of the twentieth century and into the twenty first century (CHATTERJI and DEWHURST, 1996; JONES and HENLEY, 2008). In 2001, the gross value added per head in Wales was 77.1 percent of the UK average, and this fell further to 74.3 percent by 2009. This pattern of lagging performance is evident in labour market measures, including economic activity and unemployment rates. There is also greater relative employment in the public sector compared to the more prosperous regional economies of the UK, suggesting a reliance on the state to compensate for a weaker indigenous business community.

Over the last two centuries, Wales has shifted from a mainly agrarian economy to one that was at heart of the industrial revolution largely due to the exploitation of its reserves of natural resources, principally coal (MORGAN; 1997; 2012). From the latter part of the 1800s onwards, large extractive industries along with the manufacture of steel began to dominate the Welsh economy, creating large numbers of new jobs and attracting significant numbers of migrant workers (JONES, 1984; WILLIAMS, 1950). However, the subsequent decline of these industries and the deindustrialisation occurring across the UK as whole left Wales with deep structural weaknesses in its economy, which it is still struggling to overcome.

In hindsight, it is clear that Wales has suffered from economic and political institutions that were innately 'extractive' (ACEMOGLU and ROBINSON, 2012), with the power underlying the prosperity generated by its economy lying in the hands of a small elite of coal barons and industrialists. Nevertheless, once the entrepreneurs behind these industries departed, Wales was left with little institutional infrastructure or innovative capacity (MORGAN, 1997; 2012). In particular, during the 1970 and 1980s employment in the once dominant coal and steel industries collapsed (MACKAY, 1992; ALDEN 1996). Since then, Wales has not been able to regenerate and convert itself toward a high value service or advanced manufacturing economy with the same success as other parts of the UK such as the south east of England (ROBINSON et al., 2012; BLACKABY and MURPHY, 2009). These issues remain particularly acute in the south Wales valleys localities. In particular, the lack of a spirit of entrepreneurship has been linked to an industrial legacy that did not produce a 'middle-class' strata of Welsh culture and society embedded with capacity to even consider business ownership (MORGAN, 1980; MASSEY; 1984).

For some, both the uprising and downfall of the coal and heavy manufacturing led to the emergence of a political economy in Wales in which a highly collective culture is manifest: 'The place-bound politics arising out of the experience of class solidarity and gender relations in Wales is radically different from the more abstract conceptions held by academics and party leaders' (HARVEY, 2001: 176). Others suggest that religion and the history of nonconformist religious denominations in Wales has helped shape the economic culture of Wales, such as the organised discipline of the miners of south Wales (BEYNON, 1973; MASSEY, 1984). The nature of this culture has also impacted on perception toward economic change by the workforce in Wales: '...we hear, as though it were patently funny, that Welsh ex-miners cannot be expected to turn their attention to making marshmallows, or underwear. What is at stake is....the uniqueness, the status, and the masculinity, of working down the mine' (MASSEY, 1995: 2003).

It has suggested that due to historical and political processes, Welsh people suffer from a feeling of inferiority, often perceiving themselves as second class citizens in comparison with their English counterparts (THOMAS, 1992). In particular, union with England is often perceived by the Welsh as resulting in a process of cultural homogenization (DAVIES, 1987; CLIFTON, 2011). Either way, defining a Welsh identity and culture across time is no easy matter (BOWIE, 1993; CLIFTON, 2011), with some suggesting that there is no 'natural' Welsh identity: 'a country called Wales exists only because the Welsh invented it. The Welsh exist only because they invented themselves' (WILLIAMS, 1985, p. 2).

However, the fact that Wales has its own language, which is considered to be one of Europe's oldest, indicates a quite deep-rooted ethnic and cultural Celtic identity (COOKE and REHFELD, 2011). Although the proportion of Welsh speakers in Wales has declined over a number of years, there have been sustained efforts to revive it with, for instance, the Welsh Language Act in 1993 and the Government of Wales Act in 1998 providing that the Welsh and English languages be treated on a basis of equality (CLIFTON, 2011).

Administratively, Wales is one of the 12 government office regions (GORs) of the UK. In recent years, it – like Scotland and Northern Ireland - has achieved a degree of political autonomy from the UK government through the process of devolution. The National Assembly for Wales became operational in 1999, with its elected Welsh Government having responsibility for developing economic policies within the context of central UK policy frameworks, giving policy-makers in Wales more autonomy than previously. However, the fiscal powers of the Welsh Government are limited with no tax raising powers, and finance provided via a block grant from the UK Government. Recent political and academic discourse concerning devolution has tended to stress the economic advantages of the transfer of power from national to sub-national institutions, characterized as the 'economic dividend' of devolution (RODRÍGUEZ-POSE and GILL, 2005). Unfortunately for Wales, however, despite political devolution it remains trapped in a vicious cycle that continues to erode its development and lower standards of living for its citizens.

Although Wales has had a growing degree of autonomy in recent years to establish policies tailored to creating interventions best suited to catalysing economic development, as yet there is little evidence of economic returns accruing from these interventions. Compared with many other regions, Wales barely engages in the global economy (HUGGINS and KITAGAWA, 2012). More generally, devolution has not been able to address the underlying problems of the Welsh economy to any great extent, with Wales continuing to experience low levels of innovation and entrepreneurial activity in comparison with other UK regions (ROBINSON et al., 2012). Of the twelve regions in the UK, Wales is the least economically competitive (HUGGINS and THOMPSON, 2010). It has the lowest level of GVA per capita of all UK regions, coupled with levels of pay, productivity, employment and economic activity that are all significantly below the UK average.

Across Wales there is also significant variation in economic performance and development, which can be categorised with three broad types: (1) areas with significant urban and city development, which along with the capital city Cardiff includes Newport, Swansea, and Wrexham; (2) the wider south Wales Valleys sub-region, which was previously the coal

mining and industrial heartland of the Wales, but for many years has been engaged in a process of economic restructuring (with the localities consisting of Blaenau Gwent; Bridgend; Caerphilly; Merthyr Tydfil; Neath Port Talbot; Rhondda, Cynon, Taff; and Torfaen); and (3) localities with significant levels of rurality, and agricultural dependence, consisting of Anglesey, Carmarthenshire, Ceredigion, Conwy, Denbighshire, Flintshire, Gwynedd, Monmouthshire, Pembrokeshire, Powys, and the Vale of Glamorgan. In general, economic conditions are far from uniform across Wales. This is recognised by the division between the more rural North and West, which along with the industrial South Wales valleys have for a number of years qualified for Objective 1/Convergence assistance from the European Union. Disparities in economic conditions across Wales are also evident in terms of the unevenness of earnings.

MEASUREMENT AND METHOD

This section outlines the measures and methods used to analyse place-based culture in the second part of the paper. It first outlines the empirical measures utilised, and second, it outlines the mode of analysis used to compare culture across regions and localities.

Measuring Place-Based Culture

The remainder of this study seeks to empirically measure and examine a range community culture measures, as well as economic culture measures principally related to entrepreneurial attitudes and actions. The measures developed are guided by the existing literature exploring culture, and are intended to capture a range of different aspects of the prevailing culture that are likely to be relevant when considering the history and future development of places (FLETCHER, 1983).

There has been considerable work examining different types of economic systems, but less that specifically examines the impact of community culture on the economic culture of places. This is not to say that business and economy has been seen as completely divorced from the cultural environment, with HOFSTEDE's (1980) seminal work developing the dimensions of culture, which has led to the establishment of a stream of literature examining this issue in considerable depth. Whilst HOFSTEDE's work was based around a specific survey of individuals within one large international organisation, IBM, the findings from his work have been adapted and applied to a variety of settings, especially at the national level (see KLYVER and FOLEY (2012) for a review).

Although, not always keeping to the principles set out by HOFSTEDE, most studies have frequently looked for evidence of the principle constructs of culture he identifies, in particular: (1) power distance – indicating the extent to which a society expects and accepts inequalities between its people, and an unequal distribution of power and responsibility within its institutions and organizations; (2) uncertainty avoidance – related to the extent to which countries and their institutions establish formal rules and fixed patterns of operation as a means of enhancing security and of avoiding ambiguity and doubt; (3) individualism-collectivism – related to the degree to which people in a country prefer to act as individuals rather than members of groups; (4) masculinity-femininity – the more ‘masculine’ a society the more it values assertiveness and materialism (promoting competition, meritocracy, decisiveness and strong leadership). ‘Feminine’ societies promote harmonious relations in the workplace; (5) long-term-short-term orientation - with the ‘long-term’ relating to factors such as thrift and perseverance, and short-term values to respect for personal tradition and social obligations.

The difficulty with transferring HOFSTEDE’s findings from an organisational to a place-based setting is that there is often greater within group (community, country) variation than between group variation, and outside the like-for-like comparison of individuals undertaking the same roles within the same organisation in different nations, contextual elements are likely to have a substantial effect. This is likely to be further influenced by any self-selecting elements of the occupational and non-occupational roles that individuals choose. Nevertheless, the cultural dimensions identified by studies such as HOFSTEDE are important starting points for studying differences in community culture. Therefore, whilst acknowledging the limitations, as a pragmatic starting point the empirical assessment in this study draws on HOFSTEDE’s (1980) original national level typology as means of configuring a series of indicators allowing broad measures of different facets of place-based culture. With this in mind, the framework consists of five measures of community culture: (1) attitudes to work and education; (2) social cohesion; (3) work life balance, feminine and caring activities; (4) risk taking and social rules; (5) collective action and equality; and (6) an overarching measure of economic culture utilising entrepreneurship as an appropriate conceptual lens. The conceptual rationale and the means of empirical measurement for each of these components is discussed below (with a full list of the indicators employed presented in Appendix Table 1).

Attitudes to work and education – attitudes toward work and education are in many ways related to the extent to which individuals place a strong emphasis on self-sufficiency

and making a contribution to society (GREGSON et al., 1999; BRENNAN et al., 2000). However, in order to accomplish this, the correct investments in human capital must be made and this requires a long-term orientation. This means that much of this measure is closely associated with HOFSTEDE's (1980) long-term/short-term orientation measure. As a means of capturing these traits, indicators of economic activity and educational attainment and participation are utilised.

Social cohesion – the social capital formed within a community may be strongly influenced by the extent to which there is a cohesive and uniform group that makes up the majority of the community population. Some evidence has suggested that group membership symbolising this is correlated with stronger economic growth (KNACK and KEEFER, 1997; ZAK and KNACK, 2001; BEUGELSDIJK et al., 2004; GUIISO et al., 2004). Equally, if groups within a community are deeply divided this can hold back economic growth, as generalised trust will be reduced (EASTERLY and LEVINE, 1997; AGHION et al., 2004). To capture the extent to which there is a homogeneous community, indicators of ethnic and religious similarity are utilised, along with measures based on gross migration. Existing studies have used variables as diverse as: the presence of sports and cultural associations, newspaper readership, voting behaviour, and the presence of non-governmental organisations to capture participation in community activities and decision making (HELLIWELL and PUTNAM, 2000; PAXTON, 2002; DURLAUF and FAFCHAMPS, 2003). Following this approach, the proportion of the population stating they belong to any religion and voting in general elections are also utilised to capture participation.

Work life balance, femininity, and caring activities – although individualist and competitive societies may achieve greater economic success, this is not necessarily the case if competition is too great. Conflict and violence can result, with fractures appearing within the community. The market offers an opportunity for this competition to be used in a less destructive manner than could be the case. However, there is still potential for resources to be wasted; for example, the desire to possess certain goods without regard for the generation of negative externalities on others (HIRSCH, 1977), or where higher income levels do not necessarily lead to greater well-being (EASTERLIN, 1974). This means that although many of the traits associated with business activities are often thought to be masculine in nature (BENNETT and DANN, 2000; BRUNI et al., 2004), in order to achieve higher levels of well-being and greater work life balance, lower working hours and greater flexibility may also be beneficial (HUNDLEY, 2001). Social norms and expectations may result in contrasting effects on male and female welfare as differing domains take precedence for each

gender (PARASURAMAN et al., 1996). As means of measuring these cultural differences the following indicators are employed: female economic activity; female part-time employment, and rates of unpaid care provision.

Risk taking and social rules – most of the measures relating to risk taking activities available at the place-based level generally relate to subversive activities, which may lower the opportunity for mutually beneficial collaboration within a community, since social conventions reinforced by reputational effects are required as coordination tools through information gathering activities (LORENZEN, 2007). There is even a danger that if unchecked such subversive activities could become the social norm and be seen as being acceptable (KEARNS and FORREST, 2000). Where this is the case, the level of trust within the community is likely to fall, plus it will be harder to form bridging ties to other communities, as individuals from within those communities are likely to suffer from a stigma effect (ATKINSON and KINTREA, 2001). Based on these issues and the availability of data, the following indicators are utilised: personal insolvencies, alcohol related deaths, underage conceptions, as well as rates for a range of differing forms of crime.

Collective action and equality – it is unclear whether a more individualistic or collective cultural approach is more conducive to economic development, with there being potentially benefits from both cultural systems. In more individualistic systems although less trust may be built up within the community, the community may possess a greater propensity toward market activities. More collective systems can create greater trust within groups, but any ‘aggressive’ tendencies must usually be directed outwards at other groups (GREIF, 1994; CASSON, 1995; ETTLINGER, 2003). Closely associated with collective action is a desire for equality or greater equity, and where this is the case the rewards achieved by successful business men and women, or other successful agents, may be viewed less positively by the remainder of the community. Community enterprises may be viewed as one way of boosting all community members’ welfare, providing an equity driven collective approach that can be twinned with incentives for greater enterprise (CASSON, 1995). In order to capture collective action and equality, the following indicators are employed: membership of trade and credit unions; election voting patterns; and the proportion of the population considering they prefer equal living standards.

Clearly, *economic culture* can be measured in many different ways, and one means is to consider cultural traits related to entrepreneurship. Although some measures are objective, and may not necessarily identify the key mechanisms determining the nature of the economic system of a locality or region, others are more subjective, and provide a better indication of

the intentions of both individuals and firms with regard to economic activity. Drawing on models of entrepreneurial intentions, such as AJZEN's (1991) theory of planned behaviour and SHAPERO's (1982) model of the entrepreneurial event, the key potential components of entrepreneurial culture are: (1) the nature of existing businesses; (2) entrepreneurial activities; (3) the attitude of the population in terms of becoming involved in the business community, in terms of the perceived desirability and feasibility of entrepreneurial activities. These key components of entrepreneurial economic culture are likely to be inter-related with causality often running in both directions (BEGLEY and TAN, 2001; SCHERER et al., 1989; KRUEGER, 1993). The three key components are given an equal weighting in the overall economic culture measure (see Appendix Table 2 for a full list of weights and measures).

The potential for path dependency in economic development means that the existing business community will play an important role (BOSCHMA, 2004; MARTIN and SUNLEY, 2006). To capture the strength of the business community in terms of scale, the number of enterprises present and actual established business ownership as scaled by population are included. Some business communities are perceived to be more or less suited to job creation, the development of new business ideas and venture creation than others (CARREE et al., 2002). Particular business and labour market structures are perceived to encourage new venture creation, such as employment within existing small and medium sized enterprises (SMEs), employment within the service sector, and non-public sector employment. However, not all new ventures that are created are growth and innovation orientated (THOMPSON et al., 2007). Also, the potential of the business community to encourage entrepreneurial activities depends on the activities undertaken and the knowledge resources available in particular that embodied by skilled individuals (FLORIDA, 2002). To capture growth and innovation within existing businesses, measures include: growth intentions; and knowledge resources in the form of employment as managers, professionals, and associate professionals; the proportion of knowledge based firms; and firms pursuing innovation activities.

Although a number of authors such as BINKS et al. (2006) and KWONG et al. (2012) have noted that restricting the definition to entrepreneurship to new venture creation is inappropriate, given the importance of entrepreneurial activities in the wider economy and society, this is the most commonly used measure of entrepreneurial activity in the literature and therefore it is incorporated as a key component in its own right. Broader measures of entrepreneurship are likely to be captured in the existing business ownership component discussed above.

The measures included to capture entrepreneurship are: new business creation scaled by existing business stock and population; nascent entrepreneurship and new business ownership capture the prevalence of entrepreneurs rather than businesses and are discussed in more detail below; entrepreneurial finance from both formal venture capital sources and informal investors. SHAPERO's (1982) feasibility and desirability constructs leading to entrepreneurial activities are generated using measures from the Global Entrepreneurship Monitor (GEM). These are discussed in more detail below, but entrepreneurial desirability is captured by: perceptions of entrepreneurship being a good career; entrepreneurs being seen as having high status; and there being good media coverage of entrepreneurship. Entrepreneurial feasibility is captured by the following measures: perception of possessing entrepreneurial skills (entrepreneurial self-efficacy); knowing someone who started a business in the last two years (entrepreneurial social capital); and expectations of being involved in a business start in the next three years (entrepreneurial intentions).

As discussed above in order to capture measures on attitudes towards entrepreneurship and entrepreneurial activities data are drawn from the Global Entrepreneurship Monitor (GEM) survey, in particular the UK GEM survey. A number of these measures are utilised as dependent variables in the analysis of microdata, and therefore require greater explanation. Running since 1999, the GEM study is the largest internationally comparable study of entrepreneurship in the world with 59 economies involved in the 2010 survey, representative of 52 per cent of the world's population and 84 per cent of GDP (KELLEY et al., 2011). The objective is to develop a number of internationally comparable measures of not only entrepreneurial activities, but also attitudes towards entrepreneurship (REYNOLDS et al., 2005; BYGRAVE et al., 2003; LEVIE, 2007).

In terms of entrepreneurial *activities*, four measures representing different levels of involvement and stage of development are included in the analysis: (1) entrepreneurial intentions – those expecting to be involved in a business start within the next three years; (2) nascent entrepreneurship – those that have actively undertaken efforts to start a business, which they will own or part own and manage (the venture must not have paid profits or wages for three or more months to qualify); (3) new business ownership – those that own or part own ventures that they manage and have been paying profits or wages for between three and 42 months; and (4) established business ownership – those that own or part own ventures they manage and which have been paying profits or wages for over 42 months.

Alongside entrepreneurial activities, the items outlined below from the GEM survey measure *attitudes* toward entrepreneurship: (1) Entrepreneurial Social Capital - do you know

someone personally who started a business in the past 2 years? (2) Opportunity Perception - in the next six months will there be good opportunities for starting a business in the area where you live? (3) Entrepreneurial Self-Efficacy - do you have the knowledge, skill and experience required to start a new business? (4) Fear of Failure - would fear of failure prevent you from starting a business?

Mode of Analysis

Within this study, analysis is conducted at three different levels: regional, local, and micro (individual attitudes and actions). First, an analysis of the relationship between community and economic culture across the twelve standard UK government office regions, taking the region of Wales as our reference point. Second, an analysis of the relationship between community culture and economic culture at the local level within Wales, utilising data from across 22 local authority district areas. For these first two stages of analysis, the indices for each of the cultural components are formed using the logged terms to reduce the influence of outliers and skewed distributions. Indices of each measure are formed on the basis of the UK average value. The combined cultural indices are then formed with weights included to ensure the main constructs within each are given an equal weighting, as shown in Appendix Tables 1 and 2. Some of the items were only available at either the local authority or regional level, and therefore the individual item weightings used in the two indices are slightly different. However, the weightings for the overall constructs are the same. For example, at the local authority level missing data for some female alcohol related death rates mean only the male alcohol related death rate is included, while at regional level rates for both males and females are included.

The third level of examination consists of a multivariate regression analysis examining the association between the entrepreneurial orientation of individuals in Wales and the local place-based community cultures in which they live. The regression analysis aims to provide a more robust examination of how community culture influences the decisions of the individual members of the population controlling for other personal and environmental influences on attitudes towards entrepreneurship and involvement in entrepreneurial activities in Wales. Between 2005 and 2007 the GEM study was given additional funding from the European Social Fund and Welsh Government, which expanded the survey to approximately 8000 respondents annually. Pooling the data for the three years ensures that a relatively large number of observations are available in each of the 22 local authority areas in Wales. In total, the expanded GEM surveys in Wales provide just under 15,000 observations for *entrepreneurial activity* where all controls for personal characteristics described below are

available. Even though only half the sample are asked to provide responses to those items investigating *attitudes towards entrepreneurship*, this still provides a minimum of 7722 observations.

The entrepreneurial activity and attitude measures take the form of binary items where the activity or attitude is either present or not. This means when used as the dependent variable, ordinary least squares (OLS) estimation is inappropriate, and instead a binary logistic regression approach is adopted. The personal characteristics controlled for are those found in previous studies to be associated with greater entrepreneurial orientation and involvement, in particular: gender- men have consistently been found to be more likely to be entrepreneurs than women due to factors such as greater risk aversion (BRUSH, 1992; GALLOWAY and LEVIE, 2001); and age – representing accumulated experience (SIEGEL et al., 1993; KIM, 2007). The ability to make a return from entrepreneurship may also recede as age increases, with the time to recoup any investments declining (LÉVESQUE and MINNITI, 2006). To allow for a non-linear relationship, a squared age term is also included. Both age terms are centred around the mean age of the population to reduce problems with collinearity and make a zero value more meaningful (COHEN et al., 2003).

A further measure of personal human capital included in the analysis is educational qualifications. Studies suggest a positive relationship exists between formal schooling and training and entrepreneurial success, in particular opportunity perception (ROBINSON and SEXTON, 1994; ARENIUS and DE CLERCQ, 2005; VAN DER SLUIS et al., 2006). Dummies representing the highest levels of qualification achieved are included, as is a dummy for those holding vocational qualifications, which are often associated with those occupations over-represented in self-employment. Employment status is also considered, as this is likely to have a substantial impact on the differing networks that individuals have access to. For example, lower levels of human, financial and social capital may be constraints for the unemployed (NAHAPIET and GHOSHAL, 1998; ARENIUS and DE CLERCQ, 2005).

For entrepreneurial intentions, whether employment takes the form of an established business owner is separated from other employment, as studies such as WESTHEAD and WRIGHT (1998) have previously found motivations to differ for habitual entrepreneurs relative to their more novice counterparts. As a more direct measure of the availability of financial capital, household income is included.

Migration status - life-long resident of the region; in-migrant from elsewhere in the UK; and immigrant to the UK - is used to control for the lower risk aversion associated with

the more geographically mobile. Those moving into a new area may also view local conditions differently and perceive different opportunities to those more strongly embedded in the locality. A control for social capital issues at a personal level is a dummy relating to whether the respondent is a fluent Welsh speaker, as this may provide differing opportunities (JONES-EVANS et al., 2011). As previously noted, both community culture and attitudes towards entrepreneurship are likely to be influenced by the physical characteristics of localities such as their rural or urban characteristics and/or infrastructure present. In order to control for such influences, the rural or urban nature of the locality is included (COUNTRYSIDE AGENCY, 2004).

FINDINGS

This section presents the key empirical findings stemming from the study, consisting of the following: (1) a comparison of the cultural differences found between Wales and other regions of the UK; (2) a comparison of the cultural differences across the localities of Wales; and (3) an investigation of the association between community culture and economic culture – as measured through the lens of entrepreneurship – at the local level in Wales.

Regional Cultural Differences

The development of regional cultural indices, as summarised in Table 1, facilitates an understanding of differences and similarities in the cultural attributes between Wales and other regions based on the typology developed above. First, in terms of attitudes to work and education, it is no surprise that those regions achieving the highest levels of embracement of work and education are those with the strongest economies. More entrepreneurial migrants might be expected to move to such regions, leaving the less entrepreneurial in those regions with weaker resource allocations (CASSON, 1995; MIN and BOZORGMEHR, 2003; LEVIE, 2007). Unfortunately, Wales with its concentrations of social and economic deprivation displays the lowest score of the regions.

Based on the index of social cohesion, those regions attracting higher levels of migration from both within and outside the UK are generally towards the bottom of the table. London, in particular, with its high levels of inward migration from other parts of the UK and the rest of the world, displays a low level of social cohesion. There is less homogeneity of the population, and understandably a lower proportion of the capital's population identify themselves as English. London is also found to lag behind in terms of political engagement with low election turnout levels relative to the UK average. There is much less variation

between the remaining regions. With their shared industrial heritage, the north of England and Wales, display characteristics that would be associated with greater social cohesion.

Overall, Wales displays a high level of feminine or caring characteristics, achieving the highest ranking on this scale. Other regions rating highly under this measure have similar traditions of heavy industry, such as the North East and the West Midlands. Those regions traditionally seen as more dynamic, particularly London and the South East, appear to display lower levels of caring attributes. The greater emphasis on individualistic productive activities might be seen as beneficial, but where competition is excessive this may reduce trust in the community (MILLER, 1992; GREIF, 1994; CASSON, 1995).

Wales' risk and social rules regional index score is in line with the UK average, London - along with the other core regions of the East of England and South East - score highly. In terms of collective action and equality, Wales also compares favourably with the rest of the UK, with only Scotland scoring higher. At the other end of the spectrum is South East England, which perhaps is relatively unsurprising. Overall, it is clear that there are more collective and equality driven preferences in Wales compared to the UK average. In particular, estimated trade union membership is found to be higher, especially where there is a greater tradition of manufacturing activity.

As for economic culture, Wales ranks mid-table, but this is a long way below the leading regions of London and the South East. Ultimately, it appears that the existing Welsh economic culture is not enhancing new entrepreneurial activity, with the feasibility of such activities perceived to be relatively low. Desirability of entrepreneurship is around the UK average, perhaps reflecting the relatively low opportunity costs for much of the Welsh population.

In terms of the interactions between the economic culture and community culture variables, at the regional level, correlation analysis finds that greater social cohesion is negatively related to the perceived entrepreneurial feasibility and activity. Also, entrepreneurial activity, perceived feasibility and the existing business community are negatively associated with greater collective action.

Table 1 About Here

Local Cultural Differences

As well as differences across regions, the indices also provide a means of comparing cultural differences across localities in Wales, as summarised in Table 2. First, those localities displaying the greatest embracement of education and employment are most frequently found

in the more prosperous areas of Wales, but also to a lesser extent the larger urban agglomerations. The more rural areas of West Wales, on the other hand, are often towards the bottom of the rankings, but generally above the South Wales Valleys communities.

Conversely, it is the larger cities in South Wales that appear to have the lowest levels of social cohesion. Interestingly, the Valleys localities all rank above the larger cities. This perhaps indicates the stronger community links within localities dominated by smaller towns with a more homogenous population, even in the presence of higher levels of deprivation. The more rural north and west, as expected, display the highest levels of social cohesion. As might be expected for a relatively small nation, there is a stronger national identification than the UK average, although this is lower in those localities near the border with England and the more multicultural Cardiff.

It is the industrial South Wales Valleys localities where greater work life balance and caring appears to be most present in the community. Similarly, in the more rural areas of Wales and the capital, Cardiff, femininity is still generally above the UK average, but relatively low in Welsh terms. Generally, Welsh localities have above average provision of unpaid care to that of England and Wales as a whole. The localities displaying the highest levels of unpaid care are the old industrial areas of South Wales. Although still above the UK average, Cardiff, and the more rural central and western Welsh localities, display lower levels of unpaid care provision.

In terms of risk taking and social rules, some of the more rural localities of Wales display higher levels of alcohol abuse, as do some of the more urban areas in South Wales. In terms of underage conceptions, the South Wales Valleys display the highest prevalence. The recorded crime rates reflect a disregard for property and social norms. As might be expected, the more rural localities in Wales display a lower crime rate per head. The larger cities fare less well with Newport displaying relatively high levels of criminal activity as measured by all three variables.

The northern and western localities in more rural areas of Wales rank highly on the collective action and equality index. The only locality not achieving a collective action equality index value representing a level above the UK average is Powys. Monmouthshire displays the next lowest preference towards collective action. A political reflection of more egalitarian objectives may be support for more left-of-centre parties. Both the South Wales valleys and the more rural areas of Wales generally show greater involvement. This preference for collective action is reflected in support for left-of-centre political parties, with

only the more affluent and rural Monmouthshire and Powys localities showing a relatively low level of support for these parties.

The economic culture measure shows a relatively predictable pattern, with those localities in Wales with stronger traditions of entrepreneurial activity being above the UK average, which are often more rural areas. The industrial South Wales Valleys localities are a long way below the UK average.

A local level correlation analysis largely shows the same relationships between the economic and community culture variables as the regional level patterns, with a few notable exceptions. In particular, within Wales greater social cohesion appears to produce a high trust society, which then creates a greater perception of entrepreneurial feasibility and actual entrepreneurial activity.

Table 2 About Here

Community and Economic Culture in Wales

This section utilises micro data to investigate further whether there is evidence that the community culture of particular localities in Wales influences economic culture as measured by attitudes and actions related to entrepreneurship. Data from the Global Entrepreneurship Monitor (GEM) adult population surveys of Wales from 2005 to 2007 are used to examine what influence community culture has on entrepreneurial attitudes and activity. The community culture components for the locality within which each respondent is based enter the logit regressions to determine whether the prevailing community culture influences the probability that these activities are being undertaken (Table 3).

Table 3 About Here

All four regressions outperform the null of constant probability according to the likelihood ratio tests, and null of goodness of fit cannot be rejected by the Hosmer-Lemeshow tests. Collectively, the community culture variables are found to be significant for all models except the new business ownership regression. In the case of entrepreneurial intentions, greater collectivity is found to reduce the probability that individuals will expect to be involved in future entrepreneurial activities. It is understandable that individualistic and more materialistic activities, such as new venture creation, might be less positively viewed in such communities. It is interesting to note that embracement of work and the long-term perspective

has a negative influence on entrepreneurial intentions. These entrepreneurial intentions may in many cases never come to pass, and perhaps are influenced by an underlying culture of looking for an 'easy' alternative, although in reality this likely to be far from the truth.

In the case of nascent entrepreneurship, individualistic activity again appears to be negatively influenced where collective action is stronger. Embracement of work is a negative influence on this early stage of business development, with nascent entrepreneurs potentially being 'refugees' from the mainstream workforce. For the business ownership measures, collective action continues to be negatively associated with involvement, although social cohesion plays a positive role in encouraging and potentially propagating business activity.

Only a relatively small proportion of the population are likely to actively investigate a new venture business start at any given point in time, as a trigger event may be required to instigate the active pursuit of these opportunities. However, community culture may play an important role in creating an environment where entrepreneurial activity is perceived to be feasible, and therefore the probability of undertaking the activity is increased when such a trigger event occurs. The regressions of attitudes towards entrepreneurship are presented in Table 4 below. All regressions again outperform the null of constant probability. The null of a good fit with the data cannot be rejected by the Hosmer-Lemeshow tests for any of the regressions. The community culture variables are found to be jointly significant in the opportunity perception and entrepreneurial self-efficacy regressions. Opportunity perception appears to be lower where more caring and feminine attitudes are present in the community. This type of individualistic activity may not be examined where it is less in line with the prevailing culture, so opportunities may be overlooked.

Table 4 About Here

Although the item relating to entrepreneurial skills is worded in a personal manner, this is positively associated with social cohesion. It is unclear whether the trust and support of the community lowers the perceived hurdles, or whether the expectation of support in the future means that potential entrepreneurs feel more confident given the emotional support they have access to. The significance of these results, along with the entrepreneurial activity measures, suggest that not only does social cohesion increase confidence in the ability to succeed in new venture creation but that this ultimately increases actual entrepreneurial involvement. Therefore, the results do appear to suggest that more socially cohesive communities are better placed to create more entrepreneurial local economic cultures in Wales.

DISCUSSION

Due in part to its industrial heritage, Wales displays characteristics associated with greater social cohesion compared with many UK regions and nations. The Valleys localities rank particularly highly for social cohesion even in the presence of high levels of deprivation. Wales displays the highest regional level of feminine or caring characteristics. Regions traditionally seen as more dynamic tend to display lower levels of caring attributes. Femininity and mutual caring appears to be traded-off where there is a greater embracement of work and education, perhaps reflecting a more atomistic society. Wales is also more collective and equality-driven compared to the UK average.

More generally, the regional level analysis suggests that Wales' community culture traits are negatively associated with an economic culture associated with economic success; for instance: (1) collective action, social cohesion and more feminine or caring actions are negatively associated with entrepreneurial activities and attitudes; (2) more entrepreneurial regional economic cultures are negatively associated with greater collective action; (3) social cohesion and caring is negatively associated with perceived entrepreneurial feasibility and activity; (4) more feminine attitudes and collectivity reduce the probability that individuals will expect to be involved in current or future entrepreneurial activities; and (5) opportunity perception appears to be lower where more caring and feminine attitudes are present.

Some of the values by which the community culture can be characterised have clearly emerged as a result of the hardship the citizens of Wales have faced, and in many cases are still facing. For example, it is no accident that collective action, femininity and caring behaviours are negatively associated with physical health, since the development of such a culture is clearly a reaction to embedded issues of low levels of well-being, as well as the lack of more formal institutions to tackle these problems (STREECK, 1992; RODRIGUEZ-POSE and STORPER, 2006; FAROLE et al., 2011; TABELLINI, 2010). In essence, Wales as a whole can be characterised by a community culture based on social cohesion, caring, femininity, collective action and a general desire for fairness and equality. Such traits clearly represent a Welsh community culture and society rooted in values that should be cherished, rather than discarded (BHABHA, 1994; HOFSTEDE, 1980; 1991; DOCHERTY et al., 2001; KOCKEL, 2002). In many ways, however, they are values contrary to those of regions that are more successful in economic terms, which have advanced through more entrepreneurial economic cultures.

Raymond Williams highlighted the complexities in attempting to base a reviving notion of Welsh identity around the notion of Wales as a single national community, with the Welsh always asking what Wales actually was? (WILLIAMS, 1989; HALL, 1993). CASSON (1995) suggests that the traditional ‘positive points’ of Welsh culture include a Protestant-type work ethic (often regarded as a legacy of the chapels), a desire for education, and a facility for social networking. Also, the dynamic nature of place-based culture has been evident in parts of Wales at different points in time. For instance, in the South Wales Valleys immigrants initially acquired Welsh accents but did not assimilate the language; instead they developed a distinctive culture whose hero, according to CASSON (1995: 243), ‘was the skilled self-educated and politically active working man. This culture of the valleys, symbolized by chapel, temperance movement, trade union and Labour party, now verges on collapse’.

From a conceptual and theoretical perspective, this paper has sought to go some way to developing a framework by which to analyse place-based culture, which is no easy task given that ‘culture’ is ‘one of the two or three most complicated words in the English language’ (WILLIAMS, 1983: 87). Any multitude of such frameworks can be potentially established, but the framing of both the community and economic culture of places is an attempt to shift the analysis of place-based cultures beyond those which have either implicitly or explicitly been set within the framework relating to differences in class structure. When discussing the work of Raymond Williams, HARVEY (2001) notes how his work embodies the ‘local place-bound internalization of capitalistic values’ (p. 171). To a large extent, this is undoubtedly true, and moving beyond analyses of place-based differences in class structure to ones which acknowledge cultural variety at both ends of the socio-economic systems underlying regions and localities is partly akin to the recognition that most nations can be analysed in terms of ‘varieties of capitalism’ with their socio-economic systems (HALL and SOSKICE, 2001). Most work in this area at both the national and more regional level has been framed within the bounds of institutional, rather than emerging cultural, theories (CROUCH et al., 2009; RODRÍGUEZ-POSE, 2013; PECK and ZHANG, 2013). Institutional and cultural explanations are clearly interrelated, with both concepts and measures of each often overlapping. Institutional change potentially represents a relatively dynamic means for facilitating development compared with cultural change. Culture is often inherently reproduced over time, with it being possible, for example, to trace the origins of the individualism found in certain regions of England back to the 13th century (MACFARLANE, 1978; NORTH, 2005).

To be effective, however, institutions have to take account of place-based cultures, with complementary institutions only like to succeed through repeated interactions with the underlying community and economic culture. The outcome of these interactions may limit or expand the directions in which a region or locality can develop in the future. This hints at the need to set cultural-institutional analysis firmly within a spatiotemporal framework. For instance, in the case of Wales it will be fascinating to examine how over time the establishment of a very formal institution such as the Welsh Government will influence, and be influenced by, the cultural traits highlighted in this paper. More generally, the increasing acknowledgement of the evolutionary nature of regional and local economies (BOSCHMA and FRENKEN, 2006), indicates the need for a fuller inclusion of the role of culture in shaping their development trajectories. In particular, the role of cultural norms and values within regional and local communities in facilitating or constraining the entrepreneurial and innovative capabilities of these places, as well as the means through which the norms and capabilities are reproduced over time, should form a key locus of analysis within the emerging field of evolutionary economic geography (JAMES, 2005; 2011).

Culture – be it community or economic – forms part of the place-based development systems linking economic performance with societal well-being (TÖNNIES, 1957; EASTERLIN, 1974; BEUGELSDIJK et al., 2004; JOHNSTONE and LIONAIS, 2004). It is the cultural attributes of places that act as the glue forming the interdependency between the economic logic and societal logic of places (KNACK and KEEFER, 1997; KEATING et al., 2003; MOULAERT and NUSSBAUMER, 2005; STORPER, 2005). In some regions and localities this cultural glue is a facilitating force enabling economic development and relatively enhanced levels of well-being, while in others it is a factor impeding the development of places in an economic sense, as well as pushing down relative levels of well-being. As mentioned at the outset of this paper, adding culture – and its forms – to the mix of place-based analysis results in further complexity to understanding the nature of places, particularly why some ‘succeed’ and others do not.

Nevertheless, it should remain strongly borne in mind that no particular prevailing community culture across places should necessarily be seen as superior (MILLER, 1992; SYSSNER, 2009). It is not necessarily clear that the success of a locality or region should be entirely based upon economic measures of success, and whilst some place-based cultures may not encourage the development of a complementary thriving business and enterprise culture, they may provide life-style benefits captured only in broader well-being measures (LAYARD, 2005). Similarly, when considering the economic outcomes of a place’s

combined culture, only a snap shot is being considered. Although a cohesive community may encourage the development of positive attitudes towards entrepreneurship, for instance, a too strongly bonded community may lack openness to new ideas (GRANOVETTER, 1972), stifling innovation and preventing long-term success.

From a policy perspective, the question one is left with is (notwithstanding the potential economic/well-being tradeoffs alluded to above): to what extent can the cultures of economically less successful regions be realigned through policy interventions designed to emulate more dynamic and successful regions and localities (JAMES, 2005; 2011). Clearly, it is difficult to ‘engineer prosperity’ (ACEMOGLU and ROBINSON, 2012), and as PUTNAM (1995) has shown intervention may actually impinge on development, with the American slum-clearance policy of the 1950s and 1960s renovating physical capital, but at a very high cost to existing social capital. Similarly, the findings stemming from this study represent a particular conundrum from the policymaking perspective, i.e. would a region such as Wales benefit from a shaking off and changing of its community cultural values to become a more atomistic, individualistic, and ‘less caring’ society, as perhaps typified by the UK’s more prosperous regions. This question can be asked regardless of whether or not such change is possible, and it suggests that policymakers pay heed to two key issues. First, is the issue of cultural evolution and the reasoning why community culture has developed its current traits. Although our analysis does not lend itself to long-term causal reasoning, it does logically suggest that the type of community culture existing in a lagging region may be a response to the long-term erosion of what was once clearly a ‘work-oriented’ economic culture. This suggests the focus of policy should be the ‘enhancement’ of economic culture.

Second, it is important to look beyond the regional and more toward the local to assess how policy intervention may be best utilised. Despite, the regional analysis suggesting a community culture poorly suited to entrepreneurship, the analysis of Welsh localities finds that those with more socially cohesive communities are better placed to create stronger entrepreneurial economic cultures. In these localities greater social cohesion appears to produce a high trust society, which then creates an improved perception of entrepreneurial feasibility and actual entrepreneurial activity – at least relative to less cohesive localities. This suggests that social cohesion represents a potential strength, rather than a weakness, which policymakers can potentially enhance as an economic development tool. It further suggests that not only are lagging regions extremely unlikely to imitate the cultural traits of their more prosperous neighbours, but that they should not actually actively seek to do so. A place-based approach to development, therefore, must clearly build on local values and a ‘sense of

community', while at the same time being open to values from outside (SEN, 2009; BARCA et al., 2012).

The link between community and economic development has been increasingly recognised by policymakers, and numerous policies have sought to relate the need to improve social inclusion as a lever for facilitating wider economic development (PEET, 2000; KOCKEL, 2002; KEATING et al., 2003; STORPER, 2005; TABELLINI, 2010). In reality, a mix of policies seeking to influence both community and economic cultures will be required to facilitate economic development, although intervention aimed at addressing the economic culture should be compatible with the underlying community culture. Finally, although changing prevailing community cultures is not theoretically impossible, it is unlikely to be a rapid process and any community leader attempting such a process must look at all outcomes of such a change, as captured by both economic and broader measures of well-being.

CONCLUDING REMARKS

This study has responded to the call for a more in-depth understanding of the nature of culture and cultural change at the local and regional level, and the relationship and significance of place-based culture for development. Focusing on an analysis of UK regions and the localities within the region of Wales, the study has sought to define and measure two forms of place-based culture – community culture and economic culture – as a means of developing a broader understanding of the notion of culture than is usually considered by the extant literature.

Overall, considerable variability has been found in the cultural characteristics across regions and across localities in Wales. It has also been found that the type of community culture embedded across regions and localities is often strongly associated with the prevailing economic culture in these places, and to an extent – although with certain exceptions – this indicates that community cultures have a strong symbiotic association with the prevailing economic culture across places, be they localities or regions.

Emerging literature at the national level suggests that there is a considerable influence from culture upon development (CASSON, 1995; KNACK and KEEFER, 1997; ZAK and KNACK, 2001; BEUGELSDIJK et al., 2004; GUIISO et al., 2004). Although place-based measurements of culture – such as those developed in this study - are to some extent bound to reflect a stereotype, they should not be rejected out of hand, as stereotypes are likely to contain useful information about typical attitudes of members of a group, although there may be considerable diversity within groups (CASSON, 1995). Furthermore, in reality the

community culture and economic culture of places are unlikely to be discrete, with one reinforcing the characteristics of the other. Indeed, this one of the key arguments suggested by this paper. However, this does not mean that they should be considered ‘fuzzy’ concepts (MARKUSEN, 1999), as in each case they have been defined in a manner allowing for their operationalization and measurement. Clearly, it is difficult, if not impossible, to operationalize and measure every dimension of either community or economic culture. The rich literature on the role of economic culture in promoting regional development, stemming back to SAXENIAN’s (1994) study of Silicon Valley’s culture, indicates that the cultural features underpinning economic success go beyond merely an ‘entrepreneurial culture’ to include cultures of innovation, cooperation, and competition. Although the current study has primarily used entrepreneurial traits as a means by which to analyse place-based economic culture, it is generally considered that pro-entrepreneurial placed-based cultures are synonymous with economic cultures that can also be considered innovative, cooperative and competitive (SAXENIAN, 1994; CASSON, 1995; FLORIDA 2002; HUGGINS AND WILLIAMS, 2012).

The reference point for this study has been a relatively peripheral region, which potentially limits the extent to which the findings can be generalised. Comparative studies of other regions, both similarly lagging in economic terms and more successful regions, would provide a more complete picture. In the case of Wales, the manner in which its culture has clearly been shaped by exogenous factors, manifested by the global shifts in the resources and productive capabilities from which they originally developed, raises concerns regarding the extent to which culture is a process that is fully endogenous. As LOVERING (1999) notes with specific reference to Wales, meaningful local and regional development analysis must give due attention to the historic and macro-economic context and associated dynamics. In this regard, the evolutionary link between place-based culture and both the spatially internal and external institutional frameworks underlying development should be the focus of more longitudinal studies. For instance, it is surely no coincidence that the extractive national institutions of Britain associated with the extractive industries upon which the industrial development of Wales was built resulted in the emergence of a regional community characterised by the traits found in this study (ACEMOGLU AND ROBINSON, 2012). This highlights the importance of undertaking cultural studies at multi-scalar levels, and the value of examining both the regions in the nation and the localities with the region.

Needless to say, measuring place-based culture is a somewhat difficult and controversial undertaking. Isolating particular measures from indicators that could be

considered the outputs or outcomes of local and regional development presents a range of issues in terms of identifying potential causality and endogeneity. Also, the distinction between what may be considered a measure of place-based culture, as opposed, to say, a measure of an institutional factor is not necessarily straightforward. In order to try and overcome these difficulties, the operationalization approach adopted in this paper has sought to draw upon a relatively wide-range of indicators that can be usefully considered to be relevant for understanding the particular aspect of place-based culture they are seeking to measure. Such an approach provides a means for establishing measures of cultural concepts that are relatively robust, and in line with established methods, such as those originally adopted by HOFSTEDE (1980; 1991). Although no regression model can be considered fully ‘watertight’ in that it is able to explain everything that potentially matters, the constructs developed, and the rationale for the inclusion of the quantitative indicators by which they are measured, provides a means for performing an innovative analysis of the association between the community and economic culture of places. Nevertheless, only through further qualitative analysis can a more complete picture of these associations, and the directions of probable cause and effect, be painted.

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Table 1: Community Culture Indices by UK Region (UK = 100)

	Embracement	Rank	Social Cohesion	Rank	Femininity	Rank	Risk and Social Rules	Rank	Collective Action	Rank	Economic Culture	Rank	GVA per Capita(£)	Rank
East Midlands	98.4	7	103.1	8	101.3	6	101.5	5	83.9	9	96.1	5	18,041	6
East of England	103.7	4	104.7	7	96.1	9	130.8	1	100.4	7	98.7	3	19,473	4
London	105.4	3	80.3	11	90.1	11	119.0	3	97.3	8	127.2	1	34,786	1
North East	97.3	9	115.8	2	107.2	2	90.8	10	123.7	3	87.0	10	15,887	10
North West	97.5	8	116.2	1	103.7	4	93.4	9	116.1	4	90.4	9	17,555	7
Scotland	101.8	5	99.1	10	99.7	8	84.7	11	132.1	1	82.5	11	20,086	3
South East	111.2	1	101.8	9	94.0	10	124.7	2	77.4	11	104.8	2	21,688	2
South West	106.1	2	105.0	6	100.3	7	116.2	4	83.1	10	91.8	8	18,782	5
Wales	89.7	11	111.5	3	110.4	1	99.1	6	125.6	2	92.6	7	15,237	11
West Midlands	91.9	10	106.8	5	103.7	3	97.8	7	103.0	6	93.2	6	17,463	8
Yorkshire and Humber	100.5	6	108.1	4	103.5	5	94.8	8	107.8	5	98.4	4	17,096	9

Table 2: Community Culture Indices by Locality in Wales (UK = 100)

	Embracement	Rank	Social Cohesion	Rank	Femininity	Rank	Risk/Social Rules	Rank	Collective Action and Equality	Rank	Economic Culture	Rank	GVA per Capita	Rank
Anglesey	87.2	15	113.4	1	106.8	15	173.6	4	129.0	3	96.4	10	10,998	19
Blaenau Gwent	83.3	20	98.6	18	115.8	5	88.7	19	123.5	9	73.0	22	10,050	22
Bridgend	95.7	6	100.0	14	112.6	8	96.2	15	123.4	10	84.1	17	15,564	6
Caerphilly	82.8	21	99.4	15	111.9	10	91.7	16	128.4	5	83.2	19	10,603	21
Cardiff	90.4	9	96.0	22	104.1	19	100.1	13	118.4	12	86.7	14	24,862	1
Carmarthenshire	89.5	13	106.1	5	112.5	9	174.8	3	130.7	2	87.3	12	12,290	14
Ceredigion	90.1	10	105.5	6	106.5	16	285.2	1	110.6	20	88.4	11	11,886	15
Conwy	89.8	11	101.8	10	108.3	13	102.9	11	117.3	15	106.3	1	10,776	20
Denbighshire	91.8	7	103.3	9	108.0	14	100.0	14	121.1	11	102.4	4	13,220	11
Flintshire	88.0	14	105.1	7	101.6	21	110.5	9	116.1	16	101.7	6	17,821	3
Gwynedd	86.4	16	112.8	2	101.4	22	162.2	5	127.0	6	104.2	3	13,388	10
Merthyr Tydfil	82.3	22	100.7	12	118.9	3	81.3	22	123.5	8	83.8	18	13,817	9
Monmouthshire	109.8	1	101.2	11	102.9	20	146.8	7	101.2	21	105.4	2	15,144	7
Neath Port Talbot	85.0	17	96.4	21	121.8	1	102.8	12	128.9	4	84.2	16	11,630	17
Newport	98.1	2	97.6	20	109.3	11	86.8	21	115.9	18	96.8	9	21,443	2
Pembrokeshire	83.8	18	103.5	8	114.0	7	156.3	6	116.1	17	101.8	5	12,751	13
Powys	96.3	4	107.2	4	108.5	12	190.1	2	87.2	22	97.4	8	13,179	12
Rhondda, Cynon, Taff	83.7	19	100.3	13	118.1	4	89.0	18	131.6	1	74.1	21	11,082	18
Swansea	89.5	12	99.1	17	119.8	2	107.2	10	117.9	14	86.9	13	15,717	5
The Vale of Glamorgan	96.7	3	98.0	19	105.5	17	116.4	8	114.2	19	99.3	7	11,703	16
Torfaen	91.3	8	99.1	16	114.6	6	87.7	20	124.8	7	79.0	20	13,919	8
Wrexham	95.9	5	110.8	3	105.3	18	89.4	17	118.0	13	86.1	15	16,642	4

Table 3: Logit regression of entrepreneurial activities and community culture

	Entrepreneurial Intentions	Nascent Entrepreneurship	New Business Ownership	Established Business Ownership
Male	0.6446 (0.000)	0.6316 (0.000)	0.5596 (0.000)	1.1400 (0.000)
Experiential Human Capital				
Age (centred)	-0.0338 (0.000)	-0.0234 (0.000)	-0.0231 (0.000)	0.0386 (0.000)
Age ² (centred)	-0.0008 (0.003)	-0.0012 (0.004)	-0.0017 (0.000)	-0.0025 (0.000)
Educational Qualifications (base category compulsory secondary)				
Post Graduate Degree	0.3574 (0.008)	0.8048 (0.000)	0.1409 (0.448)	-0.1859 (0.261)
First Degree	0.2405 (0.018)	0.3671 (0.018)	-0.1431 (0.335)	0.0650 (0.561)
A Level	0.2492 (0.017)	0.3615 (0.025)	0.0474 (0.756)	0.0639 (0.597)
Vocational	0.1768 (0.150)	0.3755 (0.037)	0.2052 (0.222)	0.0915 (0.482)
No Formal	-0.4794 (0.002)	-0.6066 (0.017)	-0.1020 (0.621)	-0.0509 (0.685)
Household Income (base category £30,000 to £49,999)				
£11,499 or less	-0.0264 (0.836)	0.2757 (0.140)	-0.8524 (0.000)	
£11,500 to £17,499	0.0512 (0.652)	0.0847 (0.628)	-0.2693 (0.120)	
£17,500 to £29,999	0.0586 (0.544)	0.0582 (0.690)	0.1831 (0.170)	
£50,000 or more	0.2940 (0.006)	0.3132 (0.047)	0.5611 (0.000)	
Employment Status (base category employed)				
Homemaker	-0.0055 (0.968)	-0.2243 (0.284)		
Student	0.3034 (0.162)	-0.5490 (0.243)		
Disabled	-0.0951 (0.689)	-0.9804 (0.035)		
Unemployed	0.7371 (0.000)	0.5990 (0.003)		
Established Business Owner	0.6856 (0.000)			
Migration Status (base category life-long resident)				
In-Migrants	0.4070 (0.000)	0.3200 (0.006)	0.3031 (0.007)	-0.0406 (0.640)
Immigrants	0.9655 (0.000)	0.4182 (0.057)	0.5624 (0.009)	0.1159 (0.553)
Fluent Welsh Speaker	0.0229 (0.842)	-0.2044 (0.260)	-0.0951 (0.558)	-0.0688 (0.577)

Notes: p-values in parentheses; Data source – Global Entrepreneurship Monitor (GEM) adult population survey.

Table 3 - continued

	Entrepreneurial Intentions	Nascent Entrepreneurship	New Business Ownership	Established Business Ownership
Rural/Urban (base category urban)				
Small Town or Fringe	0.0728 (0.461)	0.2786 (0.052)	0.1887 (0.176)	0.2829 (0.011)
Village and Isolated Hamlet	0.2183 (0.066)	0.3095 (0.084)	0.5292 (0.001)	0.9180 (0.000)
Community Culture				
Femininity Index	-0.0105 (0.129)	-0.0046 (0.650)	0.0012 (0.910)	-0.0007 (0.938)
Risky Actions Index	-0.0009 (0.498)	-0.0013 (0.514)	-0.0002 (0.902)	0.0009 (0.475)
Collective Action Index	-0.0136 (0.009)	-0.0169 (0.030)	0.0010 (0.891)	-0.0178 (0.000)
Embracement of Work Index	-0.0186 (0.021)	-0.0403 (0.001)	0.0022 (0.846)	0.0045 (0.609)
Social Cohesion Index	0.0080 (0.505)	0.0015 (0.934)	0.0269 (0.126)	0.0398 (0.003)
Constant	0.1754 (0.926)	1.7925 (0.528)	-7.0345 (0.010)	-6.0567 (0.006)
<i>N</i>	14779	14932	14932	14932
Hosmer-Lemeshow	14.2 (0.077)	10.7 (0.218)	4.8 (0.778)	15.3 (0.053)
<i>R</i> ²	0.064	0.051	0.052	0.107
LR-test v constant probability	451.1 [29] (0.000)	185.98 [28] (0.000)	203.99 [23] (0.000)	642.6 [20] (0.000)
LR-test joint significance of community culture	11.4 [5] (0.043)	11.6 [5] (0.041)	4.7 [5] (0.456)	41.9 [5] (0.000)

Notes: p-values in parentheses; Data source – Global Entrepreneurship Monitor (GEM) adult population survey.

Table 4: Logit regression of entrepreneurial attitudes and community culture

	Entrepreneurial Social Capital	Opportunity Perception	Possess Start-up Skills	Fear of Failure
Male	0.4800 (0.000)	0.3821 (0.000)	0.7970 (0.000)	-0.2841 (0.000)
Experiential Human Capital				
Age (centred)	-0.0226 (0.000)	-0.0063 (0.009)	0.0114 (0.000)	-0.0144 (0.000)
Age ² (centred)	-0.0006 (0.003)	-0.0003 (0.089)	-0.0005 (0.002)	-0.0008 (0.000)
Educational Qualifications (base category compulsory secondary)				
Post Graduate Degree	0.6063 (0.000)	0.4000 (0.000)	0.2841 (0.005)	0.3090 (0.002)
First Degree	0.4136 (0.000)	0.4271 (0.000)	0.3362 (0.000)	0.2197 (0.001)
A Level	0.4317 (0.000)	0.1749 (0.019)	0.4009 (0.000)	0.1488 (0.037)
Vocational	0.2672 (0.002)	0.2383 (0.005)	0.4265 (0.000)	-0.0712 (0.399)
No Formal	-0.4275 (0.000)	-0.4188 (0.000)	-0.5207 (0.000)	0.2070 (0.011)
Household Income (base category £30,000 to £49,999)				
£11,499 or less	-0.2388 (0.011)	-0.3266 (0.000)	-0.2387 (0.002)	-0.0213 (0.787)
£11,500 to £17,499	-0.0600 (0.463)	-0.1952 (0.014)	-0.0929 (0.198)	-0.0886 (0.230)
£17,500 to £29,999	0.1696 (0.012)	0.1663 (0.013)	0.1729 (0.007)	-0.0752 (0.241)
£50,000 or more	0.4948 (0.000)	0.4384 (0.000)	0.3485 (0.000)	-0.2854 (0.000)
Employment Status (base category employed)				
Homemaker	-0.2019 (0.032)	0.0754 (0.378)	-0.4290 (0.000)	-0.0585 (0.467)
Student	-0.1820 (0.349)	0.1728 (0.372)	-0.2748 (0.131)	0.2092 (0.239)
Disabled	-0.3046 (0.068)	-0.2039 (0.171)	-0.4094 (0.002)	0.0824 (0.525)
Unemployed	-0.2313 (0.086)	-0.0656 (0.606)	-0.3769 (0.001)	0.0588 (0.605)
Migration Status (base category life-long resident)				
In-Migrants	0.1410 (0.011)	0.3103 (0.000)	0.2311 (0.000)	0.0143 (0.783)
Immigrants	0.0772 (0.510)	0.0937 (0.427)	0.0734 (0.510)	-0.1435 (0.211)
Fluent Welsh Speaker	0.0382 (0.638)	0.1380 (0.088)	-0.0187 (0.811)	0.2241 (0.004)

Notes: p-values in parentheses; Data source – Global Entrepreneurship Monitor (GEM) adult population survey.

Table 4 - continued

	Entrepreneurial Social Capital	Opportunity Perception	Possess Start-up Skills	Fear of Failure
Rural/Urban (base category urban)				
Small Town or Fringe	0.1390 (0.048)	-0.0655 (0.345)	0.0574 (0.375)	-0.0566 (0.387)
Village and Isolated Hamlet	0.3049 (0.000)	-0.1852 (0.031)	0.3746 (0.000)	-0.2589 (0.002)
Community Culture				
Femininity Index	-0.0037 (0.465)	-0.0197 (0.000)	-0.0025 (0.596)	0.0051 (0.285)
Risky Actions Index	0.0001 (0.927)	0.0003 (0.775)	0.0001 (0.891)	0.0016 (0.080)
Collective Action Index	-0.0012 (0.754)	-0.0006 (0.874)	0.0053 (0.154)	-0.0023 (0.542)
Embracement of Work Index	-0.0015 (0.802)	0.0011 (0.840)	0.0087 (0.107)	-0.0048 (0.379)
Social Cohesion Index	0.0049 (0.575)	-0.0019 (0.829)	0.0265 (0.001)	-0.0112 (0.175)
Constant	-1.3122 (0.337)	1.2991 (0.335)	-4.2679 (0.001)	0.5364 (0.676)
<i>N</i>	8605	7722	8479	8546
Hosmer-Lemeshow	10.8 (0.215)	9.2 (0.325)	14.4 (0.072)	12.4 (0.136)
<i>R</i> ²	0.063	0.051	0.081	0.016
LR-test v constant probability	650.3 [28] (0.000)	522.2 [28] (0.000)	945.0 [28] (0.000)	171.1 [28] (0.000)
LR-test joint significance of community culture	1.8 [5] (0.872)	24.6 [5] (0.000)	28.4 [5] (0.000)	9.2 [5] (0.103)

Notes: p-values in parentheses; Data source – Global Entrepreneurship Monitor (GEM) adult population survey.

Appendix Table 1: Community Culture Measures

Embracement of Work and Employment	Measure	Source	Local Index Weighting	Regional Index Weighting
Embracement of Work	Male economic activity rates	Annual Population Survey (APS)	0.25	0.25
Embracement of Work	Proportion of economically inactive men who wish to work	Annual Population Survey (APS)	0.25	0.25
Education and Long-Term Orientation	Proportion of population with NVQ4	Annual Population Survey (APS)	0.125	0.125
Education and Long-Term Orientation	Proportion of population with no formal education	Annual Population Survey (APS)	0.125	0.125
Education and Long-Term Orientation	Primary school absenteeism, proportion of half day sessions	Schools Statistics	0.125	0.125
Education and Long-Term Orientation	Secondary school absenteeism, proportion of half day sessions	Schools Statistics	0.125	0.125
Social Cohesion	Measure	Source	Local Index Weighting	Regional Index Weighting
Community Homogeneity	Ethnic similarity	Census	0.1	0.1
Community Homogeneity	Religious similarity	Census	0.1	0.1
Engagement with Community Institutions	Proportion of the population identifying with a religion	Census	0.2	0.2
Embeddedness in Local Area	Gross migration as a proportion of the population	National Health Service Central Register	0.1	0.1
Embeddedness in Local Area	Proportion of the population which is UK born	Annual Population Survey	0.1	0.1

Local Identity	Proportion of the population perceiving themselves to be English/Irish/Scottish/Welsh	Annual Population Survey	0.1	0.2
Local Identity	Proportion of the population able to speak Welsh fluently	Annual Population Survey	0.1	n/a
Engagement with Political Process	Proportion of the electorate voting in the general election	Electoral Commission	0.2	0.2
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Work life balance, femininity, and caring attitudes	Measure	Source	Local Index Weighting	Regional Index Weighting
Femininity	Female economic activity	Annual Population Survey	0.333	0.333
Work-life Balance	Female part-time employment	Annual Population Survey	0.333	0.333
Caring Activities	Unpaid care provision 1 to 19 hours a week	Census	0.111	0.111
Caring Activities	Unpaid care provision 20 to 49 hours a week	Census	0.111	0.111
Caring Activities	Unpaid care provision of 50 hours a week or more	Census	0.111	0.111
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Risk taking and social rules related behaviours	Measure	Source	Local Index Weighting	Regional Index Weighting
Financial Risk Taking	Personal insolvencies per 10,000 population	Insolvency Service	0.333	0.333
Personal Risk	Male age standardised alcohol related deaths per 100,000 population	Health Statistics Quarterly	0.167	0.083
Personal Risk	Female age standardised alcohol related deaths per 100,000 population	Health Statistics Quarterly	n/a	0.083

Personal Risk	Underage conceptions per 1000 women	Health Statistics Quarterly	0.167	0.167
Social Rule Breaking	Violent crimes per 1000 population	Notifiable Crimes Recorded by the Police	0.056	0.056
Social Rule Breaking	Burglaries residential and non-residential per 1000 population	Notifiable Crimes Recorded by the Police	0.056	0.056
Social Rule Breaking	Vehicle crimes per 1000 population	Notifiable Crimes Recorded by the Police	0.056	0.056
Social Rule Breaking	Fire and rescue fire incidents per 10,000 population	Fire and Rescue Service	0.083	0.083
Social Rule Breaking	Proportion of fires that are deliberate	Fire and Rescue Service	0.083	0.083
Collective Action and Equality	Measure	Source	Local Index Weighting	Regional Index Weighting
Collective Activities	Trade union membership	Annual Population Survey	0.317	0.317
Collective Activities	Credit union membership	Annual Population Survey	0.017	n/a
Collective Activities	Credit unions per 1 million population	Financial Services Authority	n/a	0.017
Collective and Equality Politics	Proportion of the population voting for left of centre parties	Electoral Commission	0.333	0.333
Preference for Equality	Proportion of the population who feeling a majority prefer equal living standards	Global Entrepreneurship Monitor (GEM)	0.333	0.333

Appendix Table 2: Economic Culture Measures

Existing Business Community (Component Weighting 0.333)	Measure	Source	Within Component Weighting
Growth Intentions	Proportion of businesses proposing to grow	BERR Annual Small Business Survey	0.2
Business Presence	Stock of VAT Registered Enterprises per head	Business Demographics	0.1
Business Presence	Established Business Ownership	Global Entrepreneurship Monitor (GEM)	0.1
Small Business Employment Experience	Services as a percentage of employment	Annual Population Survey (APS)	0.1
Small Business Employment Experience	Small and medium enterprises as a percentage of units	ONS UK Business: Activity Size and Location	0.1
Sector Suitability	Non-public sector employment	Annual Population Survey (APS)	0.2
Knowledge Resources	Employment as Managers	Annual Population Survey (APS)	0.024
Knowledge Resources	Employment as Professionals	Annual Population Survey (APS)	0.026
Knowledge Resources	Employment as Associate Professionals	Annual Population Survey (APS)	0.021
Knowledge Resources	Proportion of Knowledge based Firms	Annual Business Inquiry (ABI)	0.030
Knowledge Resources	Proportion Innovation Active Firms	BIS UK Innovation Survey	0.1

Entrepreneurial Desirability (Component Weighting 0.167)	Measure	Source	Within Component Weighting
Career Choice	Entrepreneurship is a good career choice	Global Entrepreneurship Monitor (GEM)	0.5
View of Entrepreneurship	Entrepreneurs have high status	Global Entrepreneurship Monitor (GEM)	0.25
View of Entrepreneurship	Entrepreneurship has good media coverage	Global Entrepreneurship Monitor (GEM)	0.25

Entrepreneurial Feasibility (Component Weighting 0.167)	Measure	Source	Within Component Weighting
Entrepreneurial Feasibility	Perceive self to possess start-up skills	Global Entrepreneurship Monitor (GEM)	0.333
Entrepreneurial Feasibility	Know someone who successfully started an enterprise in the last 2 years	Global Entrepreneurship Monitor (GEM)	0.333
Entrepreneurial Feasibility	Expect to be involved in a new venture creation in next 3 years	Global Entrepreneurship Monitor (GEM)	0.333

Entrepreneurial Activity (Component Weighting 0.333)	Measure	Source	Within Component Weighting
Business creation within population	New business VAT registrations per 1000 population	Business Demography	0.111
Business creation within population	Nascent entrepreneurship prevalence rate	Global Entrepreneurship Monitor (GEM)	0.111
Business creation within population	New business ownership prevalence rate	Global Entrepreneurship Monitor (GEM)	0.111
Business creation scaled by industry	VAT registrations as a proportion of existing businesses	Business Demography	0.333

Entrepreneurial Finance	Informal investor prevalence rate	Global Entrepreneurship Monitor (GEM)	0.167
Entrepreneurial Finance	Early stage venture capital as a percentage of GVA	British Venture Capital Association Report on Investment Activity	0.083
Entrepreneurial Finance	Expansion stage venture capital as a percentage of GVA	British Venture Capital Association Report on Investment Activity	0.083
