

Placing entrepreneurship and firming small town economies

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Placing entrepreneurship and firming small town economies: manufacturing firms, adaptive embeddedness, survival and linked enterprise structures

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ABSTRACT

SMEs make a major contribution to the economy of cities and places. The relationship between firms and place is increasingly explained through the application of city-based externality models. Such explanations have limited validity in a number of contexts. One of these is in the economies of small- and medium-sized towns and communities (SMST). Whilst convention has sought to apply core-periphery explanations to the functioning of firms within SMSTs, the economies of SMSTs and entrepreneurial processes of SME embedding, adaptation and survival in such places are more complex. This paper explores these entrepreneurial processes in the context of manufacturing firms in five SMSTs in the West Midlands, UK. The paper uses interview data to understand the relationships between SMEs and place through the development of successive and evolving linked enterprise structures. Through these linked enterprise structures, SMEs engage in a process of adaptive embeddedness, resulting in new resource configurations through fluid iterations of structural, emotional, and circumstantial embeddedness. This paper is the first to identify and explore these different forms of embeddedness.

KEYWORDS

Small Towns; manufacturing firms; entrepreneurship and embeddedness; linked enterprise structures; adaptation strategies; path dependency; sunk costs; Southern Staffordshire

Introduction

Small towns constitute a significant proportion of both regional and national populations and economies. Nevertheless, the economies of such places have been largely ignored by urban theorists (Bell and Jayne 2009). In the United Kingdom, small towns are being repositioned in policy debates with growing concerns over responsible inclusive economic growth and marginalized places. In 2017, a major report on inclusive economic growth in the United Kingdom noted ‘peripheral towns and cities on the outskirts of major metros have a particularly acute lack of inclusive growth’ (RSA 2017, 5). Remedying this requires:

“... businesses and civic organisations to work together to create stronger institutional foundations in our towns and cities. The creation of quality jobs are at the heart of this. Local businesses need to be directly engaged by local anchor institutions (universities, hospitals, colleges and other major employers) to drive up productivity and stimulate demand” (RSA 2017, 10).

Such a strategy needs to be informed by appreciation of the importance of local assets and the ways in which firms are embedded in smaller urban areas. This requires developing a more inclusive urban economic research agenda appreciative of the heterogeneity of urban form, function, experience and economy.

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Some academics have challenged the tendency for research to focus on a small number of core, large or global cities (Robinson 2005). The emerging research agenda on 'ordinary places' suggests an emphasis on the largest cities has ensured many cities 'are essentially labelled as "lesser" or irrelevant' (Bell and Jayne 2009, 684). But, in many accounts these ordinary places are simply ignored. The difficulty is such places have perhaps very different local economies and supporting institutions compared to major conurbations. The RSA report (2017) falls into the trap of highlighting places with local universities and key anchor institutions; this is to side-line many smaller towns without such assets. An earlier literature on small towns has been overlooked; Glaisyer et al.'s (1946) analysis of the small town of Worcester, UK highlighted the importance of local assets, skills, and the established reputation of certain industries. This reputation ensured a highly dispersed geography of transactions, 'a clear indication of the industrial possibilities of a city in spite of its position' (Glaisyer et al. 1946, 59).

In this paper, we pursue this line of inquiry around ordinary places exploring the economy of five small and medium-sized towns/communities (SMST) in Staffordshire, on the edge of the UK West Midlands conurbation and its major centre, Birmingham. This intra-regional relationship is, however, not the focus of our analysis; rather the research concentrates on a sample of surviving small- and medium-sized enterprises (SMEs) as entrepreneurs and focusses on processes of firm formation, adaptation and embeddedness in the context of five SMSTs. These manufacturing firms are important to local, regional or global production networks and in attracting human capital to these SMSTs, but in demand terms, such firms have been partly decoupled from their SMST location. Balancing alterations in the location of supply and demand requires firms to engage in a continual process of adaption. *This paper focuses on exploring the relationship between entrepreneurship and firm evolution focusing on small and medium-sized manufacturing firms located in SMSTs.* There are three research questions:

- (i) To analyse processes of firm formation in SMSTs.
- (ii) To explore firm-level embeddedness as a dynamic process as firms respond to localized resources and sunk costs.
- (iii) To identify and explore processes of adaptation in the embeddedness of SMEs located in SMST economies in response to processes of dislocation and detachment and identifying different forms of embeddedness.

These questions contribute to developing a new conceptual approach to understanding the place of firms in SMST economies. Such firms are important local employers engaged with local policy-makers to ensure local conditions contribute to their survival. Whilst established in these SMSTs in response to endogenous and exogenous drivers, ongoing alterations in these drivers lead to continued adaptation.

The paper is structured as follows. The first section explores debates around the formation and development of small-town economies, the role of entrepreneurship in such environments, and the evolutionary processes of firm embedding. Following this the methodology is discussed; a qualitative approach was adopted based on interviewing a subset of SMEs. The analysis considers the varying processes through which firms become embedded within SMSTs. In the conclusion, we explore the changing relationship between SMEs and place and the implications for understanding SMST economies, entrepreneurship and adaptive embeddedness.

Small towns, entrepreneurship and place

The relationship between entrepreneurship and place has been the subject of significant attention in academic debate (Fritsch and Storey 2014). A prominent feature of this debate is continued interest in cities as a locus for economic activity. Founded on notions of urban centres driving economic growth, a positive correlation has been proposed between city size and productivity (Bettencourt et al. 2007)

valorizing a proliferation of city-first, city-region and core-periphery-based policies (Harrison 2010; Harrison and Heley 2015; Martin and Sunley 2010). This city-regionalist approach is founded on concentration-agglomeration affects, integrating city-based economies through notions of 'stickiness' (Hall 2003) or externalities (Audretsch and Dohse 2007; Storper and Venables 2004). As a result, core city environments become synonymous with enterprise, mixing concentrations of opportunity with agglomerations of localized resources; places beyond the city here benefit through a 'borrowed size' effect, linking access to city-based resource with certain cost- or environment-based benefits (Alonso 1973).

This city-regionalist orthodoxy has seen a further debate emerge over the application of standardized city-based systems (Thrift 2000). Several recent studies argue against positive correlations between urban size and economic performance; the growing negative externalities of congested larger cities (Dijkstra, Garcilazo, and McCann 2013), firm-based dependency of city networks (McCann and Acs 2011), and misrepresentation of city productivity outputs (Martin, Gardiner, and Tyler 2014) and location of key economic capabilities (Cox and Longlands 2016). Notions of 'borrowed size' may be a two-way process with larger cities dependent on peripheral places for critical resources including housing and land (Meijers and Burger 2015; Walters 2013).

It is therefore timely for scholars to look beyond core cities and city regions to understand how place and economy interact with regard to entrepreneurial processes of firm formation and adaptation across the heterogeneity of urban settlements. A new literature has emerged exploring sub-national development emphasizing the importance of smaller places and the role played by entrepreneurs in linking peripheries and centres (Mayer, Habersetzer, and Meili 2016). As a result, several interstitial spaces have emerged in opposition to the proliferation of city-regional approaches (Harrison and Heley 2015).

One of the most interesting of these interstitial spaces is SMST. Such smaller urban centres represent a significant proportion of the population compared to larger cities (European Commission 2011). SMSTs have higher levels of structural diversity often overlooked as research has focused on national economies or larger city-regions. SMSTs play many different functional roles (Hildreth 2006; Hamdouch, Demaziere, and Banovac 2017) often founded on historically embedded industrial trajectories (Massey 1995; Bell and Jayne 2009). They may be dormitory towns, leisure and recreation sites, or locations for distribution centres, manufacturing or knowledge-intensive services. Nevertheless, SMSTs are often framed singularly within conventional regional urban hierarchies (Daniels 1989) with limited research on their specific structures, functions and relationships with broader spaces and scales (Bell and Jayne 2009; Hardoy and Satterthwaite 1986; Mayer and Knox 2010).

One notable way SMSTs differ from major cities is the importance of manufacturing (Hamdouch, Demaziere, and Banovac 2017). This tendency is partly explained by 'agglomeration shadow', draining services and functions from SMSTs to adjacent larger centres (Meijers and Burger 2015); SMST restructuring through increased service-based employment is thus limited. Parallel to such service restrictions is the reinvention of traditional industries as SMSTs transition towards new development models (Mayer and Knox 2010; Kourtiti, Nijkamp, and Arribas 2012; Hamdouch and Depret 2013).

Many SMSTs and their constituent firms have become increasingly embedded in global networks (Grillitsch and Nilsson 2015). Here the challenges of an SMST location and its resource limitations compared to larger cities (Johnstone and Lionais 2004), forces firm adaptation. Whilst reinforcing certain activities within SMSTs in a conventional hierarchical form, agglomeration alone does not explain their development pathways (Burger et al. 2015; Parkinson, Meegan, and Karecha 2015; Camagni, Capello, and Caragliu 2015). Pressures placed on SMSTs through macro-economic restructuring and agglomeration shadow create a distinctive set of challenges for the formation and ongoing adaptation of firms situated in such structurally distinctive heterogeneous spaces.

Entrepreneurial processes followed by businesses have to some extent faced similar generalizations to urban development. Here, linear models and optimizing practices prioritize outputs over

context (McKelvie and Wiklund 2010). Entrepreneurs are pivotal in developing activities through which SMSTs interact with other spaces and scales (Mayer, Habersetzer, and Meili 2016); the form of entrepreneurialism within SMSTs emerges as firms form and adapt through distinctive socio-economic histories and localized resource configurations (Anderson 2000; Johnstone and Lionais 2004; Hall and Soskice 2001; Cooke and Morgan 1998). Entrepreneurial response to such distinctive environments challenges SMEs to operate within looser boundaries (Nohria 1992), avoiding lock-in to local knowledge spillovers (Grillitsch and Nilsson 2015) through non-spatial forms of proximity (Boschma 2005) or dislocated linked enterprise structures (Florence 1953). This networked response to sub-optimal conditions found in SMSTs forces entrepreneurs and firms to embrace adaptation (Johnstone and Lionais 2004; Vaessen and Keeble 1995).

Critical to the relationships between SMEs and SMSTs are firm-based strategies of place-based adaptation that transform a firm's local embeddedness. Embeddedness has a long history (Granovetter 1974, 1985), but emphasis has been on socio-spatial embeddedness combining notions of social capital and networks (Scott 2006, 57). This sociologically informed analysis of embeddedness highlights the entrepreneur as social agent situated within a wider structure of socio-economic relationships. An earlier literature exists arguing firms located in SMSTs should be considered as part of an evolving 'linked enterprise structure'. In this analysis a localized or regional economy is a complex bundle of resources, but also a 'complex "concatenation" of linked industries', 'linked enterprise structures' or a localized division of labour (Florence 1953, 87). Four types of linkage were identified:

- (i) Vertically (outputs from one firm are inputs to another)
- (ii) Convergently (firms producing similar outputs)
- (iii) Diagonally (firms providing services to several different industries)
- (iv) More indirect social relationships (1953, 87)

The fourth type arguably includes socio-economic forms of embeddedness, but the other three concern economic embeddedness.

A region's layering and conversion of resources and economic activity is founded on this concatenation of linkages and the ability of entrepreneurs to benefit from local resources. Florence makes two additional points. First, is that 'a complex of linked industries could probably flourish anywhere else' (1953, 88), but he emphasizes the 'whole complex'. Thus, a policy intervention to relocate an economic activity would require, according to Florence, a process of 'swarming' in that all the linkages would have to be relocated and 'move together like a swarm of bees' (1953, 88) and to a location with similar levels of connectivity. Second, firms make decisions about resources that result in durable outcomes related to sunk costs and path dependency where past decisions, such as the lease of a building, affect future decisions. These decisions present further complications; firms making decisions irrationally, placing lifestyle factors over profit calculations, or partially, implying a form of bounded rationality (Johnson and Hoopes 2003). In addition, firms make a correct decision based on available information, but over time the decision no longer reflects present-day circumstances. Florence termed this 'obsolescent logic'; a frequent occurrence affecting firm adjustment (Florence, 1953:90). A linked enterprise structure may begin as a highly localized embedded set of relationships. Over time these relationships evolve, often including displacement as they incorporate non-local suppliers and customers.

Debates on embeddedness need further theoretically informed empirical analysis in the context of SMSTs. Some studies inform this analysis, although importantly these offer only limited insight in identifying embeddedness as a continual process of adaptation. Mackinnon, Chapman, and Cumbers (2004) provide an empirically grounded analysis of networking, trust and embeddedness amongst SMEs in the Aberdeen oil complex, arguing extra-local networks offer critical access to wider knowledge sources, reflecting Granovetter's (1985) emphasis on learning. Recently, Biniari (2017) explored the 'emotional embeddedness' of entrepreneurs through social-emotional

interactions. Simsek, Lubatkin, and Floyd (2003) developed a theory of inter-organizational networks based on the concept of 'structural embeddedness' with a focus on the network as a whole emphasizing relational and cognitive embeddedness. These papers represent a development of socio-spatial embeddedness, but often omit the spatial context, considering embeddedness as a phenomenon occurring in rather than through a place. In a study of the socio-economic profiles of small European towns, Hamdouch, Demaziere, and Banovac (2017) argued embeddedness would be difficult to replicate elsewhere as spatially distinctive social relations, territorial capital, and modes of asset mobilization 'are deeply embedded in the local social structure and reflect a very particular history' (2017, 470). We agree and disagree. On the one hand, we agree as this statement supports the concept of 'swarming' and the difficulty of replicating the complex concatenation of processes and factors that exist locally. On the other hand, we disagree as firms must and do adapt to exogenous and endogenous processes, transforming a firm's place within a wider structure of economic relationships (Knoben and Oerlemans 2008).

Our argument is that we need to know more about adaptations in the embeddedness of SMEs in response to these changes, including entrepreneurial processes by which firms adapt and become locally disembedded. This is to argue that firms are in a continual process of becoming or adapting to external and internal changes. This is an entrepreneurial process in which owners and managers continually restructure or re-orientate the firm including alterations in the relationships between a firm and its geography. Debates on entrepreneurship and place are often framed within the limitations of agglomeration and accumulation models, linking city-based externalities with firm output and entrepreneurial gains. Yet challenges to this model have suggested the need to understand, in more detail, SME practices in relation to SMST locations, as a form of urban organization which is different to larger cities, and the entrepreneurial responses these locations stimulate (Servillo et al. 2014; Meili and Mayer 2017; Hamdouch, Demaziere, and Banovac 2017). Resource configurations within SMSTs make for notable variations compared to larger urban areas in which SMEs must successfully undergo formation, embedding and adaptation. Our argument is that through these stages, firms develop entrepreneurial solutions to reconfiguring their networks, or linked enterprise structures. Thus, these stages see firms develop an evolving set of spatial relationships utilizing often esoteric configurations of endogenous and exogenous resources, and founded upon the embedded yet evolving adaptation processes of SMEs in SMSTs.

Methodology and small towns and southern Staffordshire

Research on SMSTs has conventionally been framed through an orthodox hierarchy of administrative spaces, with emphasis on cities and city-regions. This approach has to some extent been detrimental to understanding the dynamics of SMSTs, privileging geographic proximity over cognitive or organizational, social interaction over economic transactions, and political economy over trading networks. This paper addresses some of these shortcomings through a network-based analysis examining the critical relationships and dependencies of a sample of SMEs located in SMSTs. The methodology incorporates two distinct elements; the data collection methods and the spatial context.

Data collection

This study adopts a firm-centric approach using a qualitative methodology to identify the critical relationships and dependencies of a sample of SMEs located in SMSTs. Data was collected using in-depth telephone interviews, offering access, resource and dialogue benefits (Mitchell and Zmud 1999; Williams 1993), each lasting between 20 and 60 minutes. A structured questionnaire was used, divided into three sections: firm characteristics; trade relations, networks and embeddedness; and public-sector interactions. Section 1 focused on identifying factors relating to the location of the firm and how it was locally established and embedded. Section 2 posed more specific questions mapping evolving spatial relationships with customers, suppliers, competitors and their role in the enterprise adaptation process. Section 3 collected data on firm relationships with the public sector as similarly an influencer on the

adaptation process. The questionnaire was informed by Markusen's (1994) framework for studying regions by studying firms.

The interview sample consisted of 29 SMEs all involved in manufacturing (Table 1). This sample was identified from a database of 171 manufacturing firms consolidating information from Local Authorities, Chambers of Commerce, and the FAME business database. Interviewees were senior personnel within the firm. The interviews were transcribed and anonymized. The focus on manufacturing reflects the importance of this sector in SMSTs (Hamdouch, Demaziere, and Banovac 2017). Manufacturing has experienced processes of global dispersal, disintegration or on-going fragmentation. These 29 firms have experienced an on-going process of structural transition. Each commencing life before 2000, their longevity places them amongst a minority of firms considering the current 5-year survival rates of West Midlands firms (44.4%) (ONS 2017) and an aggregate 10-year lifespan for a firm (Daepf et al. 2015). Nevertheless, SME manufacturing firms are perhaps more locally embedded reflecting spatially-bounded production systems and, in this instance, the West Midland's manufacturing history (Walters 2013). This history reflects an accumulation of assets, skills, and reputations that has made an important contribution to facilitating the establishment of SME manufacturing firms in the West Midlands.

The study area

The location for this research was Southern Staffordshire, an area consisting of five separate SMSTs in England's West Midlands; Cannock Chase, East Staffordshire, Lichfield, South Staffordshire and Tamworth (Figure 1). This area sits on the edge of the Birmingham-Black Country West Midlands Conurbation (WMC). Southern Staffordshire is an archetypal SMST area, peripheral to a major city

Table 1. Characteristics of firms.

Company	Year Formed	Employees	SIC Group Description
C1	1965	115	Remanufacturing of automotive parts*
C2	1995	7	Manufacture of other electrical equipment
C3	1998	30	Other manufacturing n.e.c.
C4	1954	190	Manufacture of plastics products
C5	1998	16	Manufacture of other fabricated metal products
C6	1982	40	Manufacture of other general-purpose machinery
C7	1989	20	Treatment and coating of metals; machining
C8	1952	63	Manufacture of basic precious and other non-ferrous metals
C9	1984	12	Manufacture of parts and accessories for motor vehicles
E1	1994	5	Architectural and engineering activities and related technical consultancy
E2	1983	60	Manufacture of electric motors, generators, transformers and electricity distribution and control apparatus
L1	1989	24	Manufacture of basic chemicals, fertilizers and nitrogen compounds, plastics and synthetic rubber in primary forms
L2	1965	4	Manufacture of plastics products
L3	1994	10	Other manufacturing n.e.c.
L4	1955	65	Manufacture of plastics products
L5	1987	9	Manufacture of other fabricated metal products
L6	1981	151	Other manufacturing n.e.c.
S1	1972	64	Manufacturer of on-site power equipment*
S2	1963	150	Manufacture of articles of concrete, cement and plaster
S3	1987	50	Manufacture of plastics products
S4	1964	243	Manufacture of communication equipment
S5	1991	220	Manufacture of computers and peripheral equipment
T1	1918	54	Manufacture of cutlery, tools and general hardware
T2	1974	250	Manufacture of other electrical equipment
T3	1932	134	Manufacture of other fabricated metal products
T4	1984	61	Manufacture of furniture
T5	1994	112	Manufacture of metal connectors*
T6	1962	54	Manufacture of cutlery, tools and general hardware
T7	1996	18	Manufacture of vegetable and animal oils and fats

*Description of activities where no single SIC Group identified

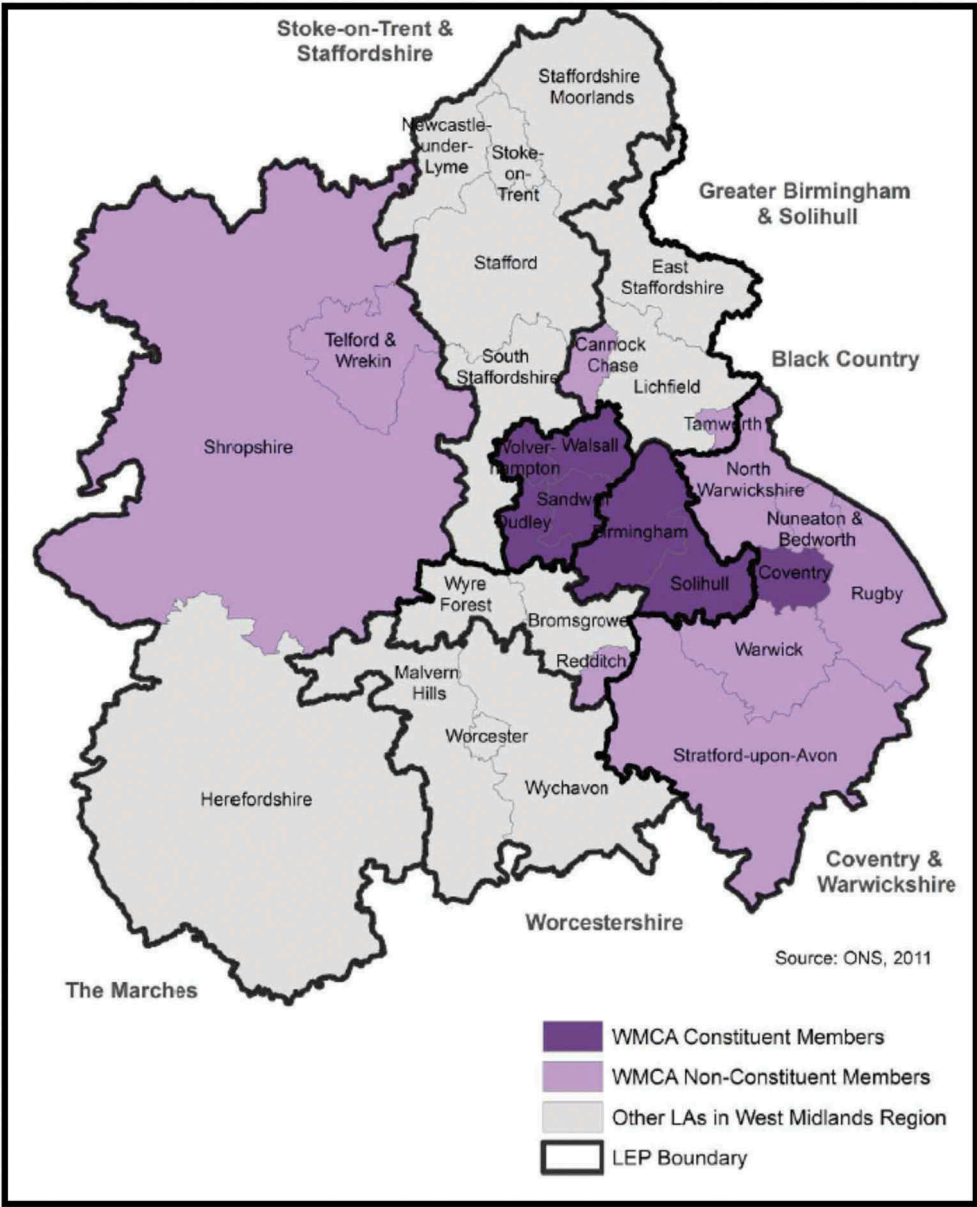


Figure 1. UK west midlands by local authority units.

with a daily outflow of commuters, well served by the national motorway network, and with a network of road and rail connections to the WMC. As a result, this area is at risk from an agglomeration shadow (Meijers and Burger 2015) through focused investment within key urban centres under core city policies. It also has potential to benefit from a borrowed size effect (Alonso 1973). Each Southern Staffordshire locality is a separate urban area, with a distinctive history. The SMST designation of these localities is taken from DEFRA's Rural-Urban Classification (2011), each locality determined via population density as too small to be (part of) a conurbation but too densely populated to be rural. Focusing on this area contributes towards understanding

entrepreneurial processes in SMST economies, alongside forms of embedding and their adaptation processes.

The origins of these SMSTs represent a complex interplay between availability of local resources and accessibility. Southern Staffordshire consists of scattered small market towns across the region with few villages and several 'small hamlets and dispersed farmsteads set in intricate, anciently enclosed landscapes' (Hooke 2006, 13). The local landscape of small market towns and the cathedral city of Lichfield represents the outcome of a complex concatenation and layering of incremental decisions made by individuals, firms and the state over a period dating back 500 years.

The West Midlands contains two very different types of settlement (Hooke 2006, 13). First, those places experiencing rapid and dramatic change over the last 200 years driven by local resources, rapid urbanization, and processes of industrialization and deindustrialization. These places have been explored in many academic studies. Second, smaller towns and cities have experienced processes of adaptation and evolution rather than rapid transformation and are thus largely ignored in academic analysis. These smaller places are not isolated from the region's larger settlements. Three major linkages can be identified. First, the WMC's travel-to-work area incorporates many Southern Staffordshire's SMSTs, thus a reciprocal employment-housing dynamic exists. Second, there is a long history of interaction between the WMC and surrounding small towns, linking production capacity with knowledge. One example is Samuel Johnson's infamous comment concerning the relationship between Lichfield and Birmingham. Provoked by James Boswell stating Lichfield had no important industries, Johnson's replied: 'We are a city of philosophers: we work with our heads and make the boobies of Birmingham work for us with their hands' (Boswell 1830, 105–6).

Finally, during the 1960s Staffordshire's smaller towns experienced stagnation and depopulation whilst larger cities grew rapidly. A major 1966 study of some smaller towns surrounding Birmingham and the role industry played in their local economies noted that:

"... the (WMC) is a demographically and economically overcrowded and congested heart, where the inherited social evils of the region are concentrated. On the other hand, some of the peripheral areas of the five counties have been suffering depopulation and stagnation and are in need of some stimulation in their development" (Wood 1966, 7).

This study led Birmingham City Council to develop plans encouraging the relocation of people and industry from the conurbation to smaller towns including Lichfield and Tamworth. This included provision of factory space, and interventions in the region's economic geography which strengthened 'some existing towns not adverse to the incoming of more people and more trade' (Freeman 1966, 95). Wood's analysis of industrial linkage and small towns highlighted the importance of understanding specialization of technologies and agglomeration economies. At the local level these might be unrelated when exploring individual firms or small towns given 'the high degree of connection that such small economic units have with the outside world makes local causes difficult to examine' (Wood 1966, 1). This is an extremely important point. The socio-economies of these SMSTs and the WMC enjoy a reciprocal borrowed size relationship (Alonso 1973). Yet some SMST firms have limited direct linkages with the WMC beyond land and labour. This highlights the difficulties of isolating economic activities and specific locations from embeddedness in wider regional, national and international relationships, linkages or production networks. It also highlights how firms adapt as local linkages are broken and replaced with non-local linkages.

Forming firms in southern Staffordshire small towns

Our first research question highlighted processes of firm formation in the context of Southern Staffordshire's SMSTs. These places represent a set of localities whose origins reflect different

periods of social and economic development involving changing interactions with surrounding towns and cities. Southern Staffordshire houses a population of 506,500 across its SMSTs (Table 2). Lichfield (pop. 103,100), an historic Cathedral and market city, is a pivotal location for agricultural goods' transactions from its' hinterland and more widely across Staffordshire. Cannock (pop. 98,500) emerged as a core location for production linked to Staffordshire's coal reserves and related heavy industrial processes. East Staffordshire (pop. 116,700), specifically the principal town of Burton, has and maintains a strong brewing heritage. Tamworth (pop. 77,000) expanded following implementation of urban dispersal policies in the 1960s designed to combat urban overcrowding and industrial pollution in the WMC.

Despite these distinctions, the establishment of SMEs within these SMSTs has been in response to the environment, factor conditions and an interplay between resources internal and external to firms. These factors include affordability, access to a skilled workforce, land availability and sunk costs (Figure 2). Affordability is an advantage to firms in both the early stages of development and forced relocation driven by ongoing gentrification processes or reductions in internal margin. Such investments run alongside perceived lower service costs in terms of business rates and planning charges. Workforce factors link the operational requirements of the firm to established localized skills and capabilities in local labour markets. Land availability for industrial purposes within areas such as Southern Staffordshire has proved adequate to encourage the development of localized economic activity and foreign direct investment (FDI).

Sunk costs are conventionally associated with firm-based investments limiting flexibility and movement (Clark 1994). Sunk costs, including personal convenience, lifestyle choices and place of residence, are also important in shaping SMST economies and influencing firm formation processes. This reflects bounded rationality in which emotional preferences for a location outweighs more rational decision-making. Firms therefore can establish in a sub-optimal location; even the most rational locational decision might eventually be undermined by processes leading to 'obsolescent logic' (Florence 1953). Such sunk costs apply to existing investments

Table 2. Southern Staffordshire towns by population, 1981–2016.

	1981*	1991*	2001*	2011*	2016**
Cannock Chase	84,609	87,591	92,126	97,462	98,500
East Staffordshire	94,459	96,376	103,770	113,583	116,700
Lichfield	88,134	91,191	93,232	100,654	103,100
South Staffordshire	96,183	104,088	105,896	108,131	111,200
Tamworth	64,253	69,051	74,531	76,813	77,000

Sources: *UK Census Data; **ONS Population Estimates

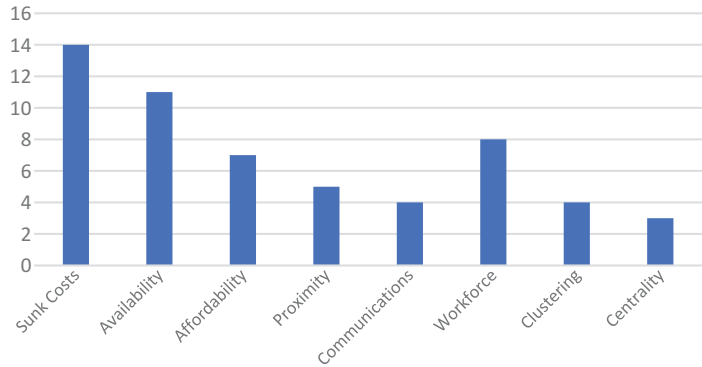


Figure 2. SME locational influences at establishment stage.

Source: Authors (N = 29)

Note: Sunk costs are related to the existing residential location of the founder(s)

in everyday living including housing, social relationships and educational facilities. At the nascent firm formation stage sunk costs emerge in personal or emotional iterations, fitting into a pragmatic approach linking personal residence and social ties with localized demand and skills. Thus, one business owner noted that: 'My business partner...would be more based at the factory and he lives over in Cannock. And there were a few moulders in Cannock...a ready-made workforce' (C3). For many firms, initial location reflected personal convenience as an important shaper of business decision-making. One owner noted that: 'We...happen to be in Burton because that's where our founder lives. Is there more skilled...labour than anywhere else? No. If we were relocating...today would we do it differently? Yes' (E2). The initial locational decision for establishing a new firm is often determined by factors related not to the business, but the founder's personal circumstances and experience of place. Additional factors influencing location can be grouped as cost-related (accessibility, availability, affordability) and non-cost related (skilled workforce; agglomeration) (Figure 2).

Amongst the SMEs in the analysis, the oldest commenced trading in 1918 and the youngest in 1998. Such different formation periods reflect a range of contexts. Just under one-third (9) relocated from elsewhere or were outcomes of FDI decisions. This group included investment driven by external forces, either parent company acquisition strategies and relocations or changing land-use policies that encouraged relocations from Birmingham. To this extent, the access benefits of Southern Staffordshire SMSTs was an important consideration during the firm formation stage, alongside sunk costs (operational and emotional) and dependency on historic industrial and infrastructural investment providing access to skilled labour, an existing or established client base, and new markets.

Embedding firms in southern Staffordshire small towns

Our second research question requires analysis of firm-level embeddedness as a strategic process involving utilization of available local inputs. Firms were initially formed in these SMSTs to exploit relatively local markets and factor inputs (land, labour, resources including residential location). This reflects a set of well-known processes as firms form to take advantage of local inputs. The process by which firms become locally embedded as well as embedded in other places through linked enterprise structures is on-going and reflects the needs, strategies and attitudes of different firms in response to alterations in endogenous and exogenous processes. This process is iterative, demand translating into an evolving package of dependencies for firms emerging at varying scales. It also involves understanding sunk costs as a determining factor in the on-going embeddedness process limiting alternatives. Recent orthodoxy in theoretical debates has proposed the embedding process for firms is positively associated with agglomeration economies, specifically city-regional models (Audretsch and Dohse 2007; Storper and Venables 2004). This debate comes principally from research on larger cities, assuming centripetal forces drive peripheral places without similar analysis of firms located in SMSTs.

Embedding is a dynamic process of continual renewal and reconfiguration as firms develop and survive. Considering how long the SMEs have traded – ranging from 15 to 95 years – this embedding process for many has experienced several cycles of decline, renewal, and transformation. These cycles of local embedding reflect the changing nature of demand for a firm's products and services and related configurations of linked enterprise structures. Initially, the primary market for these firms was local, but economic restructuring leading to the closure or relocation of these markets has for some firms eroded local demand and required a mix of product/service and process adaptations with implications for how the firms remains locally embedded. Most recent iterations within the firms were driven by embedding factors of industrial clustering, transport networks, sunk costs, forms of proximity, and key workforce inputs and dependencies (Figure 3).

Cluster-based embedding has principally been bound into conventional interpretations of key transactional relationships for firms. The localized or regional presence of such transactions

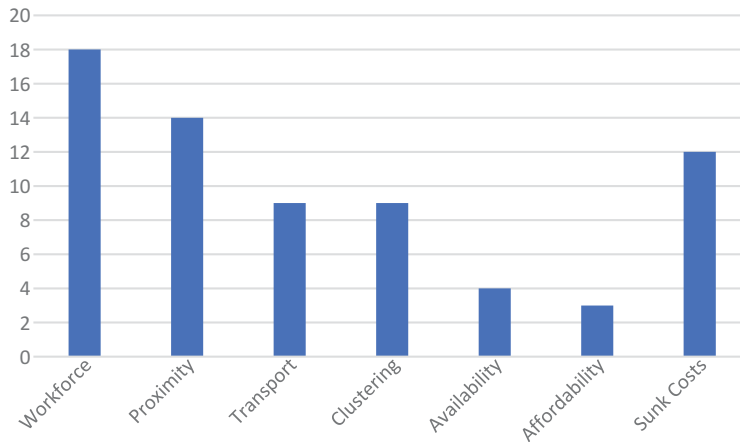


Figure 3. Southern Staffordshire firms and the process of becoming locally embedded.

Source: Authors ($N = 29$)

endures, embedding firms into primarily supplier-based clusters or localized linked enterprise structures. This clustering tends to manifest around concentrations of specialist suppliers for specific raw materials historically associated with the West Midlands. Access to transport infrastructure plays an important role in embedding firms. Southern Staffordshire sits at a critical intersection of the British motorway and railway networks, offering relatively easy access to important North-South and East-West routes. The centrality of the area provides firms with relatively easy access to increasingly dispersed customer bases. One firm noted that it was 'ideally situated...much of our work is breakdown work on customer sites (in) South Wales, South of England, Yorkshire, Scotland' (C6) and another noted 'I'm in the centre of the country, so it doesn't matter if I work anywhere' (L3).

As with location, specific sunk costs are keys to the embedding process, providing path dependency and lock-in. The most important sunk cost is the location of the firm's premises; a firm's initial location leads to the configuration of a linked enterprise structure with a precise local geography. Establishing and maintaining production lines plays a central role in this process of place-based related path dependency. This reflects the double-edged cost of production downtime and further investment in relocating or reconfiguring production lines and linked enterprise structures. Thus, one firm noted that 'we have very big machinery...the downtime would be considerable' (C5), and another that 'the upheaval would be massive...last time it took 6 months to move...there was a lot of financial difficulty getting up and running' (L4). Another firm hinted directly at place-based path dependency when they noted 'there would be a significant cost associated with a move...it's not something that you can change on a whim' (S5). Proximity is key to the embedding process, but this takes multiple forms. For some, proximity aligns with personal sunk costs where physical closeness to the business is considered critical. This allows for maximizing production time alongside maintaining work-life balance within a set of firms where owner-manager overtime is commonplace; gains from firm relocation could be as much as three hours a day. Others see it as proximity to key suppliers and clients; such cases are not about proximity to a cluster but to key companies on which a firm has transactional dependence within the development of the firm's linked enterprise structure. To one firm, '... the Head Offices of our customers tend to be located around the Midlands, which is a help' (T5) and another firm noted 'Historically we were associated with Leyland. We still are with Land Rover so clearly there's locality...for those customers' (T3).

Proximity includes the location of a firm's workforce; this is one of the most critical of embedding factors. Here workforce was interpreted as human capital both within the firm and with associated skills and aptitudes from a wider local or regional catchment area including the embedded legacy of the West Midlands manufacturing production system. The enduring lifespan of this sample of firms has seen the evolution of skills amongst employees leading to an enhancement in capabilities difficult to replicate elsewhere. Included in this factor is the high level of service years which had seen employees become specialists critical to the delivery of their employer's core goods and services. For many firms some members '...of the workforce have been with the firm "boy-to-man". Key skills are embedded in this group' (C1) and 'the business relies on people skills...that skill level really does go down to the shop floor' (T2). This internal resource is supplemented by the availability of trained labour within the firms' catchment area. Transition away from high volume towards high-quality methods of production within SME manufacturers in the United Kingdom has seen this embedded skill base provide the foundation for innovations in products and services. The loss of internal production or reworking functions in customer firms presents expansion opportunities including services in design or finishing to reduce client and forward chain costs.

With a range of factors contributing towards embedding firms, the provision and management of these factors occurs principally outside the firm and because of historic decisions made around investments by industries, education providers and the State around planning and infrastructure. Whilst internal development – formal and shop-floor based – allows firms to shape niche production practices, concentrations of skills within the local catchment is a result of historic industry-led training and development schemes of the 1970s and 1980s. Availability of this resource has been enhanced through thinning out the manufacturing sector, decline and loss of skills occurring at a slower rate to that of localized or regional employment. Infrastructure provision in the shape of employment sites, safeguarded through planning regulation, serve to reinforce sunk costs via a mix of protections and permissions. On-going investment in and commitment to transport networks by state organizations further reinforces these dependencies.

Embeddedness is a dynamic process as firms' respond to alterations in the geography of their transactional relationships. This may transform the initial rationality of locational decision through 'obsolescent logic' (Florence 1953, 90). There is a tension between locational stickiness driven by sunk costs, including the firm's premises and employees, and the changing geography of client demand and supplier inputs. For surviving manufacturing firms, alterations in the geography of client demand, combined with a shift towards the production of high-value added products, ultimately results in a process of dislocation and detachment from their SMST. This produces a new form of embeddedness no longer solely focused on the SMST location but is now increasingly multi-scalar. It is to this that we now turn our attention.

Adaptive embeddedness: dislocation and detachment in southern Staffordshire SMST

Our third research question highlighted embeddedness as an on-going process of what can be termed '*adaptive embeddedness*' as the relationship between a firm and its place alters, often significantly, resulting in processes of dislocation and detachment and the development of a multi-scale approach to embeddedness. In this section we explore the changing nature of firm embeddedness in SMSTs. This could be interpreted as alterations in how firms borrow size from different places. Thus, initially the focus is on local embeddedness and the establishment of a firm within a SMST setting including the benefits of borrowed size reflecting the locality, but later firms borrow size from locations much further away. This is a process that continually recasts or reshapes the relationship between firm and place, providing firms located in an SMST with access to client and supply networks substituting for the benefits of agglomeration (Meijers and Burger 2015). This

reflects an attempt to balance the inertia associated with localized sunk costs with the dynamics of alterations in the geography of client demand and supplier inputs.

Analysis of the formation and embedding of firms in Southern Staffordshire provides some understanding of key factors binding SMEs to SMSTs. This process must also be placed within the context of ongoing spatial transformations in production systems influenced by globalization and liberalization tendencies. Thus, transformations challenge notions of localized and regional production systems, presenting firms with opportunities to expand trading territories and evolve product and service portfolios. The influence of such opportunities for this sample of SMEs disrupted their localized linked enterprise structures, relationships and dependencies.

Where this detachment can be principally identified is around trade. Demand for the firms' products had shifted from local or regional to clients located across the United Kingdom and extending internationally. This shift was partially driven by reductions in regional demand, key customers closing or relocating to compensate for cost pressures and to capitalize on more liberal trade regulations. It also represents a conscious adaptation within firms in response to changing operational and market conditions and locations. One firm noted that '... much of our work would have traditionally been with the kilns in Stoke, but with the decline of this industry we're looking further afield at a worldwide market' (C6). For many firms this reflected a move to high value and low volume production with a shift towards more specialist and added value activities focusing on improved design, greater diversity, or increased specialization. These strategies saw further narrowing of demand at the regional scale, increasingly niche product lines requiring a broadening of trading territory to maintain sufficient demand. This process reflects an awareness that price-based competition would lead to the offshoring of production to lower cost locations whilst high value niche production enables manufacturing to continue in Southern Staffordshire but targeted at a much more dispersed client base.

Through this broadening of trading territories, firms have found themselves subject to, and therefore in need of greater integration in, related knowledge and regulatory networks capable of understanding and responding to wider geographical markets. These alterations reflect changes in production processes including an emphasis on supply chain management and in legislation intended to increase consumer, citizen and employee protection. These regulations sit not only outside local and regional systems but increasingly lie beyond national boundaries, manifesting at supra-national scales through either formal political organizations, such as the EU, or industry-led collectives.

Maintaining up-to-date knowledge on industry challenges and issues sees SMEs engage in increasing relationships at these expanded geographic scales. Access to these non-local clients can be facilitated by trade associations or representation organizations, performing a role as insider and intermediary examining and analysing the evolution of an industry including alterations in regulations. Such intermediaries operate nationally and often internationally and can impact on the evolution of an industry and its firms. Thus, national actors become more important, displacing the role of local actors. A similar scenario emerged in the case of SMEs maintaining a higher dependence on local or regionally situated actors, specifically suppliers. Maintaining relatively localized relationships is a deliberate strategy and increasingly important for SMEs producing high value or niche products. These suppliers were rarely manufacturers but instead were stockists or agents themselves linked to highly dispersed linked enterprise structures or production networks. Rather than representing any enduring production system, such suppliers instead represent a localized access point to an increasingly dispersed global linked enterprise structure to which SMST firms are increasingly bound.

As access points to insights on industry trends and changes and regulatory reforms, such networks are invaluable, allowing firms in more isolated places to compete through localized innovation. Such SMST firms are often considered dependent on the dispersal of externalities and multipliers from a regional centre; the use of network hubs in the form of customers, suppliers and representation organizations enables these firms to move beyond conventional bounded

rationality and become more effective agents of change playing integral roles in an industry. This role includes ongoing redesign of products to address cost and efficiency issues faced by customers and maintaining key competencies eroded within client firms through processes of rationalization and vertical disintegration. The strategy of one firm was to '... improve the quality of our product...to reduce the cycle time...in the field. Because if you can save one minute on [customers] installing...it's quite good value for them' (C4). Another firm noted 'the larger manufacturers seem to have lost a lot of the skillsets ... so one of the major offerings we're now doing is we won't just provide you with the [product] we will handle all aspects of designing it for you' (T6). All this suggests a location within an SMST does not imply isolation or limited innovation. It also suggests that SMEs, in this analysis, have survived through processes of adaptive embeddedness involving learning from, whilst adapting to alterations in the linked enterprises structures within which they are embedded. The important point is that the orientation of these linked enterprises structures has altered to embrace a different geography. The local remains an important site for labour inputs, but also reflects path dependency and sunk costs. As demand has shifted from local to national and international, SMST-located firms have altered products, production processes, and developed a more geographically dispersed or extended linked enterprise structure.

In absorbing this latter role, SMEs enter a further type of detachment from their local resource base. Previous dependence on embedded skills and aptitudes is slowly eroding through a process of natural attrition as the workforce matures and is not replenished. Thus, one firm noted that 'the skillsets are available, although not anything like as widely available as we would like' (T6). The ongoing focus on high value niche products is altering the skills required by these firms. As a result, firms have increasingly to focus on importing skilled workers; this contributes to undermining the relationship between firms and a locally embedded workforce. One firm highlighted that to maintain '... the quality of our team...we're recruiting from Europe' (L6) and another noted that 'We're currently in a recruitment phase targeting three universities in the area to find a development systems engineer to bolster our...software control' (E2). An alternative strategy was based on mergers and acquisition (M&A) and according to one firm '... what you've seen over the last 6–7 years is – through acquisition – going from a purely hardware business to...professional services/business services' (S5).

Two models of SME embeddedness in SMSTs can therefore be identified from these interviews. First, some firms remain focussed on their locality with a strategy based on maintaining local embeddedness. T5, for example, is a manufacturer of fittings for the construction industry, trading in its current form since 1994 and from its current location since 1998. This firm is the outcome of an M&A process by a parent company that entered the UK market and then engaged in a consolidation process of acquisitions in Worcester, East London and Cannock. The company's present site was selected given the size of operations established in Staffordshire, access to a nationally distributed market via transport networks, and the comparative cost of business premises. This firm is focused on the UK market. It is embedded with a workforce of over 100 employees. Key suppliers and customers are easily accessible. There are important cost implications of any production downtime and these risks are minimized given the firm's localized linked enterprise structure. There are a strong set of factors that bind the firm to this location. Proximity dependence is, however, a misleading interpretation of these relationships. Key customers may be close, but this closeness is transactional rather than involving geographical proximity; products are distributed around the United Kingdom through retailers and merchants. Similarly, the firm's primary material input is steel. There is a concentration of suppliers in the Midlands, but these are importers or subsidiaries of international operations.

Second, the majority of the firms in this study had become increasingly detached from the locality. L6 is an R&D engineering and manufacturing business established in Staffordshire in 1981. The location and local embeddedness of this firm occurred through consolidation of the owner's investment interests. The firm's chairman owns the site and the premises are leased to the firm. The evolution of this firm has isolated it from further localized dependency as the firm's services have

become more specialized focusing on a niche manufacturing sub-sector. The firm's value depends on maintaining high levels of up-to-date technical knowledge. To achieve this, they recruit researchers from across Europe and beyond. This level of specialization means the firm sells its services to customers based mainly in Europe and Japan. The firm's supplier linked enterprise structure is also focussed on Europe and Japan. This firm's location reflects a decision made by the founder based on the ownership of existing assets and residential sunk costs. This firm, however, has become dislocated as the geography of its linked enterprise structure has altered. The firm relies on its ability to recruit employees from elsewhere, inputs from firms located elsewhere, and clients located outside the United Kingdom.

The distinction between these two models of embedding is, however, rarely absolute. In most instances, firms develop a blended or multi-scale approach. Differences in the form of embeddedness and detachment may however be interpreted in three specific ways; *structural embeddedness*, *emotional embeddedness* and *circumstantial embeddedness*. Structural embeddedness occurs through embedded strategic relations between the SME and its evolving linked enterprise structure, with emphasis placed on local relationships that enhance adaptive capacities. Structural embeddedness is challenged as firms located in SMST environments have to borrow size from other localities due to alterations in the geography of supply chains and in client demand. Failure to replace inputs and clients results in firm failure. This might be a reflection of emotional embeddedness combined with limited awareness of opportunities to dislocate or detach from the constraints imposed by alterations in the SMST. Emotional embeddedness occurs through personal interest and investments within and outside the firm, blended with management decisions despite risks of 'obsolescent logic'. Emotional embeddedness reflects a conflict between place-based attachment and business operations. The location of the firm may be a response to emotional attachment to a place rather than the outcome of a rational decision-making process intended to select an optimal location, thus acting as a catalyst for entrepreneurial responses to sub-optimal operational conditions. Circumstantial embeddedness occurs by maintaining direct operationally important forward and backward relationships based on geographical proximity but offering limited strategic inputs. These forms of embeddedness will exist in other settings outside SMSTs. Their manifestation can, however, be considered distinctive in SMSTs due to structural factors related to relative isolation, limited local demand and resource limitations. Limited provision of externalities in comparison to larger cities alongside the specific demands of more mature firms operating in established sectors implies that embedding is a more conflicted process, reconciling localized and dispersed relationships consecutively. For surviving firms, reconciliation is an on-going process of adaptive embeddedness as SMEs located in SMSTs respond to a mixture of endogenous and exogenous drivers.

Discussion and conclusions: adaptive embeddedness and SMEs in SMSTs

This paper has explored the relationship between SMSTs and constituent SMEs with a focus on understanding their entrepreneurial processes of formation, adaptation, survival and dislocation and their implications for embeddedness. SMSTs are heterogeneous places reflecting an on-going accumulation of incremental firm-level decision-making involving the evolution of the geography of localized and increasingly globalized linked enterprise structures.

The analysis focussed on three research questions that highlighted processes of firm formation, embedding and adaptation. The separation of these processes is however misleading. Each of these processes is co-dependent to some extent; three specific issues however are prominent.

First, the decision to form a firm in a SMST reflects several motivations and drivers. Of these, the most important relates to personal sunk costs, reflecting a form of emotional embeddedness in a place compared to that of business considerations. Thus, it is difficult to isolate lifestyle from business choices in the SME establishment process.

Second, firms located in SMSTs are in a continual process of embedding as the relationship between firm and SMST alter. But, this process is constrained by localized sunk costs that limit adaptation and might eventually contribute to failure. These sunk costs reflect an interplay between the owner's place of residence and the firm's premises combined with the firm's dependence on local labour.

Third, surviving firms engage in a process of *adaptive embeddedness*, through which firms reconfigure their relationships with place borrowing size from elsewhere. This includes a gradual disembedding of existing local relationships, replacing them with non-local clients and inputs. Altering the nature of local embeddedness through non-local networks is an on-going process, with implications for an SME through expansion of its capability sets and for the SMST through fragmentation of localized supply chains and rescaling of linked enterprise structures.

In understanding embeddedness as an on-going process, this paper has identified three specific forms through which firms are engaged with SMST economies: structural, circumstantial and emotional. These forms contribute to the on-going debate on embeddedness and, in particular, by emphasizing that embeddedness is a dynamic adaptive process rather than a single event in the life of a firm and, in addition, that there are different forms of embeddedness not yet identified in the literature (Simsek, Lubatkin, and Floyd 2003; Biniari 2017). These forms may represent standardized elements of the embedding process, and therefore occur similarly in larger cities. This requires further research. Nevertheless, their occurrence in the context of SMSTs is important. The key issue is the size of the available local market and the ability to replace local inputs and clients. It is possible to argue this is part of a process of borrowed size as firms seek to integrate agglomeration benefits of larger centres. Such relationships are reciprocal but are also not limited to proximity-based interactions as SMEs become embedded in broader aspatial, or non-local, networks supplementing localized resource deficiencies. Using SMEs as the object of analysis to explore SMST economies, we gain a more detailed understanding of how SMEs within SMST environments evolve, adapt and embed, where and how their critical interactions and dependencies are emerging, and how the SMST environment enables adaptive practices in constituent firms.

There will be other forms of embeddedness that reflect aspects of the complex interrelationships between firms and place. The focus on socio-spatial embeddedness has distracted attention from more economic forms; the latter however remain integral. Structural embeddedness involves tangible and intangible elements of linked enterprise structures providing critical firm inputs, while Circumstantial reflects the convergence of functional relationships in a locality through serendipity and the accumulation of place-based assets outside the gift of the firm. Structural reflects a strategic form of embedding. Circumstantial is focussed on operations. Structural is, however, in danger of on-going erosion with declining local skills and alterations in the geography of a firm's linked enterprise structure and client base. Through this erosion, Emotional embeddedness becomes more significant through residential or lifestyle sunk costs that bind people – entrepreneurs and employees – to a place.

Placing firms within SMST economies is a process of understanding how and why firms are established in a place combined with both understanding the evolution of a firm's linked enterprise structure and their framing through a firm's 'obsolescent logic' (Florence 1953). Such processes involve understanding different ways in which firms become locally embedded combined with a focus on adaptation as some firms become detached from their SMST location. This process of detachment is part of a survival and/or growth strategy as a firm seeks to replace local with non-local inputs and clients. It is a survival strategy if this replaces erosion of demand and supply within a firm's local economy. Further research, however, is required on firms that failed to survive, or failed to grow, to understand how adaptive embeddedness contributed to these outcomes.

On-going erosion of processes contributing to local embeddedness has specific implications for how we understand the functioning of SMSTs. In particular, this presents a contrary picture to emphasis placed on city-based agglomeration economies. Concentration-agglomeration arguments suggest benefits accrue through the creation of self-replicating and reinforcing

externalities – the ‘stickiness’ which binds places together (Audretsch and Dohse 2007; Hall 2003; Storper and Venables 2004). This phenomenon is seen almost in reverse in SMSTs. Continued dispersal of markets and fragmentation of key relationships creates an ongoing narrowing of embedding factors to their most prosaic; the physical and tangible factors cited within classic debates on industrial location. It similarly enforces a growing separation between co-located firms with perhaps similar heritage and the structural integration of SMSTs with neighbouring large cities.

Escalating forms of separation are integral for forms of entrepreneurship emerging in SMSTs. Narrowing of localized relations sees SMEs adapting capabilities for and from new and distinctive patterns of production. Focus on specialist niche products is associated with the emergence of highly distinctive geographies of dependency and knowledge creation (Grillitsch and Nilsson 2015). Such portfolio adaptation has been integral to manufacturing SME success and survival in SMSTs. Polarization between resource and demand requirements of these firms and the resource and demand provisions of SMSTs has encouraged the configuration of more nationally and globally orientated linked enterprise structures (Boschma 2005). Building and maintaining such structures is founded on on-going entrepreneurial processes of firm adaptation (Anderson 2000; Johnstone and Lionais 2004). This adaptation blends embedded tendencies established through transitioning phases of development with requisite knowledge and capabilities acquired through evolving relationship structures. As a result, new and iterative models of operations and entrepreneurialism evolve (Mayer and Knox 2010; Kourtit, Nijkamp, and Arribas 2012; Hamdouch and Depret 2013).

For firms located in SMSTs, the integral factor in forming and maintaining knowledge networks becomes the SME itself through strategic relationships with co-located firms and those based elsewhere combined with entrepreneurial practice. This is not to isolate firms from drawing upon the accumulation of assets within a SMST. For some firms, SMSTs remain critical given the continued importance of localized linked enterprise structures; for others their location reflects obsolescent logic and/or emotional embeddedness. The shift towards high value, low volume manufacturing alters a firm’s linked enterprise structure towards more specialist inputs not locally available. In its most extreme form, a firm located in a small town must create the conditions for its continued embeddedness, importing skilled labour and working with local policy-makers to maintain and enhance attractive residential environments. This suggests surviving firms located in SMSTs must use a continual process of adaptive embeddedness that involves shaping the local environment to enable survival.

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