

**How place, institutions and firms
shape the Mersey Dee cross-border
economy**

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Philosophy (PhD) in Planning Studies**

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University Statement

I, Paul Adrian Hildreth confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

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Abstract

This study considers how the interaction of place, firms and institutions impact on realising the potential of the local economy. This is explored through a case study of the Mersey Dee cross-border economy that lies between North East Wales and North West England, as an illustration of a mixed urban and rural area that extends beyond a major urban area. It considers the application of two contrasting local models of local economic development to characterise the Mersey Dee: as a 'city-region' and a 'locality'. In the UK context, the city-region is an agglomeration-driven and metropolitan territorial construct, that reflects the dominant narrative of UK sub-national economic policy, observed through Combined Authorities and, in England, metro-mayors. The locality, alternatively, is situated within a place-based framework, having territorial, relative and relational characteristics that are formed from its institutional, industrial and settlement character. The study is conducted in three stages. First, to understand what makes a place by considering how history, geography and institutions have shaped the distinctive character of the Mersey Dee. Second, by investigating the contribution of local institutions to economic place. Third, by uncovering knowledge about the local economy from its firms – understanding how they arrived there, their firm-to-firm and institutional relationships and how they view their location in the area today. Finally, it combines insights from the interrelationship of place with firms and institutions of value to realising the potential of the Mersey Dee, as well as being relevant to other sub-national places. It argues for valuing a place-based understanding of the sub-national economy that gives recognition to the distinctive and inter-dependent contribution that different places can make. This is by responding appropriately, within a multi-level context, to the long-term interactive relative and relational processes that shape the heterogeneous qualities of place.

Impact statement

Because of the approach taken towards stakeholder engagement and the contribution of its analysis and insights, this study will achieve impact in academic and policy fields. The project was underpinned, early into the study, by researching and writing three journal papers (two collaboratively with Professor David Bailey). These provide a framework to understand sub-national and place-based economy policy (Hildreth, 2011, Hildreth and Bailey, 2013, 2014). They are well cited in the UK and international literature in this field.

Considerable effort was made to engage local and wider stakeholders in this research. Every opportunity was used to share and test research results through presentations and taking part in discussion events (see Figure 4-13). For example, feedback from Wrexham firms about the results of their interviews was debated with a Scrutiny Committee of Wrexham Council. This in turn influenced Council local economic development policy and practice (see Section 4.5). The author has also talked with the Welsh and UK governments about the findings.

This participative approach provides a platform to broaden the reach and significance of impact for this study. First, by informing the wide range of contacts who are interested in the research outcomes. Opportunities will continue to be explored to share results locally in the Mersey Dee – with interviewed firms, the Mersey Dee Alliance and its members, other local and regional institutions – and nationally with the Welsh and UK governments. Second, there is a paucity of such extensive and intensive place-based studies outside metropolitan areas. This study contributes to theory, by showing how different literatures might be brought together to address the conceptual challenge of working in functionally connected places beyond major conurbations. It also provides a detailed and novel insight from firms and institutions about how they relate to place.

Together these open up potential to impact policy and practice nationally and locally. This is at a time when there is growing need to better understand the role of place (e.g. HMG, 2018). This will be achieved by engaging with the UK and Welsh governments, through opportunities for policy presentations and by writing. A start has been made in collaboration with Professor Maria Hinfelaar, Vice Chancellor of Wrexham Glyndŵr University. This was by jointly writing

up a practical institutional case study of university, business and government collaboration in North Wales and the Mersey Dee into an academic paper (Hinfelaar and Hildreth, 2019). Further academic papers will follow drawing on the methods and outcomes of this study. Ideas for further research will be explored. In conclusion, strong foundations are established to achieve reach and significance in policy and academic impact from this research.

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Abbreviations and acronyms

AMRC	Advanced Manufacturing Research Facility at Deeside
APPPG	All Party Parliamentary Group on Mersey Dee North Wales
BIS	Department for Business, Innovation and Skills
CAD	Computer aided design
C&WLEP	Cheshire and Warrington Local Enterprise Partnership
CBI	Confederation of British Industry
CC&I	Chamber of Commerce and Industry
Coalition	Conservative and Liberal Democratic Coalition Government
CoE	Council of Europe
CPS	Centre for Policy Studies
CW&C	Cheshire West & Chester Council
DBF	Deeside Business Forum
DBW	Development Bank of Wales
Denbighshire Council	Denbighshire County Council
DCLG	Department for Communities and Local Government
DTI	Department of Trade and Industry
ESDP	European Spatial Development Perspective
ETS	European Union Emission Trading Scheme

EU	European Union
Evolved firms	Firms investing to locate into the Mersey Dee prior to 1980
FE	Further Education
Flintshire Council	Flintshire County Council
FSB	Federation of Small Businesses
FUR	Functional Urban Region
GDP	Gross Domestic Product
GPN	Global production networks
GSE	Greater South East
HMG	Her Majesty's Government
HMT	Her Majesty's (HM) Treasury
HQ	Headquarters
ICI	Imperial Chemicals Industry
ICT	Information and communications technology
Incoming firms	Firms investing to locate into the Mersey Dee post-1980
Indigenous firms	Firms forming from within the Mersey Dee
IoD	Institute of Directors
LCR	Liverpool City Region
LEPs	Local Enterprise Partnerships

Local	Local government
MDA	Mersey Dee Alliance
MIRA	Motor Industry Research Association
MNE	Multinational enterprise
National	Central government
NDFW	Draft National Development Framework for Wales
NE	North East
NEG	New Economic Geography
NWBC	North Wales Business Council
NWEAB	North Wales Economic Ambition Board
NWEF	North Wales Economic Forum
NW	North West
NVQ	National Vocational Qualifications
ODPM	Office of the Deputy Prime Minister
OECD	Organisation for Economic Cooperation and Development
Place debate	International 'place-based' versus 'space-neutral' debate
PSA	Public Service Agreement
RDAs	Regional Development Agencies
R&D	Research and Development

SE	South East
SMEs	Small and medium-sized firms
SMMT	Society of Motor Manufacturers and Traders
STEM	Science, technology, engineering and mathematics
SW	South West
T&FG	Welsh Government Task and Finish Group on City-Regions in Wales
UK	United Kingdom
WAG	Welsh Assembly Government
WDA	Welsh Development Agency
Wales Economy Minister	Welsh Government Minister for Economy, Transport and North Wales
WC&NWCCI	West Cheshire & North Wales Chamber of Commerce & Industry
WG	Welsh Government
WBP	Wrexham Business Professionals
Wrexham Council	Wrexham County Borough Council
WSP	Updated Welsh Spatial Plan 2008

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Chapter 1 The economics behind sub-national economic policy in England and Wales

1.1 Introduction: the reason for this study

This study examines how place, institutions and firms interact to shape local economic potential, through a case study of the Mersey Dee cross-border economy, between North East (NE) Wales and North West (NW) England. Whilst the empirical content of this study is framed in a local economy setting, it is conceptually positioned within contemporary approaches towards sub-national economic policy in England and Wales. It is particularly concerned with their appropriateness for mixed rural and urban places that reach beyond a major urban area. It addresses this by contrasting the application of two local models of economic development, both of which have been used to describe the Mersey Dee. First, as a 'city-region', as an agglomeration-driven and metropolitan territorial construct, that reflects the dominant narrative in UK policy making. Second, as a 'locality', a place-based understanding of the area, that considers how its relational, relative and territorial qualities are shaped by its historical, geographical and institutional context. In doing so, this investigation is situated within the context of the international '*place-based*' versus '*space-neutral*' (or '*place*') debate (Barca, 2009, 2011; 2019; Barca et al, 2012, Hildreth and Bailey, 2013, 2014; McCann, 2016).

I undertook this investigation to continue my long-standing interest in economic development policy and its capacity to support the realisation of local economic potential, developed from a career working in local and national government. In particular, I sought to address an apparent policy and evidence gap: that within an urban centric UK sub-national economic policy framework, there was not an approach tailored to the needs of mixed rural and urban places that reach beyond a major urban area. Or, even acknowledgement that they might face contrasting institutional and policy challenges to major urban areas (Harrison and Heley, 2015; Harrison, 2017; Beel et al., 2020). Recently, this interest has become timelier, with rhetoric from the Boris Johnson led Conservative government, elected in December 2019, about 'levelling up left behind places', many of which are towns positioned outside of major cities.

1.2 Two critical problems in the UK sub-national economy

This Chapter provides a policy and conceptual context to this study, by reviewing the background to economic ideas that lie behind UK sub-national economic policy. Whilst there is broad consensus that the UK (and particularly England) has two critical and interrelated problems in its sub-national economy, there is an absence of agreement about how they might be addressed. First, is that the UK (and particularly England) is too fiscally and governmentally centralised (House of Commons, 2009; McCann, 2016, 2019; UK2070, 2019, 2020). This issue was frequently raised by the former Labour government (1997-2010), the Conservative and Liberal Democratic Coalition administration (Coalition) (2010-2015) and remains topical within the Conservative government of today. It has been highlighted in Ministerial statements and speeches. For example, in making a case for *'radical decentralisation'*, the then Prime Minister David Cameron stated that *'over the last century Britain has become one of the most centralised countries in the developed world'* (Cameron, 2009). More recently, the Ministerial introduction to the Industrial Strategy Green Paper stated that: *'Britain is one of the most centralised countries in the world, but this has not led to places being uniformly prosperous'* (HMG, 2017a: 5).

Second, is that the UK is spatially and sectorally imbalanced. In his analysis of the UK regional-national economic problem, McCann (2016) described the UK as having the worst spatial inequality problem of any Organisation for Economic Development and Cooperation (OECD) country, with spatial imbalance occurring between the Midlands and northern regions, Scotland, Northern Ireland and Wales with London and the Greater South East (GSE); commonly referred to as the north-south divide. The north-south divide extends back to the late 19th Century or earlier and remains substantial and growing today (Gardiner et al., 2013; Martin et al., 2015; McCann, 2016, 2019).

For interrelated reasons, the UK's industry has also been sectorally imbalanced. The globally successful London economy has been driven by its concentration of banking and financial services. By contrast, the north of Britain has not succeeded in shifting its economy into new growth sectors on a scale sufficient to compensate for the declining performance of its historically strong manufacturing base (Gardiner et al., 2013: 923).

McCann goes so far as to argue that UK economic geography better '*reflects the patterns typically observed in developing countries or former-transition economies rather than in advanced economies*'. He observes that whilst London and the GSE performs strongly, almost half of the UK population live in regions and cities with productivity levels similar to, or below, those of poorer regions in Central Europe (McCann, 2016: xxvi, 1).

For over 20 years, the nature, if not the scale of the problem, has been repeatedly raised by different governments. Labour administrations (1997-2010) gave it focus in their regional economic performance public service agreement (PSA) target: '*to deliver sustainable improvements in economic performance in every region, and to reduce the gap in growth rates between the poorest and richest English regions*' (HMT, ODPM and DTI, 2004: 7). Implementation included the creation of nine Regional Development Agencies (RDAs) across England. The Coalition government (2010-2015) sought to address it in its approach to *local growth* and creation of 39 Local Enterprise Partnerships (LEPs) across England (HMG, 2010). Figure 1-1 summarises key elements of the Conservative government's sub-national economic policy from 2015 to March 2021. This includes retaining the LEPS, forming Combined Authorities with Mayors and, until March 2021, a UK Industrial Strategy (HMG, 2017b).

From December 2019, rhetoric started about '*levelling up*' to share prosperity across the UK, particularly for '*left behind places*'. Whilst a plan for growth, published for the 2021 Budget (HMT, 2021), includes statements about spatial rebalancing and some new initiatives such as eight Freeports, there remains a lack of strategy for translating this rhetoric into effective policy outcomes (Tomaney and Pike, 2020; Industrial Strategy Council, 2021). How these two problems have been addressed by successive UK governments provides a backdrop to the topic of study. With such a centralised system of governance, it is central government in London, rather than UK localities and regions that has dominated the shaping of policy design and interventions to an extent almost unheard of in any other advanced industrial economy (McCann, 2016: 1-2). To understand this, it is necessary to introduce and reflect on two different and competing approaches to interpreting sub-national policy, referred to already as the 'place' debate, to which attention turns in the next section.

Figure 1-1 Principal elements of the Conservative government 2015 -March 2021 sub-national policy

1. Local Enterprise Partnerships	<ul style="list-style-type: none"> • 39 Business Led LEPs • Control of Local Growth Fund – £12bn (2015-2021)
2. City Wide Deals and Mayors	<ul style="list-style-type: none"> • Combined authorities and directly elected Mayors
3. Northern Powerhouse	<ul style="list-style-type: none"> • Transport investment, science and innovation
4. Local Government reform	<ul style="list-style-type: none"> • 100% business rate retention and phasing out of local government central grant
5. Industrial Strategy	<ul style="list-style-type: none"> • Promoting sectors, ‘Big Science’ and R&D, technical education • Local industrial strategies
6. Enterprise Zones	<ul style="list-style-type: none"> • 26 newish Enterprise Zones, 44 in total • 2 pilot manufacturing zones, East Midlands

Source: Author

1.3 The place-based versus space-neutral debate

An important divide in ideas impacting the design of institutions and public policy for local places is reflected in the ‘place’ debate (Barca, 2009; Barca et al., 2012; Gill, 2010; Tomaney, 2014; Peck et al., 2013; Turok, 2013; McCann, 2013, 2016; Pike et al., 2017). These have been observed as, ‘two fundamentally different approaches to interpreting urban and regional empirical evidence’ (McCann, 2013: 356), given that they:

‘...reflect fundamentally different philosophical understandings of the relationship between market mechanisms, the role and competence of the state and the role of the community in both shaping and responding to markets and government decisions’ (Garretsen et al., 2013: 179).

A good starting point to understand both differences and similarities is Barca’s (2011) analysis of five alternative approaches to development. These five – perfect institutions, agglomeration-driven, redistributive (two versions), communitarian and place-based –

are summarised in Figure 1-2 with respect to their different positions towards policy goals, agglomeration, institutions and knowledge.

This analysis makes two key points. First, to distinguish between the place-based approach and other development approaches. As is illustrated below, Barca (2011) shows how space-neutral approaches may combine elements from other approaches. Second, to acknowledge both commonalities and fundamental differences between place-based and place-neutral approaches. Both are concerned with people and place, recognise the principle of freedom of movement, are founded on logical economic principles and acknowledge the reality of spatial agglomeration (Barca, 2011; McCann, 2013).

The space-neutral (also referred to as space-blind or people-based) approach is associated with neo-classical and agglomeration-driven theory. By comparison, the modern place-based approach draws on insights about place (Bolton, 1992) and perspectives from evolutionary, resilience and institutional economics. Two contrasting images distinguish fundamental differences between them. The space-neutral world is one where spatial adjustment occurs relatively smoothly between levels of equilibrium in response to market-based price and cost signals in an urban and regional system that is both homogenous and predictable. It may be pictured as a smooth free-flowing river system. The alternative place-based world is somewhat different. It is one where history, culture and institutions combine to create unpredictability in the urban and regional system and resulting market outcomes. Pictorially, it is more like a river system with large boulders and rapids that causes many disruptions to the natural flow of the river (or market system) (Hildreth and Bailey, 2014).¹

Regarding foundations for agglomeration-driven theory, a distinction is sometimes made between the New Economic Geography (NEG) and urban economics (Pike et al, 2017). Both have similarities and overlaps, given their common roots in neo-classical ideas. Both seek to explain spatial unevenness in economic activity between places.

¹ The author would like to thank Professor Philip McCann for sharing this metaphor of a river system to illustrate the differences in approach between a place-based and a space-neutral economic approach.

They share use of a general equilibrium framework through which processes that concentrate economic activity are generated by the conduct of '*economically rational agents fully knowledgeable of alternative choices*' driven by '*profit maximising firms and exchange*' (Pike et al, 2017: 128), so that:

'...it must be that over time, the workings of the economic system amplify and reinforce difference to generate historically persistent patterns of spatial disparities. For this to happen there must be self-reinforcing benefits for the spatial concentration of activity' (Cheshire et al., 2014: 24).

In addition, both view the urban system as operating homogeneously, where larger cities generally offer higher productivity than smaller ones and where emphasis is given to enabling successful cities to grow by removing market, price and planning constraints on land and housing markets (Cheshire et al., 2014: 39-44; Pike et al., 2017: 125). There are also differences. In urban economics, scale and density within urban areas is given greater primacy, whilst NEG puts more stress on the tension between agglomeration and dispersion processes resulting from differences in transport costs of moving people and goods across space. For this study, technical differences between these two approaches are not significant. Rather than seeking to differentiate, Barca's definition of an agglomeration-driven approach will be used, where appropriate, alongside the other policy approaches described in Figure 1-2.

The influential World Development Report (World Bank, 2009) advocated a space-neutral approach '*without explicit consideration to space*' (Ibid: 24), centred on the agglomeration advantages enabled by large cities. Barca (2011: 49) links the World Bank perspective with three of the development approaches; as a '*combination of the perfect institutions, the agglomeration-driven and the redistributive (in the market driven version) approaches*'. The World Bank (2009) advocates first, to establish nationally designed spatially blind institutions, for services such as education, health and social services, to be provided uniformly across different locations. Second, infrastructure investment to better connect weaker to stronger places. Third, spatially targeted interventions to be used very sparingly. The reason why this approach is also referred to as people based, is that investment in people is advocated (e.g. skills and education)

to enable their mobility to where they expect to be better off, and in doing so, boost incomes, productivity, knowledge and overall growth (World Bank, 2009: 77; Barca et al., 2012).

In recent years, there have been major policy reports and papers advocating place-based policy approaches to sub-national economic development (Barca, 2009; OECD, 2009a, b; Barca et al., 2012; McCann, 2016). For example, the Barca Report (Barca, 2009) was highly influential in the redesign of European Union (EU) Cohesion Policy for the period 2014-2020. In comparison to space-neutral approaches, the objective of place-based policies is to promote growth in all regions. This is centred on the principle that it is the performance of the whole regional (and urban) system, rather than that of only relatively successful cities that is important to the well-being of national economies. For example, the OECD points out that those regions with average Gross Domestic Product (GDP) per capita below 75% of national average accounted for 43% of growth across the OECD member area 1995-2007 (OECD, 2012). In a globalised world, space and place is seen to be increasingly more important (McCann, 2008). And, whilst the space-neutral approach views the urban system as homogenous, in relation to city size, the place-based approach sees it as heterogeneous and is increasingly so, particularly in the mature urban systems of Western Europe (OECD, 2009a; Dijkstra, 2013, Dijkstra et al, 2013). The place-based approach argues that the greater the heterogeneity of the sub-national economy of a country, the less a one-size-fits-all policy logic will be applicable or relevant to different parts of the country (McCann, 2016).

Figure 1-2 Five alternative approaches to development

Development policy approaches	Policy goal(s)	Agglomeration (urban system)	Institutions	Knowledge
1. Perfect institutions	Economic efficiency with social/equity goals as policy constraints.	No attention to spatial dimension.	State design of 'unique institutions' e.g. health, education, labour markets) is primary driver of growth.	State knows best.
2. Agglomeration driven	Enable optimal set of agglomerations. Public investment market driven (e.g. skills, land, transport) to improve people's life chance opportunities (e.g. via migration).	Spiky world, with unique set of agglomerations (i.e. related to city size).	Appropriate institutions to optimize agglomerations.	State has limited knowledge of efficient investment allocations. Knowledge in optimal set of agglomerations is predictable.
3. Redistributive a. Tough-market orientated	Support for redistribution of resources to achieve more balanced development.	Unique form of agglomeration brings economic efficiency and social exclusion development gaps between regions.	Supports for financial transfers to 'lagging regions'.	No focus on place-based knowledge or for rent-seeking activities that redistribution may enhance.
b. Soft-compassionate	Support for redistribution of resources to achieve more balanced development with 'convergence' as policy objective.	Unique form of agglomeration brings economic efficiency and social exclusion development gaps between regions. But world is potentially flat (i.e. possibility all places have the potential to achieve similar per capita GDP).	Similar financial redistribution as for a. but on a greater scale.	No focus on knowledge or for rent-seeking activities that redistribution may enhance.

Development policy approaches	Policy goal(s)	Agglomeration (urban system)	Institutions	Knowledge
4. Communitarian	Development locally through a deliberative process that enables emergence and connection of local knowledge and values.	Recognises role of agglomeration but does not hold to a unique urban system (i.e. based on city size). Agglomerations are not natural.	Locally led role is pre-eminent. State's role is limited to enabling conditions through which a local process for development may take place.	Knowledge in agglomeration and lagging regions pre-exists and locally embedded and known. Development should connect-up local knowledge to values.
5. Place-based	To reduce the under-utilisation of resources in the locality and to promote social inclusion/well-being through policy that explicitly takes spatial context into account.	Recognises role of agglomeration but does not hold to a unique urban system (i.e. based on city size). Agglomerations are not all natural.	Institutions are not unique and must be tailor made in spatial context and inter-dependently with investments. Advocates design of appropriate multi-level governance arrangements that enable sharing of information, values and addresses balance of endogenous (locality) and exogenous (other levels of the state) power and tensions.	New knowledge (innovation) is context based and a primary driver of development, critical for all other drivers. Knowledge does not pre-exist but must be uncovered deliberately endogenously (locally) and exogenously in a multi-level process.

Source: Adapted by author from Barca (2011)

Overall, place-based approaches are underpinned by three key principles. First, they see geographical context as key. Local diversity is shaped by individually distinctive geographical, historical, cultural, social and institutional settings of different places. As a result, a space-neutral policy approach will always have spatial effects that unless allowed for, may undermine policy objectives. Because they are top down and centrally driven, they will tend to favour the interests of elites in the capital city or commercially dominant cities. In the long run they may reduce national growth by limiting options for intra-national migration of people and firms with a uniform direction towards more successful places. Thus, *'many apparently, de jure 'space-blind' policy settings are inherently de facto inherently 'place-based'* (Barca, 2011; Barca et al., 2012; Dijkstra, 2013; McCann, 2016: 430).

Second, uncovering knowledge embodied in place (in firms and people) is essential for effective policy development. Knowledge is generated, acquired and exchanged in a local context. But it is also uncertain and unpredictable and therefore needs to be discovered by participatory and bottom-up approaches to build consensus. It is held that such knowledge is not known in advance either by the state, firms or local stakeholders. As a result:

'The 'place-based' approach argues that no actor knows in advance 'what should be done'. It posits that sensible and reasonable decisions can emerge as the innovative result of a process of interactive and even conflict between endogenous and exogenous forces i.e. between the knowledge embedded in a place and external knowledge....' (Barca, 2011: 223).

However, the state is seen to lack both an understanding and knowledge of local places (Barca, et al., 2012). This has the important implication that agglomerations have both natural and unnatural (that is both policy and resource-driven) characteristics. Beyond the capital city at local levels, *'underdevelopment traps'* may occur that limit and inhibit the growth potential of regions or perpetuate social exclusion. This may relate to the failure of local elites to act appropriately or to institutional weaknesses. Therefore, the generation of ideas and appropriate solutions should be developed collaboratively both endogenously (by local stakeholders) and exogenously (by external actors) within a multi-governance approach. At the same time, both the national and local need to recognise significant potential weaknesses in both (Barca, 2009; Tomaney, 2014).

Third, in a heterogeneous spatial context, how well territories root their economic activity into their local institutional fabric is key to their economic success (Barca et al., 2012). This is because economic and social behaviours are embedded in place, and as a result, are impacted by local economic, social, cultural and institutional contexts (O'Brien et al., 2017). Thus, the place-based approach postulates that institutions both shape and are also shaped by economic geography. Finding ways to enhance the capacity and effectiveness of local institutions is a key response to local challenges of geography and development (McCann and Ortega-Argilés, 2013: 409). The place-based approach recognises that there are potential opportunities for institutions to contribute to development, if appropriately designed in the context of place. At the same time, it is important to identify possible barriers to their effectiveness. In doing so, a distinction is made between formal and the influence of informal institutional factors, including the importance of history, culture, social norms, values and traditions associated with place (North, 1990). The formal and informal are perceived to be inter-dependent through the conduct of elites (for example, political or business leadership). A summary of these differences between space-neutral and place-based policy approaches is provided in Figure 1-3.

Figure 1-3 Contrast between space-neutral and place-based policy approaches in international debates

	Space-neutral	Place-based
Purpose	Facilitate agglomerations, migration and specialization for development.	Realise growth potential in all regions, focusing on urban system as a whole.
Urban system	Homogenous (in relation to city size).	Heterogeneous (not city size dependent) Agglomerations are not all natural.
Geographical and historical context	Regions and localities follow standard development path.	Geographical characteristics (i.e. economic social, cultural, history, institutional) of place really matter with multiple development paths.
Institutions	Invest in provision of space-blind 'universal' public services (e.g. education, social services).	Design appropriate institutional structures governance in context.
Solutions	Standardised: 1 st order: spatially-blind institutions 2 nd order: infrastructure to connect across distance 3 rd order: sparingly spatially-targeted interventions.	Design appropriate public good interventions and institutional frameworks in context of place.
Knowledge	Predictable.	Uncertain, embedded in locality. Uncover collaboratively through local bottom-up participatory processes to build consensus and trust and through external actor contributions to build multi-level governance solutions.
Role of central state	Design and provision of spatially-blind public services and appropriate infrastructure.	Lacks 'sense of community', may support investments promoted by 'capital city elites'.

Source: Adapted from Hildreth and Bailey, 2013

1.4 Sub-national economic policy in England and Wales: the shift towards a city-region model

1.4.1 Sub-national economic policy in England

This section explains how an urban centric agglomeration-driven framework came to dominate UK sub-national policy making. Informed by the place debate, an allegory has been used to illustrate how policy frameworks affect national and local institutional relationships in sub-national economic policy. As described elsewhere (see Hildreth and Bailey, 2013: 234), an illustrative comparison was drawn between British national policy-making and making a *pizza*. This is in the sense that, at a foundational level, both involve three layers, of which the base can be both the most significant and yet also under-rated.

For UK policy-making, the top layer is the political and policy case (*rhetoric*) made by ministers in speeches and set out by government departments in publications to outline both what the policy approach is all about and what it is intended to achieve. The next layer is the policy

initiatives (*policies*), such as the Northern Powerhouse or more recently, Free Ports. It is common outside central government – in local government or by businesses for example – to focus on these two layers to answer questions such as, ‘*what do they mean for us?*’, ‘*what will they deliver?*’ and ‘*how might we respond?*’. But the consequence is to miss something very important. The underlying economic and policy framework (or *base*) is the neglected but crucial element that underpins both understanding and interpreting the rhetoric and policies (Hildreth and Bailey, 2013: 233-235).

This is important for two reasons. First, because it is vital to understand the thinking behind government policy and not be deflected by the rhetoric and the policies; otherwise Ministerial statements about ‘*levelling-up*’ and addressing centralisation, remain relatively meaningless. Second, it is important to appreciate what is going on as government seeks to manage a consistent narrative to protect corporate memory and manage inevitable policy tensions across departments. Whilst rhetoric and policies changed frequently between 1945 and 2010, the base remained remarkably consistent. Only three economic paradigms underpinned UK policy during that time: Neo-Keynesian (post-1945 to the late 1970s); neo-classical (exogenous growth, late 1970s to the mid-1990s) and the new regional policy (mid-1990s to 2010), which saw its roots in neo-classical endogenous growth theory. Arguably, a further shift occurred under the Coalition government within a neo-classical economic framework, towards influences from agglomeration-driven theories (BIS, 2010) (see Figure 1-4). The focus in this discussion is on 2010 onwards, from the transition of Labour to Coalition, with the earlier period reviewed elsewhere (Richards, 2001; Balls and Healey, 2002; Balls et al., 2006; Fothergill, 2005; Hildreth, 2009; Hildreth and Bailey, 2013, 2014).

The Coalition government from May 2010, speedily abandoned Labour’s regional policy, with the abolition of the RDAs and regional planning. The Coalition set out its aim to implement a new framework for delivering ‘*local growth*’ (HMG, 2010, 2011), to ‘*create a fairer and more balanced economy*’ that was ‘*driven by private sector growth and new business opportunities*’ that would be ‘*more evenly balanced across the country and between industries*’ (HMG, 2010: 5). Whilst the Coalition (and subsequent Conservative government) was less transparent than Labour about the thinking behind local growth, there were clues from the growing influence of agglomeration-driven ideas in cities policy. Go back to the 2001 HM-Treasury (HMT) led exposition of regional policy (HMT and DTI, 2001) and cities were largely invisible (Marvin

and May, 2003) in the realm of economic policy. By 2006, an HMT led report was devoted to the economic role of cities (HMT et al., 2006). A 2007 review of sub-national regeneration policy (HMT et al., 2007) gave formal recognition to functional economies (and potentially city-regions) as appropriate contexts for sub-national policy.

Figure 1-4 Shift in framework towards sub-national economic policy, Labour to Coalition and Conservative

Labour 1997-2010		Conservative and Liberal Democrat Coalition 2010-15 and Conservative from May 2015	
Construct	Content	Construct	Content
Concept	'New Regional Policy'	Concept	'Local Growth' Northern Powerhouse (from 2014) 'Industrial Strategy' (from 2017)
Rhetoric	Realising the potential of all places	Rhetoric	'Rebalancing the economy' 'Northern Powerhouse' (from 2014)
Base	Neo-Classical (Endogenous)	Base	New Economic Geography, 'Place-based'(?)
Principal institution(s)	1. Regional Development Agencies; 2. Local Authorities	Principal institution(s)	1. Local Economic Partnerships; 2. Local Authorities, particularly in metropolitan areas to form Combined Authorities and potentially the election of Metro Mayors

Source: Adapted from Hildreth and Bailey, 2013

Instead of nine RDAs, 39 LEPs, led by the private sector, were established across England. In practice, the make-up of many of these LEPs reflected more who partners got on with rather than functional economies (Hildreth and Bailey, 2014). *'Unlocking Growth in Cities'* (HMG, 2011) set out the case for cities as drivers of growth. It was followed by two rounds of city deals, first with the eight English core cities (Birmingham, Bristol, Leeds, Liverpool, Manchester, Newcastle, Nottingham and Sheffield) and then with a series of smaller cities. An urban governance model of forming Combined Authorities followed, through the voluntary coming together of local authorities within England's second tier of city-regions, to take responsibility for transport policy and securing economic prosperity. On 4 May 2017, Mayors were directly elected for the Combined Authority areas of Cambridgeshire and Peterborough, Greater Manchester, Liverpool City Region (LCR), Tees Valley, West Midlands and West of England, as a conditional part of agreeing a devolution deal with government. The Cambridgeshire and Peterborough Mayoral election is interesting, because it imported, for the first time in England, a metropolitan model of governance to a mixed urban and rural

area. A Mayor for Sheffield City-region was first elected in May 2018, for North of the Tyne in May 2019 and for West Yorkshire in May 2021.

In parallel, the government promoted the Northern Powerhouse as a policy construction connecting-up the cities of Liverpool, Manchester, Leeds and Sheffield (Lee, 2017). Its architect, the former Chancellor George Osborne, was clearly influenced by ideas surrounding the agglomeration effects of cities:

'In a modern, knowledge-based economy city size matters like never before. There is a powerful correlation between the size of a city and the productivity of its inhabitants' (Osborne, 2015).

There have been opportunities to develop a more place-based approach in UK sub-national economic policy, but so far, a space-neutral approach has continued to dominate. A paper with Professor David Bailey, explored possible reasons for this. First, national government may lack a sense of 'community' (Barca et al., 2012; Tabellini, 2010) in its capacity to understand local places and mediate consensus and trust with local actors and mobilise local resources (Rodríguez-Pose and Storper, 2006). And, national government may come under undue influence of 'capital city elites' as London, as the world city, and the GSE is given priority resource allocation and investment over other places in the UK (e.g. see Northern Economic Futures Commission and IPPR North, 2012; Lee, 2017). Second, the fact that Whitehall is organised around themed policy departments – which are shaped around functions that are largely policy specific and place-neutral – means it lacks a holistic perspective of place (Heseltine, 2012; Marvin and May, 2003). Third, Whitehall operates in relatively short-term policy cycles, operating around electoral cycles of up to five years. A new government may make institutional changes, such as the shift from RDAs to LEPs by the newly formed Coalition government in 2010, leading to a loss in institutional learning, knowledge and experience in English regions. Fourth, retaining institutional memory may be a challenge in Whitehall. Value is placed on general policy-making skills in response to the political requirements of the governing administration with frequent moves of civil servants between roles. Fifth, a long-term process of hollowing-out of the state was reinforced through continuing austerity cuts to departments and local government. Sixth, as already discussed, the national economic framework is largely un-spatial, reflecting the dominance of neo-classical economic ideas in their various guises. It may also cloud Whitehall's openness

to new evidence if it is not offered in conformity to its own preferred model (Hildreth, 2009; Hildreth and Bailey, 2013; 2014).

As indicated above, the new Conservative administration elected in December 2019 with electoral support from previously Labour held constituencies in the Midlands and North of England, pledged to lead a levelling up of prosperity across the UK. This was without being clear what the policy and base thinking behind it meant in practice. By March 2020, the coronavirus crises had taken over, so that further elaboration of the levelling up policy agenda would need to wait until at least 2021. But it will be interesting to see whether the government will continue to pursue the existing agglomeration-driven city-region model or use the opportunity to explore more place-based solutions. This may become clearer if a promised White Paper on devolution that is anticipated to extend the Combined Authority model more widely in England, within a reformed unitary model of local government becomes a reality (Jeffrey, 2020).

1.4.2 Sub-national economic policy in Wales

Whilst Wales has followed its own distinctive path in policy making in recent years, there have been parallels with the UK approach, due to its policy and financial interdependence on the UK government. Following a narrow yes vote in the 1997 referendum, a devolved administration for Wales was established in 1999 by the Government of Wales Act 1998. Further devolution from the UK government to Wales followed through the Government of Wales Acts of 2006 and 2014, the latter to implement the yes result of the second referendum of 2011. From 2014, the Welsh Assembly Government (WAG) was renamed the Welsh Government (WG), with law-making powers over 20 fields of policy, including economic development.

There were historical differences in sub-national economic policy between Wales and England, with the Welsh Development Agency (WDA) providing policy differentiation between England and Wales throughout the 1980s. However, the establishment of a devolved administration in Wales from 1999 provided new opportunities for a more differentiated approach compared with England. For example, an industrial sector policy, centred on ten key industrial sectors, with initiatives such as the anchor company and

regionally important company schemes. EU funding was of critical importance, as much of the country had remained eligible for EU convergence funding.

In 2017 the WG published its Economic Action Plan (WG, 2017), based on four key principles. First, that places matter, with a regionally focussed model of economic development centred on South East (SE) Wales (including Cardiff Capital Region), Mid and South West (SW) Wales (including Swansea Bay City-Region) and North Wales, each with appointed Chief Regional Officers. Second, simplification of business support funding into a consolidated Economy Futures Fund and an industrial focus on three thematic sectors (tradable services, high value manufacturing and enablers, such as digital and energy efficiency), together with foundational economy sectors, such as tourism, food, retail and care. Third, linking public investment to social well-being objectives and fourth, being long-term.

However, despite this progress, policy independence in Wales remains constrained. First, a piecemeal process of devolution within the UK (or '*asymmetric devolution*') has arguably undermined political and constitutional stability in Wales (Rumbul, 2017; Waite, 2017):

'Without clarity of power, without appropriate levels of agreed funding and without sustainable structures to legislate with, the Welsh Government lacks the economic tools and political powers to implement effective measures, and the credibility to provide economic stability to businesses and citizens alike' (Rumbul, 2016: 127).

Second, therefore, the WG feels restricted by remaining dependent on UK government funding and policy decisions in key areas, such as transportation infrastructure and clean energy investment. An example is the UK decision to abandon rail electrification between Cardiff and Swansea (Morgan, 2018). Wales has found itself seeking UK funding through UK models, such as City or Growth Deals and Enterprise Zones, even if they were adapted to Welsh circumstances. It was notable that the announcement of £120 million support by the UK government towards a Growth Deal for North Wales was made by the UK Chancellor in the 2018 autumn budget statement and not in Wales (see Section 6.3.2).

Third, Wales lacks its own sub-national institutional structures, such as the LEPs in England. The WDA was abolished in 2006 and its functions merged into the WG, with no credible

replacement. For example, although formerly part of the WG, Business Wales services were contracted out for private sector delivery. Otherwise, institutional capacity in the Welsh three development regions is dependent on cooperation within regional groupings of local authorities, such as the North Wales Economic Ambition Board in North Wales (NWEAB) and City-region Boards for Cardiff Capital Region and Swansea Bay City-Region. These governance structures are weaker than the comparable Combined Authority and metro-mayoral structures in England because they have no unitary control or any statutory powers. Nevertheless, there has been recent innovation outside UK models, such as the establishment of the Wrexham-based Development Bank of Wales (DBW) and Wales first Advanced Manufacturing Research Facility (AMRC) at Deeside. Also, Wales, unlike England, had a national spatial plan, updated in 2008 (WSP) and due to be replaced by the National Development Framework (NDFW) from 2021. The consultation draft of the NDFW marks a shift from the fuzzy boundaries of six areas in the WSP (including NE Wales) to a more regional approach, centred on three regions of Wales: North, Mid and South West and South East (WG, 2019).

1.5 From national to local: Mersey Dee economy case study

1.5.1 Two contrasting models for local economic development

The previous Section provided an analysis of sub-national economic policy in England and Wales. It showed how in response to the two critical problems in the UK sub-national economy – over centralisation and sectoral imbalance – the UK government has pursued an agglomeration-driven model of economic development and governance. In England, this was initially through the creation of LEPs (centred on the idea, if not the practice of the functional economy) and then by establishment of Combined Authorities and metro-mayors as the only devolution model. In Wales, this influence was reflected in City-Region Boards for Cardiff Capital Region and Swansea Bay City-Region. It may also be reflected in the North Wales Growth Deal (NWGD), due to its focus on agglomeration growth for a region that is more rural than urban (Beel et al., 2020).

As a result, in the UK context, the city-region has become tied with a top-down territorial form of governance, for which a key indicator of urbanisation (or agglomeration) is economic mass (or density of employment) (Overman et al., 2009; Overman, 2020) (Section 2.3.2). It

is underlined by a case that spatial disparities are driven by people and not place characteristics, so that: *'the role of the individual matters as much, if not more, than the role of place'* (HMG, 2010: 9). Given that it is hard to change place effects, it is suggested that it is more advantageous to invest in people rather than place. The logic follows that, if investing in place, it is better to do so by advancing the growth of successful cities, situated primarily in SE England, even if this leads to more uneven spatial development (Gibbons et al., 2010; Gibbon and Overman, 2011). This may be achieved, for example, by removing barriers to securing efficient land and housing markets (Cheshire et al., 2014).

Local rather than perfect institutions are advocated where they advance governance efficiency and effectiveness. This is, for example, where metropolitan areas have appropriate administrative boundaries to capture the economic area of the whole of the city (Cheshire and Magrini, 2009). This is on the basis that: *'where the level of decision-making is a good fit with a city's economic footprint this is associated with better economic performance'* (BIS, 2010:16). This can be in conjunction with incentivising local experimentation towards achieving greater efficiency (Leunig and Swaffield, 2008). The underlying logic to this approach is rooted in neo-classical literatures on public finance and fiscal federalism (e.g. Oats, 1972; Tiebout, 1956) to interpret whether variations in levels and forms of public expenditure may provide economic dividends (Cheshire and Magrini, 2005, 2006 ; Pike and Tomaney, 2009; Cheshire et al., 2014;) (see Section 3.3). Further, In industrial policy, horizontal (i.e. space-neutral) rather than vertical (place-specific) policy approaches are advocated, although with flexibility (Mayhew, 2013; Nathan and Overman, 2013). By reflecting the space-neutral homogenous characteristics of the agglomeration-driven approach described in Section 1.3, the city-region model starts from a different epistemological position compared with heterogeneous place-based models (Overman, 2014: 2282) (see Section 4.2).

There are questions whether the city-region is the most appropriate devolution model for England. Critics connect this agglomeration-driven narrative to the World Development Report (World Bank, 2009) and its space-neutral case presented in Section 1.3. For Haughton et al. (2014, 2015), it is about *'agglomeration boosterism'*, an approach that builds on success, targeting already well-performing local economies. For Waite and Morgan (2019: 783) *'metrophilia'*, as a *'pervasive and uncritical embrace of city-centric perspectives in*

spatial planning'. Hoole and Hincks (2020:2) describe city-regions as '*a geo-political strategy actively deployed by the national state to serve their own interests, in conversation with local considerations*'. This is in the belief that the potential for national economic growth is dependent on urban agglomerations and the targeting of resources and investment on already successfully local economies. As a result:

'In the UK, city-regions have emerged as the preferred scalar fix in local state frameworks aimed at boosting the economic productivity and competitiveness of under-performing provincial cities, while sustaining the economic fortunes of strategically dominant places such as London' (Hoole and Hincks, 2020: 2).

There are also concerns that the city-region approach is not suitable as a model for medium-sized and smaller cities or for rural areas that lie outside metropolitan areas (Harrison and Heley, 2015; Harrison, 2017; Beel et al., 2020). Larger agglomeration economies may pull capital, wealth and people from rural areas and weaker cities and their populations and centres may be more dispersed. A response is to seek a place-based approach that better captures the heterogeneous qualities of non-metropolitan places, since: '*the need for alternative economic development approaches, sensitive to the geographies of rural localities, has never been so urgent*' (Beel et al., 2020).

But what might an alternative local economy model look like? One answer is to design an approach that is place-based in character, shaped around the heterogeneous qualities of place, such as the '*new localities*' approach (Jones and Wood, 2013). For the case study under investigation, the opportunity is that the Mersey Dee has been referred to both as a city-region and locality. The roots of new localities are not new. Particular reference is made to Doreen Massey for both distinguishing between territorial - as attention on place - and relational - as a focus on connections - whilst seeing no conflict between them, since:

'From a relational perspective, the very identities of places (territories) are relationally constructed. Territories are constituted and are to be conceptualised, relationally. Thus, interdependence and identity, difference and connectedness, uneven development and the character of place, are in each pairing two sides of the same coin' (Massey, 2011: 3-4)

That is to say that places are what they are in part as a result of their history of and present participation in relations with elsewhere. As a result: *'places are a social and political product that cannot be understood without reference with other scales'* (McCann and Ward, 2011: xxi; Massey, 2011: 4).

In the late 1970s, Massey had questioned aspatial neo-classical accounts of industrial location in understanding the UK's regional problem: *'different models of response by industry'* with *'different spatial divisions of labour'* in production, may *'generate different forms of regional problem'* (Massey, 1979: 234; cited in Callard, 2004). In the *'Spatial Division of Labour'*, Massey conceptualised three different *'spatial structures of production'* – single region, cloning and part-process – that their variations lay behind the notion of uneven development, with differentiated and unique outcomes in different places (Massey, 1984).

In *'a global sense of place'*, Massey considered how place can be progressive as outward looking inter-connected sites in their social and economic relations, even though there is social and spatial unevenness due to differential mobility potential of people. Places have multiple identities and histories, where uniqueness is shaped by social and economic interactions and flows. As a result, localities are *'relational in the sense of seeing the local as an unbounded mosaic of different elements always in a process of interaction and being made'*. As a result, a place cannot be understood just by looking inside or outside it, since: *'the 'out there' and 'in here' matter together and are dialectically intertwined'* (Massey, 1991; Callard, 2004; Cresswell, 2015; Jones, 2017: 22). This thinking underpins the concept of *'new localities'*. This is expanded on in Chapters 5 and 6, as a contrasting place-based framework for analysis to the city-region approach in this study (Jones and Wood, 2013; Harrison, 2017; Jones, 2017).

1.5.2 The Mersey Dee economy case study

Given this background, it is important to seek to understand whether and how this policy context matters in the setting of a local economy. To address this, this study applies place-based principles (see Section 1.3) to investigate a local economy case study. This is by studying bottom-upwards knowledge embodied through the interaction of place, firms and institutions within and beyond the local economy. The objective is to find out the contributions made by firms and institutions in shaping the local economy and whether the

roles played by governance and other economic institutions matter for the realisation of local economic potential. This is not limited to a territorial perspective; that is being inwardly focussed on an administratively bounded area. The approach taken is also relational, looking at flows and connections both within and going beyond the place under investigation, whilst encompassing its territorial characteristics. This is for example, through labour market movements, institutional relations and firm-to-firm and institutional connections.

As stated at the opening of this Chapter, the context for this study is the Mersey Dee, as a distinctive and functionally connected sub-region that crosses between NW England and NE Wales that is represented by the Mersey Dee Alliance (MDA) (see Figure 1-5). Although, the Mersey Dee is not a 'place' printed on a map and is largely self-identified by institutions and firms investigated in this study, it offers several advantages for this study (see Section 4.3.2). First, it is a uniquely cross-border economy between England and Wales, with participation across two national perspectives. Second, it offers both '*material coherence*' – with institutional structures that enable collective action – and '*imagined coherence*' – with a recognised sense of local identity (WG, 2008; Jones et al., 2016; Mann and Plows, 2016; Meegan, 2017). Third, it operates institutionally within a wider set of regional relationships between North Wales, Cheshire & Warrington and LCR, being both '*in here*' and '*out there*' in its conception as a place (Jones, 2017). Fourth, it provides an opportunity to consider evidence for 'place' in local economic development of a context that goes beyond a major urban area and is not served by the government's agglomeration-driven Combined Authority and metro-mayoral local governance policy framework. Finally, as mentioned earlier, the Mersey Dee has been referred to as both a city-region and as a locality, the two local economic development models under consideration in this study.

Figure 1-5 The Mersey Dee



Note: The area marked in dark green is the area represented by the MDA in 2021. Denbighshire (in light green) was a member up to 2015 and when research for this project began.

Source: This image is reproduced with the permission of the MDA

1.6 Study aims, objectives and outline

As a result, the research aims and objectives of this study follow, addressed in a stepped process. The overall aim for this study is:

Aim – To understand the interaction of place, firms and institutions in realising the economic potential of local places.

Under this aim, there are four interrelated objectives.

Objective 1 – To review the economics behind sub-national policy in England and Wales, in the light of insights from the international place-based versus space-neutral policy (place) debate.

This Chapter has provided a policy and conceptual context to this study by reviewing the background to economic ideas that lie behind UK sub-national economic policy. It has set these ideas within the context of the international ‘place’ debate, with clear philosophical, theoretical and policy divides between space neutral and place-based approaches. It has shown how space neutral agglomeration-driven ideas have come to dominate UK sub-national policy. This is reflected in the urban-centric Combined Authority and metro-mayor ‘city-region’ as a single model of devolved governance. It was then shown that there have been criticisms of this approach, particularly, but not only, in the absence of an alternative model for mixed urban and rural places that reach beyond major urban areas. The Mersey Dee cross-border economy is introduced as an appropriate case study context to contrast the application of two local models of economic development, both of which have been used to describe the Mersey Dee. First, as a ‘city-region’, as an agglomeration-driven territorial construct, that reflects the dominant narrative in UK policy making. Second, as a ‘locality’, a place-based understanding of the area, which considers both its relational and territorial qualities, shaped by its historical, social, cultural and institutional context. The rest of the study builds on this by comparing the interaction of place, firms and institutions in a local economy setting, drawing on these two contrasting frameworks and understandings of place.

Objective 2 – To draw on insights from the place debate to develop a framework to conceptualise approaches for managing the local economy that:

- a) Investigate evidence from firms about how they situate themselves in place.**
- b) Use this evidence to interpret roles for institutions and public policy in local economic development.**

Objective 2 is addressed through literature reviews in Chapters 2 and 3, which explore how the interaction of firms and institutions might be understood within a local economy context. Chapter 2 examines a variety of literature that examines relationships between firms and the local economies in which they are situated. This analysis takes a staged approach by adapting a framework for mapping firms’ relations in the local economy (Markusen, 1994). This is then

explored through three models of the firm and their variations: *'pure agglomeration'*, *'industrial complex'* and *'social network'* (Gordon and McCann, 2000), which in turn have connections with agglomeration-driven and place-based frameworks. Each is illustrated by industrial examples. Contrasts are made of how knowledge flows through inter-firm and institutional relations between the three models, that leads to making a case that *a distinctive character of place lies in its particular mix of firms and combination of processes of agglomeration, within and beyond the local economy.*

Chapter 3 builds on insights from Chapter 2 to show how findings about firms have implications for the appropriateness of different institutional arrangements in local settings. Background is shared on the growing significance of institutions in economic development with analysis of the institutional implications for each of the three firm models and their variants. Whilst there is focus within this and subsequent chapters on institutions in their organisational context (e.g. governmental (local and national), partnerships, business associations, universities), these are viewed through both their formal and informal institutional characteristics. This Chapter acknowledges that *the particular mix of firm types in the local economy may present choices for the design of institutions at different spatial scales.*

Objective 3 – To test the framework developed under Objective 2, through a local economy case study to:

- a) Understand what makes a place.**
- b) Investigate the contribution of economic institutions to place.**
- c) Investigate how firms relate to economic place.**
- d) Compare the interrelationship of place with firms and institutions.**

Chapter 4 describes the design and methods applied to undertake this case study. It considers the underlying ontological and epistemological positions of the research, these being constructivist and interpretist respectively. It explains the case study choice of the Mersey Dee area, a cross-border economy between NE Wales and NW England, for this purpose. It then describes how this research was conducted to address a) to d) above, through a qualitative framework that involved interviewing institutions and firms.

To address 3a), Chapter 5 considers the two representations of the Mersey Dee as an economic place, drawing on interviews and other sources. First, as a city-region, reflecting the agglomeration-driven narrative of UK subnational economic policy, as reflected in the Combined Authority model of devolution. The other was as a locality, that has ‘absolute’, ‘relative’ and ‘relational’ characteristics (Jones and Wood, 2013). This is more closely associated with a place-based narrative. The chapter concludes that the Mersey Dee conceptually fits more closely with the locality representation of place with its polycentric functional structure of a distributed pattern of employment (Davoudi, 2003), shaped by its industrial and settlement history. Chapter 6 addresses the institutional characteristics of the Mersey Dee. This recognises that institutionally it is a ‘*soft space*’ – as a non-statutory bespoke space for dealing with specific issues – and has ‘*fuzzy space*’ characteristics (Haughton and Allmendinger, 2008). Yet, it is given legitimacy by the WSP (WAG, 2008) and the draft NDFW (2020-2040) (WG, 2019), in emphasising the imperative of cross-boundary working between NW Wales and NW England. It is acknowledged that the MDA partnership has both formal and informal characteristics. These draw on the Mersey Dee being both a relative space – functionally connected through its core centres - and a relational space – relating outwardly beyond its local authority partners across North Wales and into NW England. In this context, this chapter considers how the MDA operates institutionally both within its area and at a multi-scalar level.

Chapters 7, 8 and 9 then analyse results from firm interviews, to build up a picture of the local economy that relates to the literature review of Chapters 2 and 3 and the analysis of Chapters 5 and 6. The starting point of pure agglomeration, industrial complex and social network firms (Gordon and McCann, 2000) is developed to reflect differences in observed characteristics between firms locating into the Mersey Dee prior-1980 (evolved firms) and those arriving post-1980 (incoming firms). Also, given a mix of pure agglomeration and social network characteristics among companies forming from within the Mersey Dee, these were grouped as indigenous companies. However, in both cases, observations about firms and economic place and their institutional implications are related back to the original theoretical framework of Chapters 2 and 3. This analysis shows that the Mersey Dee is segmented as an economy of diversity of firm types and sectors and without obvious clusters. It also illustrates that how firms relate to place is changing from primarily an economy centred on the industrial complex characteristics of MNE firms to be combined with an increase of social

network type behaviours. Firms with pure agglomeration characteristics are in a small minority, found in urban centres. These findings have broader implications for the interrelationship of place with firms and institutions, which are addressed in Chapter 10 (see Section 10.5).

Objective 4 – To draw appropriate conclusions for the design of institutions and public policy for realising the potential of the local economy for places in England and Wales.

Lessons are drawn from the case study research for local and national policy. Whilst particular to the case study area, they are of broader relevance within the place debate. In particular, comparisons are drawn between the two representations of place and their interaction with firms and institutions. A locality involves working bottom-up to understand the local economy, building institutional relationships both within and multi-scale beyond the area. It requires valuing both formal and informal institutional characteristics and emphasising qualities of place-leadership. It has particular value beyond the metropolitan area. By comparison, whilst the city-region is primarily a metropolitan model, it has a territorial focus of consolidating the agglomeration benefits of urban density. But as a single devolution model, as in the UK, it offers a fragmented and aspatial solution to issue of sub-national governance.

Within a Western European context (e.g. France and Germany), metropolitan areas form part of a regional policy to enable delivery of sub-national governance at different spatial levels. Within a UK context, a localities approach might form part of an architecture that connects a Combined Authority model for major urban centres with a bottom-up multi-level localities model that links localities with regions (Coombes, 2014, Harrison, 2017). Such an approach would tailor development to understanding of the role of place within the sub-national economy. It would require recognition of the heterogeneous contribution of different places as a whole to the UK sub-national economy, including those that are presently left behind. It would involve developing a multi-level approach towards devolution focused more strongly on trust and leadership, for which territorial governance structures become supportive rather than the central consideration.

Chapter 2 Relating firms to place in the local economy

2.1 Introduction

This chapter reviews literature on how and why firms relate to place and other firms to understand how the localness of an economy might be interpreted. In doing so it reviews how and why firms make their locational choices and how embedded they are in place. It therefore focuses on part of Objective 2 of this study:

Objective 2a – Investigate evidence from firms about how they situate themselves in place.

Application is made of three models of the firm described by Gordon and McCann (2000) as '*pure agglomeration*', '*industrial complex*' and '*social network*'. This is because this framework opens access to a wide range of relevant literature about firms from different perspectives that cross the place-based and space-neutral policy divide. Connections are made with related typologies and to evolutions of the original framework (Massey, 1995: 68-77; Markusen, 1994, 1996, 1999a, b; Simmie and Sennett, 1999; McCann et al, 2002; Tully and Berkeley, 2004; Iammarino and McCann, 2013). It is recognised that Gordon and McCann (2000) distinguish their method as deductive in contrast to the more inductive approach taken by Massey (1995) and Markusen (1996), centred on empirical investigation.

This analysis could have started from the individual firm or with a clustering, or system of similar and related firms, with either approach being valid (Dicken and Malmberg, 2001). The chosen approach was to begin with the individual firm and work outwards to other firms locally. Given that Gordon and McCann (2000) centred their framework on the clustering of firms, reasoning for this choice is provided below.

It became clear during fieldwork, that a clustering of related firms might not always be the norm in a local economy. Indeed, firms in a locality might be observed to be more mixed in types and sectors than a clustering approach would suggest. They could, for example, resemble Taylor and Thrift's (1982a, b, 1983) illustration of the segmented local economy across differentiated firms; mixing larger multinational enterprise (MNE) companies and smaller, often privately owned, firms. In this setting, MNE plants would likely form part of an international complex spanning a wide range of economic activities organised across national boundaries. Different plants could have different operational characteristics, depending on

power relations within the company complex, the technologies employed and the functions each plant is responsible for. In this setting, Taylor and Thrift (1982a, b, 1983) distinguish between leader, intermediate, laggard and support companies and their plants. Leading edge companies are likely to focus on innovation, generating new products and opening new markets for services or investment. Intermediate companies provide a strong base for the company by manufacturing established products. Laggard companies are more likely to produce routine commodities, possibly towards becoming obsolete, but that still generate low but steady financial returns to the company. Support companies provide support services to MNEs.

By comparison, smaller firms are more likely to operate from one site and be privately owned. Again, Taylor and Thrift (1982a, b, 1983) separate these into three types: leaders, intermediates and laggards. Leader firms will usually be young and reliant on the personal initiative of their leaders in driving innovation and inventions of new services or products. The intermediate firms are likely to be older and fall into two types: first, the single product or single-market firm seeking to take advantage of a gap in the market left by the large MNE firms; and second, firms that are satellites of MNE companies, or firms that are sub-contracted to or are franchisees. Laggard firms are those that stand still or are in relative decline. This is either because they have chosen to remain small, or their owner with craft skills, may have entered business for personal reasons, without access to institutional capital.

The outcome is a complex set of organisational relations, with companies being in different positions in their product life-cycles (Neffke et al, 2011). This is likely to impact on the observed nature of firm-to-firm and institutional relations found in the locality. It may be that a physical cluster of firms is only a summary of the interactions of what individual entrepreneurs, firms and their workers do (Duranton, 2011). Building outwards from individual firms provides insights about the variable expectations and requirements of different companies. These may in turn help to inform the design of appropriate local institutional and public policy arrangements (Feldman, 2014; Nathan et al., 2012). It is for these reasons that analysis starts from the individual firm.

Section 2.2 draws on Markusen's (1994) insights to establish a framework for the study of firms and their relationship to place. It is adapted to address the circumstances of the thesis case study research, described in Chapter 4. A step-by-step analysis is followed, beginning

with Markusen's (1994) methodology for studying the strategies and practice of firms in place. Markusen calls for mapping the key relationships of a firm with other firms and regional (local) actors. This requires an intensive (or in-depth) method of research, using qualitative data, preferably from interviewing companies and other local (regional) actors (Massey and Meegan, 1985). Section 2.3 considers key concepts helpful to this analysis: clustering; agglomeration; embeddedness and trust. Section 2.4 applies the framework developed in this chapter to the three firm models – pure agglomeration, industrial complex and social network – and uses an industrial case to illustrate each model. Section 2.5 concludes that the distinctive character of a place may reflect in part the particular combination of types of firms and the way that they share and access knowledge within and beyond the local economy. This leads to examining implications for institutions in Chapter 3.

2.2 A framework to understand firms in the local economy

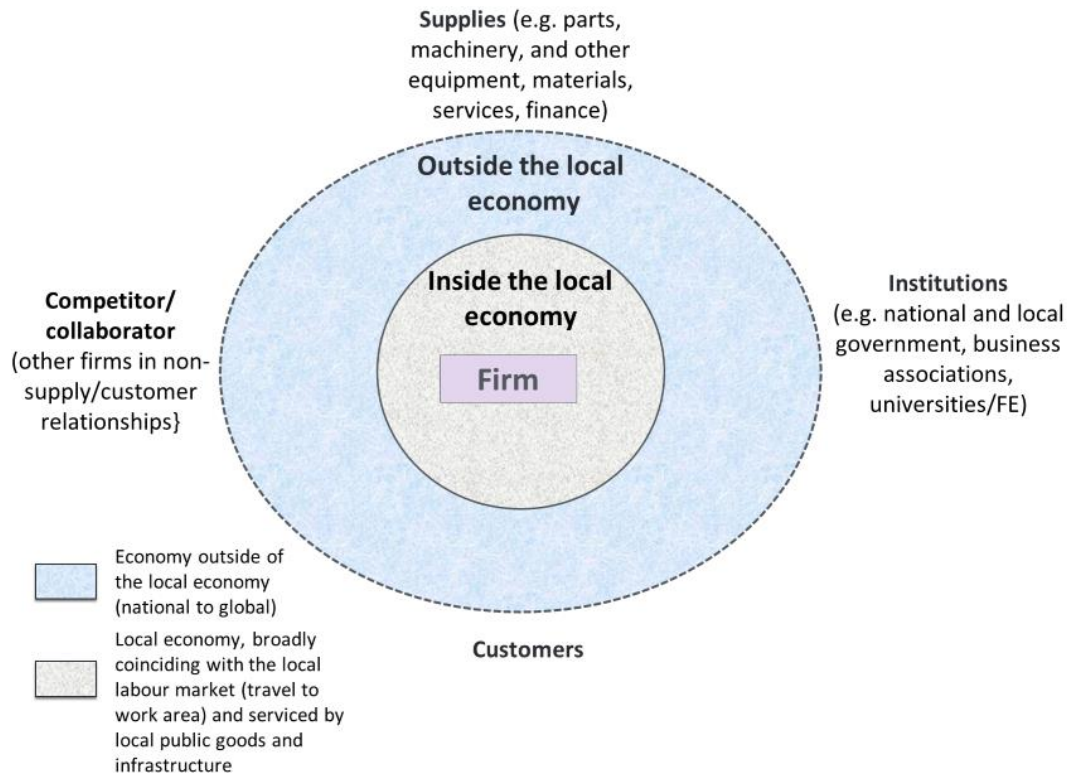
The journey to uncover knowledge about firms in the local economy therefore starts, as Markusen (1994) does, with the illustration of one firm and its relationships with other firms and institutions, locally and in the wider economy. This is to build an overall picture of patterns between them, including illustrations of clustering relationships.

A step-by-step process leads to a comparison of the three models identified by Gordon and McCann (2000) and their related variants. This starting point, illustrated in Figure 2-1, is based on Markusen's (1994) framework, with the firm situated locally in relationship to other firms and organisational institutions. Locally might be described as a region, city-region, sub-region or locality. At this stage, it is not necessary to be precise. However, one condition introduced is that locally approximates a self-contained travel-to-work area. This is so it reasonably matches the labour market from which the firm employs much of its labour force. At this stage, no distinction is made about the size, ownership structure (private or public company) of the firm, or whether it is a stand-alone company or a plant within an MNE complex. The firm will benefit from access to local infrastructure, such as roads and public transport facilities and other public goods within the locality. The local area will contain other firms of different sizes, sectors and ownership structures, some of which the firm may have trading or other kinds of relationships with. There will also be governance (e.g. national and local government) and other economic (e.g. universities, further education (FE) colleges and business associations) institutional organisations which the firm may or may not engage with.

Figure 2-1 situates the firm inside the local economy through which it employs labour and makes use of infrastructure and other public goods. The firm will have two kinds of relations for the production of goods and services and their sale (the production chain) that may occur locally and outside; nationally to globally. First, are the firm's supplier relations; the purchase of parts, machinery and other equipment, materials, services and finance that contribute to the goods or services that the firm sells. Second, are the firm's customer relations; the markets, companies and consumers that it sells goods and services to.

Beyond these, the firm may have other relationships. Three types may be identified. First, are the firm's relations with other firms, that fall outside of direct supplier and customer trading relations. These may be through what are described as untraded interdependencies (Storper, 1995), in other words, the intangible shared benefits that firms may gain from being clustered with other firms. For example, these can arise from social interaction, the 'buzz' of the local economy or other shared interdependences that might lead to knowledge exchange between firms (Nathan and Vandore, 2014; Pinch and Henry, 1999). These may be with competitor firms; firms trading in competition with the firm. Or they can be collaborator firms, firms in collaborative relations to the firm, not necessarily in the same marketplace or sector. Second, the firm can engage with organisational institutions. These may include local or central government, or economic institutions such as universities, FE and other intermediate institutions that operate as a bridge between firms and government (e.g. LEPs, Catapult Centres etc.). They can include business associations, business-led membership organisations (e.g. Chamber of Commerce and Industry (CC&I), Confederation of British Industry (CBI), Institute of Directors (IoD) and Federation of Small Businesses (FSB)) or trade associations representing the industry (e.g. Society of Motor Manufacturers and Traders (SMMT)) (Tomlinson, 2011).

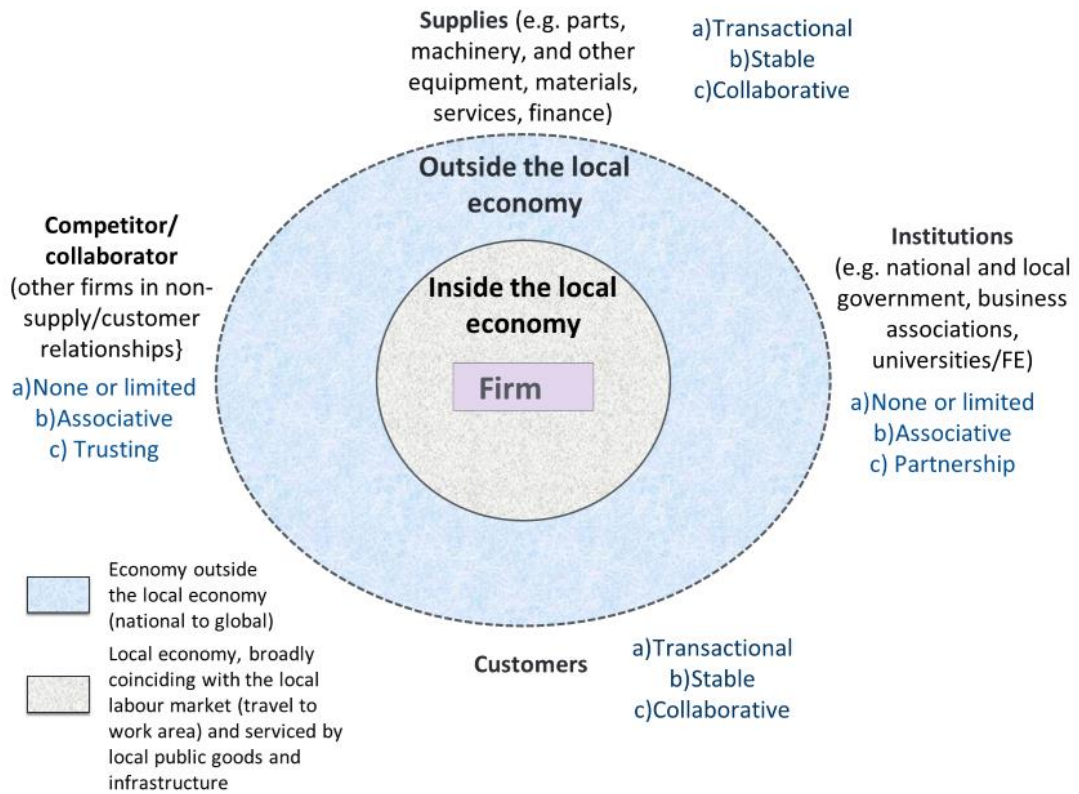
Figure 2-1 Mapping relations between space, firms and institutional relations



Source: Developed by author from Markusen, 1994, 1999b

For the second step, as in Figure 2-2, it is recognised that relations between the firm and other firms and institutions may vary in frequency, scope, depth and commitment. For example, the firm may have a limited set of relationships. Its supplier and customer relations may be purely transactional. In addition, it may have few, if any, competitor/collaborative or institutional relations. On the other hand, the reality of the firm’s relationships may be more complex with various permutations. It is helpful to introduce a limited set of variations for firm-to-firm and firm-to-institutional relations to enable the development of this framework (e.g. see Lyons, 2000).

Figure 2-2 Mapping levels of firm-to-firm and firm-to-institutional relations



Sources: Developed by author from Markusen (1994, 1999b), Gordon and McCann (2000), Lyons (2000)

With regard to the firm’s supplier and customer relations, it is proposed that these fall within three broad parameters. First are the transactional (or market) relations of the firm. This is where each purchase or sale agreed between firms is solely based on price, availability and quality, and, where any ongoing trading exchange between firms remains based purely on transactions. Second, stable (or constructed) relations, where contracting between the firm and a customer or supplier goes beyond being transactional. This involves a commitment to the needs of the customer or supplier, but without sharing of tacit knowledge or other characteristics of trust-like behaviour. Third, are collaborative (or embedded) relations. These are where the nature of purchase or sale between firms moves beyond being transactional or stable to evolve into longer-term contractual relationships that revolve around sharing tacit knowledge, by cooperation and joint problem solving (Granovetter, 1985; Gordon and McCann, 2000; Lyons, 2000).

Collaborator and competitor firms' relations are also distinguished between three levels. First, are levels ranging from none to limited. This is where the firm's relations with other firms operate at no more than at an acquaintance level, defined as retaining transactional relations as a hedge against uncertainty and for convenience, but not sharing knowledge or trust (Lyons, 2000). An example is a firm sharing common membership of the local CC&I branch with other firms. They may meet from time to time as acquaintances at a business event, but with negligible bearing on the firm's place in the locality. Second, are associative firm-to-firm relations. This may be a close relationship that involves, often informal, exchange of market information and knowledge. But this sharing does not necessarily imply formal collaboration between firms, such as through joint ventures. For example, work colleagues in a related industry, but in different firms, may meet informally to exchange views on industry challenges. Also, firms in a related industry may collaborate together on industry or locality policy within common membership on an industry body e.g. SMMT. Third, are trust relations. These are where the firm has other firm relationships that involve sharing tacit knowledge, problem solving, joint lobbying and other non-opportunistic trust-like behaviours. These may be organised through a joint venture or some other partnership arrangement.

At this point, it is observed that there will be different permutations of outcomes of the firm's firm-to-firm and institutional relations. Furthermore, the firm's situation will also be influenced by characteristics of the local economy, such as its labour market and local public goods. The aim is to identify combinations of the mix of the firm's relations with other firms and institutions, using three firm models, as described by Gordon and McCann (2000). Before doing so, attention is given to four concepts helpful to unpack these different models: clustering; agglomeration; embeddedness and trust. Each of these have implications for the shaping of firms' relationships and their embeddedness in place.

2.3 Key concepts: clustering, agglomeration, embeddedness and trust

2.3.1 Clustering

Theories surrounding clustering and agglomeration contribute to understanding firms' locational behaviour in relation to place. It is possible for a firm to locate randomly in proximity to other firms for unplanned or idiosyncratic reasons (Duranton and Overman,

2005, 2008). Tiebout (1957) observed that firm location might be the outcome of adaptive or adoptive behaviour. Adaptive is where the firm has sufficient knowledge to select an optimum location and then adapts to it. Adoptive is where, because of uncertainty and lack of fore-knowledge, the firm locates relatively randomly, and the economic system adopts to those that fit into it. For example, a privately-owned indigenous firm might locate alongside other firms locally for personal reasons. However, Tiebout (1957) argues that this need not be in contradiction to profit-making conditions.

However, evidence suggests that most firms choose to locate close to other firms (McCann, 2013; Duranton and Overman, 2005, 2008) and that any observed pattern of clustering might be rationally explained. For this chapter and beyond, clustering, unless stated otherwise, relates to the probability that the local grouping of firms is a non-random phenomenon (Castree et al., 2013: 64), so that:

'Industrial clustering refers to the observation that all types of commercial activities – manufacturing, services, resourced-based industries – are frequently observed to be grouped together in space' (McCann, 2013: 50).

Here a distinction is made between clustering and clusters. The concept of industrial cluster is contested (Martin and Sunley, 2003; Duranton, 2011; Nathan and Overman, 2013). This relates in part to an interpretation of industrial clusters developed by Porter (1990) that has been influential in public policy circles. Porter's presentation of the industrial cluster evolved from his work on national competitive advantage in the global economy. In this, he argued that the success of a nation's export firms depended on a favourable national competitive diamond of four interrelated factors. These were: firm strategy and rivalry; factor input conditions; demand conditions and related and supporting industries.

Porter suggested that the greater the intensity of interaction between these four sets of factors, the higher the productivity of the firms involved. Central to Porter's concept was that this intensity of interaction would be enhanced if the firms involved were clustered (or locally geographically concentrated). Further, the most globally competitive industries were likely to be geographically clustered within the nation. Beyond introducing Porter's competitive diamond, it is not intended to examine the concept in greater detail, beyond mentioning two points. First, this concept of industrial clustering has been criticised for lack of supporting empirical evidence (e.g. Martin and Sunley, 2003; Duranton, 2011; Nathan and Overman,

2013). Second, to note that in a report commissioned by the UK government on UK competitiveness, Porter himself concluded that whilst there were some clusters in the UK economy, '*overall, the UK does not rank high on measures of cluster development*' (Porter and Ketels, 2003: 29).

It is therefore sufficient to note that clustering of firms does take place and that this might occur for a variety of reasons. This has implications for evolving the framework of Figure 2-2 above, for the variety and nature of relationships of the firm with other firms and institutions around it. A key concept that helps to interpret this lies in the existence of agglomeration economies, to which the discussion turns next.

2.3.2 Agglomeration: external economies

A short definition of agglomeration is that it refers to the self-reinforcing benefits that occur through the concentration of economic activity in space (Overman et al., 2009). The roots of modern agglomeration theory draw inspiration from Marshall (1920), as well as to contributions by Hoover (1948), among others. Marshall contrasted between external economies of scale in space and economies of scale internal to the firm. In addition, within the agglomeration literature, a distinction is made between urbanisation and localisation economies. The former benefits firms and industries across the urban space. The latter describes economies of scale arising within an industry in a local situation, which Marshall (1920) termed as an '*industrial district*'. With the rise of NEG and urban economics (see Section 1.3), the popular contemporary interest in agglomeration has been on its urban context (Overman et al., 2009; Nathan and Overman, 2013; Glaeser, 2011).

Marshall provided three explanations for external economies of scale, which collectively form the basis of modern agglomeration theory. First, those arising from the presence of local inputs that might be traded - customer and supplier linkages of the firm, and untraded - shared local public good e.g. physical, communications and transportation infrastructure. Second, were benefits that came from sharing a large labour pool. This reduced the inconvenience and cost of job searches for both firms and labour, as well as enabling the local provision of more specialist skills. The third source is what has become referred to as knowledge spillovers across firms and people, as an unintentional as well as intentional

outcome, so that: *'The mysteries of the trade become no mysteries; but are as it were in the air, and children learn many of them unconsciously.'* (Marshall, 1920: 225).

Subsequently, in his foundations for the agglomeration-driven approach, Krugman (1991) emphasised the first two sources of economies of scale: specialist local inputs and labour market pooling and linked them to transport costs as a key factor either serving or inhibiting agglomeration. High transport costs will tend to inhibit agglomeration economies. When they are reduced, firms will want to take advantage of economies of scale in production (Pinch and Henry, 1999: 818). The third factor, knowledge spillovers, was downplayed, for being difficult to model quantitatively (Krugman, 1991). Subsequently, agglomeration theorists have tended to support this position, by stressing practical uncertainties of measuring learning mechanisms and knowledge spillovers (Duranton and Puga, 2004). They also suggest that they operate best across small and dense geographies, in which new knowledge is generated (Feldman and Audretsch, 1999; Clayton and Serwicka, 2017).

Marshall's (1920) three-fold framework was reformulated because it focused on channels to observe agglomeration, rather than on the underlying causal mechanisms. Duranton and Puga's (2004) revised framework centred on three mechanisms of sharing, matching and learning that would operate in an urban context. Sharing is the ability to share inputs, suppliers and infrastructure. Matching is the capacity to access a large pool and wide range of labour skills. Learning is the potential to learn from others and from within the surrounding (urban) environment. Examples for each of these are illustrated in Figure 2-3. This framework has been adopted subsequently in agglomeration-driven literature (e.g. Overman et al, 2009; Serwicka and Swinney, 2016; Clayton and Serwicka, 2017).

Nevertheless, it remains difficult to separate out the effects of these three mechanisms to reach a measure of the productivity consequences of agglomeration. Overman et al. (2009) sought to get around this problem by constructing a measure for the impact on productivity for a study of agglomeration in the Manchester economy. This was by establishing an indicator for economic mass (or density of employment)² as an index for urbanisation. This

² Where 'economic mass' is deemed to be high when a firm is close to locations that have lots of employment and low when a firm is relatively isolated and surrounded by locations with low employment (Graham, 2006, 2007).

was supported secondarily by focussing on concentrations of skilled workers³ and access to transport infrastructure. This reinforces that the focus of an agglomeration-driven approach is on the spatial context of the locality, in which the firm's relations become a dependent factor.

Figure 2-3 Sharing, matching and learning

Mechanism	Illustrations
<p>Sharing</p> <p>The ability to share input, suppliers and infrastructure</p>	<ul style="list-style-type: none"> • <u>Public goods</u> – Shared goods, facilities and infrastructure e.g. ports, airports, universities, cultural facilities. • <u>Supplies and labour pool</u> – Accessing a variety of supplies/pool of workers, enabling firms to be more productive. • <u>Pooling risks</u> – Absorbing risks from the impact of an economic shock on local productivity.
<p>Matching</p> <p>The ability to access a large pool and wide range of labour skills</p>	<ul style="list-style-type: none"> • <u>Quality of matches</u> – Wide selection of firms and workers improving the quality of recruitment matches. • <u>Chances of matches</u> – Reducing time workers spend looking for jobs, limiting spells of unemployment and reducing labour costs. • <u>Reducing 'hold-up' problems</u> – Limits situations where firms cannot commit to invest in skills, delaying appointments.
<p>Learning</p> <p>The ability to learn from others and from within the surrounding environment</p>	<ul style="list-style-type: none"> • <u>Knowledge exchange</u> – Improved opportunities for face-to-face contact to share tacit knowledge. • <u>Diffusion of knowledge</u> – Through workers changing jobs locally and firms learning in proximity to suppliers and customers. • <u>Diverse environment</u> – Helping processes for search, experimentation and innovation, as firms seek new products.

Sources: Developed by author from Duranton and Puga, 2004; Overman et al., 2009; Serwicka and Swinney, 2016; Clayton and Serwicka, 2017

2.3.3 Agglomeration economies: internal and the division of labour

Before leaving agglomeration economies, it is important not to lose sight of the possibility of economies of scale internal to the firm, even in the absence of localisation or urban external economies. Internal economies of scale are due to the concentration of production at a location and might be a consequence of economies of scale, scope and complexity (Parr, 2002a, b). Scale refers to economies from production costs falling as output rises (beyond some minimum point). Scope refers to economies arising from more efficient use of inputs by sharing them to produce several products. Complexity arises from the integration of

³ The population share with National Vocational Qualifications (NVQs) Level 4+ (HNDs, First Degrees, Higher Degrees and similar qualifications) and NVQ 3+ (2 or more A Levels) (Overman et al., 2009: 45).

production processes within the plant or the organisation of production across different company factories (e.g. see example of semi-conductor industry below). Concern with the possibilities of internal agglomeration economies arises especially with the industrial complex model. Mention might also be made of the possibility of external economies of complexity. This is where a firm is linked in input-output relations to other firms, particularly with respect to overcoming input-supply problems. These might enable efficient information flows and efficient coordination of activities between firms to overcome input-supply problems (Parr, 2002a, b).

Whilst these largely internal economies of scale are important, they are - with the exception of economies of complexity – on their own not place-specific. To address this, two other related factors are important. First, in the absence of external agglomeration economies, the optimal location of the firm is related to the interaction of location factor and distance transaction costs. Location factor costs arise from being located in space in the form of local factors of production – labour, capital, land. Distance transaction costs exist through overcoming space from transporting goods between different places e.g. shipping, telecommunications and executive travel (McCann, 1995). Both types of costs are not reliant on industrial concentration, although firms facing similar circumstances in related industries may locate within a common space (Gordon and McCann, 2000; McCann, 1995). As a result, these will in turn impact the spatial distribution of foreign direct investment chosen by industrial complex MNE firms (Hill and Munday, 1992).

The other factor relates to the division of labour. Such economies of scale are more likely to be applicable to larger firms, quite possibly under MNE ownership. As Massey (1995), identified, MNE firms organise their production tasks and division of labour skills in different plant locations, offering insight into the uneven development of the spatial economy. In doing so, Massey outlined three different firm organisation spatial structures (Massey, 1995: 75), relevant to the industrial complex type (Gordon and McCann, 2000) and Markusen's (1996) satellite and hub-and-spoke models.

2.3.4 Embeddedness and trust

As described above, there is good reason to focus on sharing, matching and learning mechanisms within an agglomeration framework to understand why firms locate where they

do, particularly in an urban context. However, there are also other explanations of how firms relate to space, where the character of firms' relations with other firms and institutions become central to the analysis.

To clarify this, it is necessary to consider the embeddedness of firms in space. Embeddedness is not a straightforward concept, with varied interpretations (Hess, 2004; White, 2004; Jones, 2008), and ambiguous meaning (Oinas, 1997; Pike et al., 2000). An explanation of its conceptual evolution is provided elsewhere (Hess, 2004). It is sufficient to note that it has roots associated with Polanyi (1944), situated outside the spatial domain, demonstrating that the market is socially constructed and governed through the participation of economic and social institutions (Hess, 2004). Another foundational author is Granovetter (1985), whose focus on embeddedness was about understanding the role of both individual and collective (or network) agency in '*generating trust and discouraging malfeasance*' (Granovetter, 1985: 490). This approach has relevance to the third of the firm models; the social network (Gordon and McCann, 2000).

Markusen (1994) associated the embeddedness of firms in the regional (or local) economy with whether they had needs and loyalties which kept them anchored in the region:

'Central to the affirmative answer to this question is the notion that firms are embedded in local relationships – with competitors and suppliers in particular. These relationships can be simply ones of arm's length exchange, as in traditional agglomeration models, or firms have 'fuzzy boundaries' where they share information, personnel, and equipment across their borders and engage in trusting rather than adversarial relationships' (Markusen, 1994: 483).

Markusen (1994) recognised that such relations went beyond the locality. Many non-local firms impact the locality economy, such as through the spatial division of labour within MNE companies between their global HQ and the hierarchy of factories and plants within the company (Massey, 1995; Phelps and Fuller, 2000). Nevertheless, embeddedness in a spatial context has come to be associated with relationships between the firm and its environment that are shaped by social relations with other firms and institutions. As such, it questions the neo-classical economic perspective (underpinning the pure agglomeration model), which assumes that rational self-interested behaviour of the firm is minimally affected by social relations (Granovetter, 1985: 481-2; Oinas, 1997).

The key factor that underpins these social relationships, and differentiates them from the neo-classical agglomeration model, is trust. Trust is defined here as:

'... the willingness of actors and agents to 'take a chance' in doing business with one another in the belief that one participant will not take undue advantage of the other (e.g. by challenging the rules of the game in mid-stream)' (Harrison, 1992: 115).

Thus, the generation of trust-like relations becomes a glue through which the embeddedness of firms in space might occur. By its nature, trust takes time to establish, built-up through continued contracting and/or deal-making from one firm to another. It might be reinforced by firms helping each other, for example, by addressing trading or production issues. This is in the absence of either firm taking advantage of the other, even if the nature of relations between the firms changes (Harrison, 1992: 116). It might be illustrated by terms such as partnership, loyalty, joint-lobbying and joint-venture based on principles of mutual trust. Gordon and McCann (2000) argue that being in spatial proximity may lead to further trust relations, opening the possibility of a local business environment characterised by confidence, risk taking and cooperation.

The concept of embeddedness generated a series of studies. For Phelps et al. (2003), in a study of MNE firms in Wales and NE England, local embeddedness was defined:

'...in terms of the depth and quality of the relationships between inward investors and local firms and organisations, and the extent to which spillovers provide opportunities for local economic development' (Phelps et al., 2003: 28).

Phelps et al. (2003) adopted the following *'concrete expressions of embeddedness'*, in evaluating the corporate status and function of the plant (i.e. non-manufacturing as well as manufacturing); whether it undertakes research and development (R&D) and design activity; the extent of the local supply chain and purchases; the local investment in training and skills development; and whether there was substantial factory reinvestment. In practice, little evidence was found to support the idea of the locally embedded MNE owned factory, although the majority of overseas operations researched offered more than manufacturing branch plants. They also found a limited impact of institutional activities (e.g. by development agencies), except in the sphere of training. However, as discussed in Chapters 7 and 8, a

reason for these observations is that the surveyed firms more likely reflected industrial complex rather than social trust characteristics.

2.4 Three models of the firm and their relations in the local economy

2.4.1 Three models for analysis

So far, a framework for describing the relations of the firm with its locality, other firms and institutions has been described. Three potential combinations of place, firm and institutional relations were identified, drawing on a range of academic sources. The pure agglomeration model situates relations within the external agglomeration economies provided by the locality itself. The industrial complex model considers the possibility of internal economies of scale and their interaction with location factor and distance transaction costs and the division of labour. The social network model provides a contrasting approach, where relations are distinguished by trust-like behaviours that may impact on the agglomeration of and embeddedness of firms in the local economy.

This section considers key features of each of these three models, by focusing on three issues. First, the nature of clustering by the firm with other firms. Second, the characteristics of relations between the firm and other firms and organisational institutions. Third, how knowledge might flow between the firm and other firms and institutions. In doing so, consideration is given of how the basic model might be varied. Finally, three industrial case studies illustrate characteristics of the models.

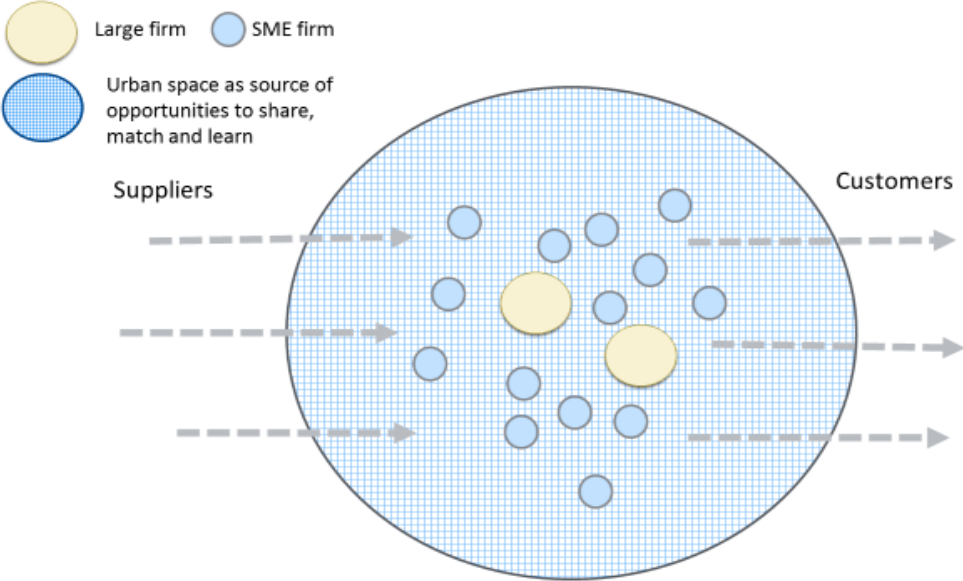
2.4.2 The pure agglomeration model

An illustrative picture of this model is shown in Figure 2-4 that relates to the description of agglomeration-driven economies in Section 2.3.2 above. This type of clustering is essentially urban in character, where entry is relatively easy; the new firm entrant just meets the local rental or property purchase costs. In doing so, the firm joins a market that is characterised by many competitors, in which no single firm has enough trading power to impact the competitive well-being of another firm locally. As within the agglomeration-driven framework, firms benefit from matching, sharing and learning opportunities created within the urban space around them.

Regarding relations, the pure agglomeration model presumes that the only cooperation that takes place between the firm and other firms and institutions is that which is in the interest of the firm, in an '*atomised and competitive environment*' (Gordon and McCann, 2000: 517). Given the concentration of different firms in local space to relate to, firm relations may constantly change in response to market conditions. Thus, little evidence of loyalty or other kinds of stable relations will be found between firms, beyond those of a transactional nature (see Figure 2-4).

Reflecting this fluidity, variety and promiscuity of relations between the firm and other urban firms, knowledge is generated outside the firm and within the broad range of public and private organisations that co-locate to share the same space. Consequently, knowledge tends to be codified, explicit and mobile between firms. Because such relations are transactional, there is no formal process to cumulatively transfer knowledge between firms (Iammarino and McCann, 2013). Within this setting, pure agglomeration firms may be differentiated by the stability of their products in the production chain. One kind may produce stable (or routine) products and derive agglomeration economies by being situated in a large and stable (urban) market (type A). Others may operate in more innovative markets with short-term product life cycles. They derive agglomeration benefits by maintaining face-to-face contact with customers and other firms in the city to respond to constantly changing markets and developing products (type B) (McCann, 1995).

Figure 2-4 Illustration of the pure agglomeration model



Source: Developed by author from Gordon and McCann (2000)

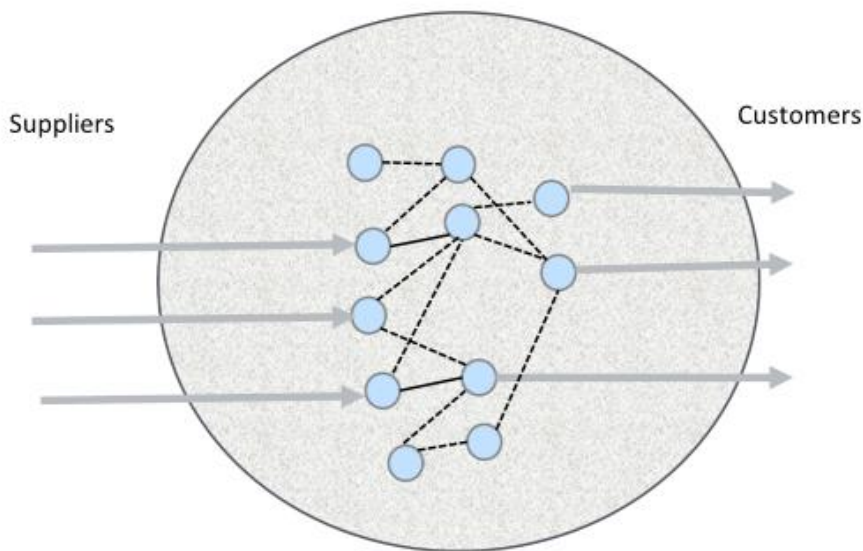
To illustrate the pure agglomeration model (with type B characteristics), Nathan and Overman (2013) point to the role of agglomeration economies in the emergence of ‘Tech City’ in Inner East London from the mid-1990s. The organic growth of at least 1,500 information and communications technology (ICT) and digital content firms in three electoral wards around Old Street Roundabout, has been reinforced by factors enabling agglomeration. These include its central city location, physical accessibility to the rest of London and beyond, knowledge spillovers and low entry barriers for new firms because of historically low cost office space locally. Early entry firms might locate there by chance; company founders lived nearby or were offered cheap or free office space. By contrast, more recent arrivals may have selected to locate, influenced by the area’s amenities and vibe, closeness to similar and competing firms, the availability of relatively cheap space, proximity to Central London and good external connectivity (Foord, 2013; Ferm, 2014; Nathan and Vandore, 2014; Nathan and Overman, 2013; Nathan et al., 2012).

The area around Old Street Roundabout provides a supportive environment for knowledge spillovers between firms to take place. The area’s streets, cafés, bars and other amenities offer social buzz and an edgy environment, together with a physically bounded community where creative work gets done by bumping into people. The density of firms and propensity

of the workforce to socialise, increases the likelihood of chance encounters, as well as existence of professional networks. In turn, this creates an attractive work environment to attract staff. Shared workspaces often reinforce these interactions through sharing advice to overcome technical problems or on business development. Nevertheless, there was little evidence that major employers, universities or supporting economic institutions were actively engaged with this clustering of firms (Nathan and Overman, 2013; Nathan et al., 2012).

The closest variant to the pure agglomeration model, is the industrial district (or localisation model) (Markusen, 1996) (see Figure 2-5). As described in 2.2.2 above, the roots of this model go back to Marshall (1920). Whilst many of the characteristics are like those described in 2.2.2, key differences result from the operation of a single sector in a space that is local, but not necessarily urban. Whilst the nature of relations are like those described above for the pure agglomeration model, it is possible that shared sectoral identities might encourage closer functional linkages across firms. For this reason, Nathan and Vandore (2014) suggest that the Tech City firms might be described as a classic industrial district, as well as illustrating features of urbanisation economies. For example, there is considerable overlap across firms coding tools and software applications, in advertising and marketing and in operations across online and physical platforms. People working in these firms shared similar characteristics of age, gender and educational background. This may suggest that the clustering of such firms goes through different stages in their development, depending on firm age, size and stage in the production cycle.

Figure 2-5 Industrial district of local agglomeration model



Source: Developed by author from Markusen (1996, 1999a)

2.4.3 The industrial complex

Industrial complex firms usually form part of an MNE structure. They may coincidentally co-locate with other industrial complex firms to maximise internal economies of scale by minimising location factor and distance-transaction costs (McCann, 1995; Parr et al., 2002a, b). To enter the complex, firms make significant long-term physical capital investments in machinery, equipment and infrastructure and real estate. Thus, firms are likely to be large. Because of high entry costs, it is difficult for a new firm to enter the industrial complex. Since the firm will own the site it occupies, and it is not for sale, rental appreciation is unlikely to be an issue. The industrial complex will be located locally or regionally, but not necessarily in urban situations. Within the industrial complex, the firm forms part of the internalised and stable chain of trading production relations with other plants within the same company nationally/internationally and its customers and suppliers.

Transfer of knowledge in the industrial complex model also takes place within the firm through its relations with other plants within the company, its suppliers and customers. This could, as an example, be as an outcome of the firm's internal R&D programme, so that a new industrial application developed by the company may be applied and then routinised through its production chain. High barriers of entry to the industry and significant costs in site

development reinforce the internalisation of knowledge within the firm's complex. This is also why larger MNE firms will usually account for much of the innovative activity within the industry. This is reinforced by the firm's market power and its investments to seek to exclude rival firms from using new products and processes generated by the firm. This in turn gives the incumbent firm a major innovation advantage over new firms in the industry, reinforcing the major role that will be played by MNEs within the industrial complex, its production chain and the locality within which a plant is located (Gordon and McCann, 2000; McCann and Sheppard, 2003; Iammarino and McCann, 2013).

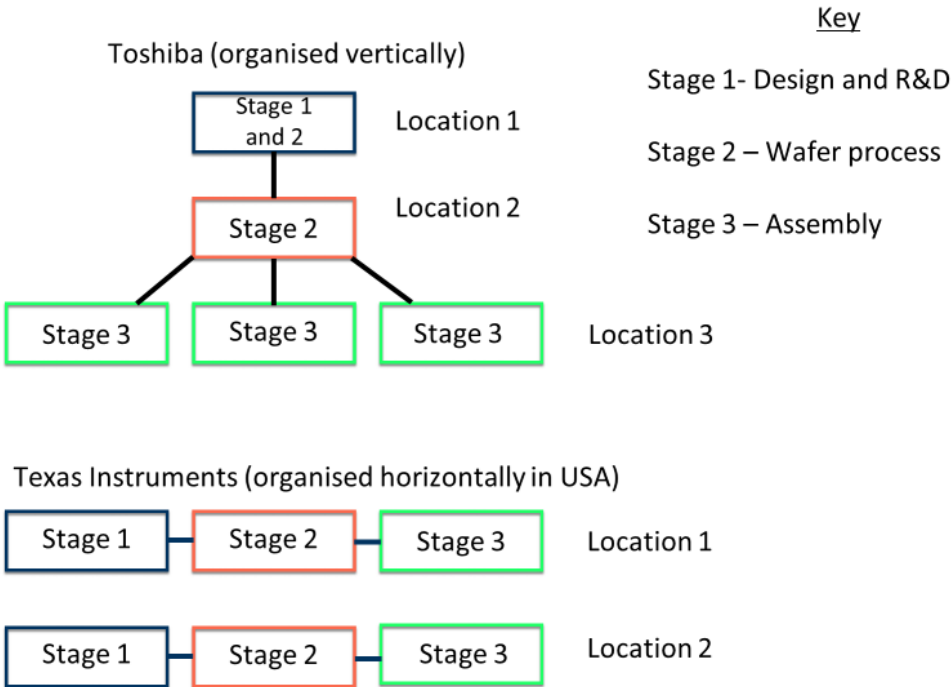
McCann et al. (2002) demonstrate the industrial complex through the semi-conductor industry. They separate the three main manufacturing stages for semi-conductors to show the organisation of production globally across different plants, in two leading MNEs in the industry: Toshiba and Texas Instruments. Stage one was the design of the silicon chip, where the layout of the chip and layout of transistors and capacitors was determined, primarily through the assistance of computer aided design (CAD) systems. This led to the production of masks, the three-dimensional templates of the chip. Stage two was the wafer process; lithography and treatment to produce a three-dimensional silicon structure. The final stage was the wafer assembly process.

Most firms in the global semi-conductor industry are large vertically integrated MNE firms. These may organise the structure of production vertically across plants in different ways. In the case of Toshiba, McCann et al. (2002) identified a simple vertical hierarchy between plants (see Figure 2-6). At the third wafer assembly level, several plants might be in proximity to perform this process. These would then serve a single plant that could be separately or locally located to undertake the second stage of wafer processing. These in turn would report to the company's headquarters (HQ), where a range of first, second and third level activities would take place. By comparison, in the USA, Texas Instruments tended to organise a clustering of plants locally to each other. Each of these would undertake one of the three stages of the wafer production process. Overseas, Texas Instruments located R&D facilities in Europe and Japan, and wafer process and assembly facilities primarily in Latin America and Asia.

The spatial organisation of plants was intended to both facilitate and control the flow of information; to mitigate the possibility of local information spillovers and to minimise

shipment costs between plants. In addition, they found that high levels of secrecy surrounding the first-tier plants indicated that their location was also unrelated to local exchanges of knowledge. Thus, spatially, both Toshiba and Texas Instruments were characterised by stable and predictable relations across plants across the production process. Informal and external information flows were clearly not part of the rationale for the spatial clustering of plants at the different production levels. Instead the emphasis was to ensure the internalisation of sharing of knowledge within the factory or across a small, but identifiable interdependent group of firms or plants involved in the production process (McCann et al, 2002: 660).

Figure 2-6 The organisation of plants in Toshiba and Texas Instruments

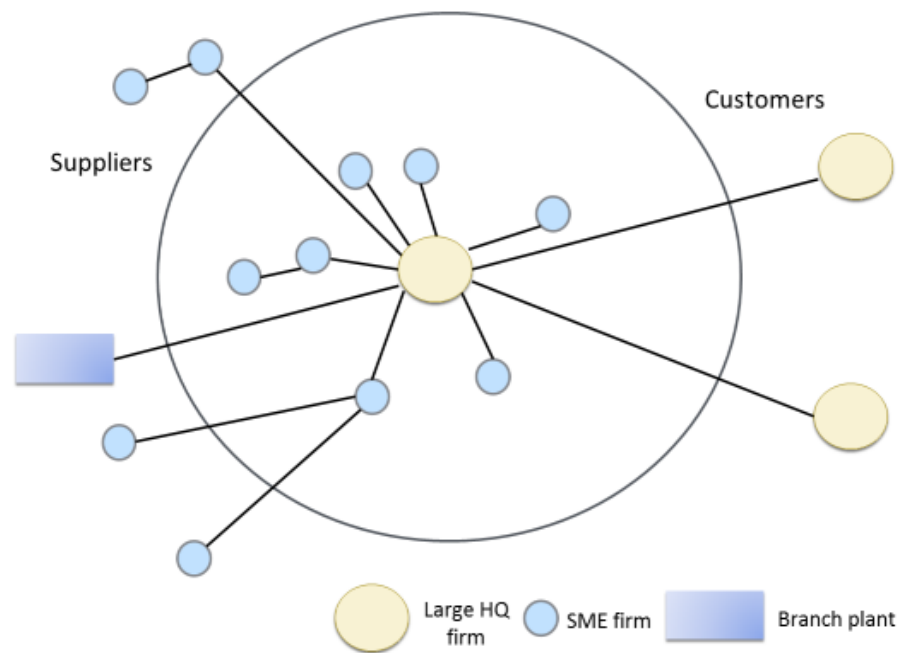


Source: McCann et al. (2002)

This case study illustrates that variations in the structure of the industrial complex depend on the international organisation of the MNE company and the spatial and technological responsibilities devolved within the company. Massey (1995) was concerned about how as a result, the spatial structure of the MNE company has consequences for local control of decision making and the division of labour of R&D, craft and assembly functions between the

HQ and plant factories. As indicated earlier, Taylor and Thrift (1982a, b) distinguished between leading, intermediate and laggard MNE companies and their plants. Markusen (1996) in examining different industrial spatial types, identified two with characteristics that relate to the industrial complex. The first is the hub-and-spoke model (see Figure 2-7). This is organised in a relatively integrated way within the locality, serviced by a network of local suppliers, as well as its wider chain of production relations nationally to globally.

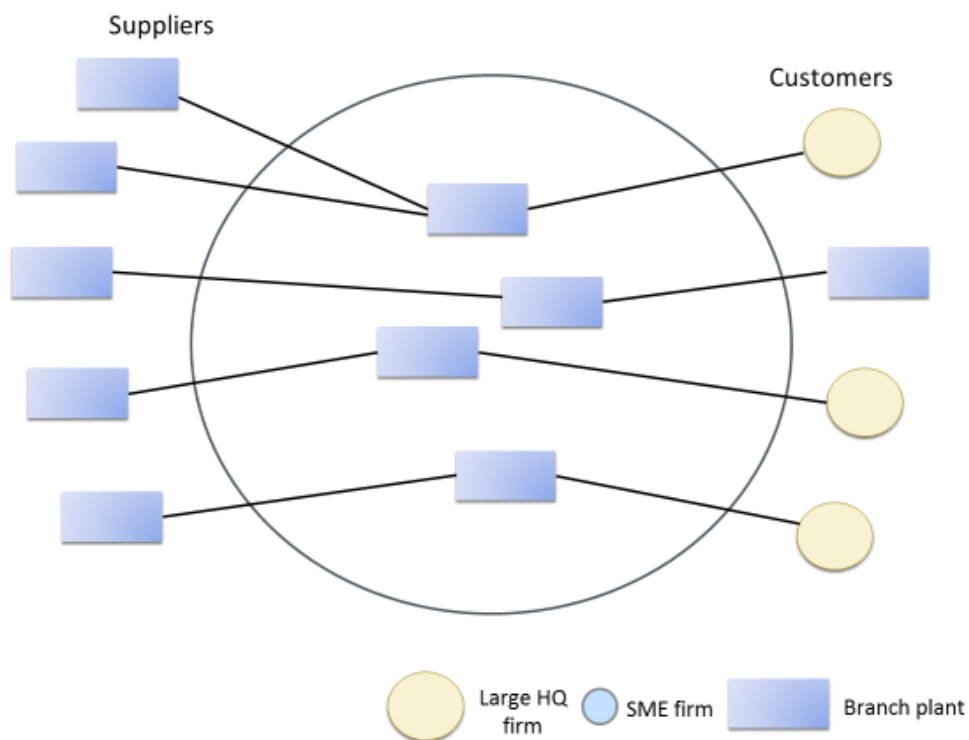
Figure 2-7 - Hub-and-spoke model



Source: Developed by author from Markusen (1996, 1999a)

The satellite model (see Figure 2-8) by contrast has no local supply or customer relations. Instead it trades through the global supply and customer relations of the MNE company to which it belongs and which controls investment decisions. As such it has limited relations into the local economy in which it is located.

Figure 2-8 - Satellite model



Source: Developed by author from Markusen (1996, 1999a)

2.4.4 The social network model

Unlike the first two models described above, the social network does not draw on the agglomeration-type arguments outlined in sections 2.3.2 and 2.3.3 above. Instead, it owes its roots to managerial sociological literatures that relate to the discussion of embeddedness in Section 2.3.4 above. This approach suggests there is more to interactions between firms, and less to those within firms than is recognised in neo-classical economics. It is postulated that such interpersonal relations between firms depend on trust. Where such trust relations exist, the result will be individual or collective behaviours that differ from those expected from the pure agglomeration or industrial complex models described above.

Therefore, the basis of relations within the social network model is that mutual trust between decision-makers in different organisations may be as important as decision-making hierarchies within individual organisations. Relations between firms will be distinguished by trust-based arrangements, such as joint lobbying, joint ventures, informal alliances and other

forms of reciprocal inter-firm relationships. These behaviours rely on a common culture and understanding of trust that evolves from a shared experience of decision making. Even when the external economic environment changes, these relations will adjust and be remade accordingly. This is further helped by cross-firm relations being differentiated from organisational boundaries operating within the individual firm (Granovetter, 1985; Gordon and McCann, 2000).

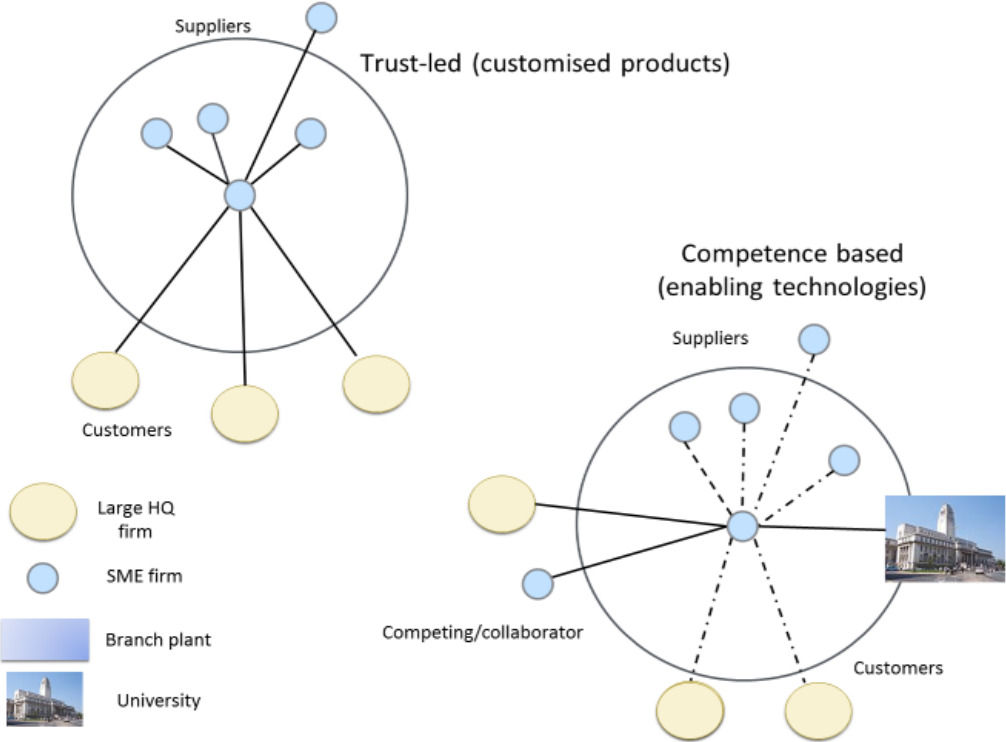
Gordon and McCann (2000) describe the social network as a single typology. However, considering the local knowledge environment of the firm, Iammarino and McCann (2013) divide the social network model into two. First, is the trust-led firm. These firms are likely to manufacture customised products found, for example, in textile, footwear and furniture industries. In this case, knowledge is accessed externally from the firm, but internally within the sector in which it operates. Thus, knowledge will tend to be codified, mature and transmitted through localised networks of firms. This may, for example, through long-term trust-like relations with the firm's customers and suppliers (see Figure 2-9). Consequently, knowledge accessed by the firm tends to be both specialised and appropriate to the industry within which it operates. It also means that technological change within the firm tends to be incremental, rather than step-change in nature (Iammarino and McCann, 2013).

Second, is the competence-based firm. This variant is more likely to be found in firms engaging with science-based and general-purpose technologies. The competence-based firm tends to access knowledge both external to the firm and the sector within which it is located. In this case, knowledge generated tends to be tacit, generic and sticky. It is transmitted through cognitive networks, such as the firm working with other firms and/or universities on collaborative projects (see Figure 2-9). It means that competence-based firms are more likely to be found in fields applying general purpose technologies, with a dynamic of uncertain and disruptive change. Therefore, this type of firm is more likely to be orientated towards the production of new kinds of products in constantly changing markets (Iammarino and McCann, 2013).

Motor Sport Valley illustrates characteristics of the competence based social network model, particularly in the role of knowledge transfer (Iammarino and McCann, 2013:228). 'Motor Sport Valley' is shorthand for the world-leading British motor sport industry that from the 1960s onwards came to dominate the world's production of single seater racing cars,

including Formula One. This is a local concentration of some 2,000 mainly small and medium-sized (SME) firms, employing in excess of 30,000 people and concentrated in a 50-mile radius of Oxfordshire in Southern England.

Figure 2-9 - Trust-led and competence-based models



Source: Developed by author from Iammarino and McCann (2013)

Henry and Pinch, with other co-authors, have written extensively about this clustering of firms. In doing so, they have countered pure agglomeration type arguments that a series of accidental factors combined with external economies of scale to account for the evolution of this industry (Aston and Williams, 1996). Pinch and Henry (1999) argue that localised knowledge spillovers were critical in enabling the rapid evolution of the industry. First, British firms adopted new technology knowledge and materials, developed for the aerospace industry to enhance the aerodynamics of cars and reduce their weight. Second, at the birth of the industry, a dense network of racing clubs was already in place. These combined with a strong tradition of small cottage-based industries with expertise in engines, lubricants and aerodynamics, enhanced the probability that British-based racing teams would mount a competitive industrial challenge.

Once established, other factors became critical to the industry's continuing success. The key asset for a motor sport company is the knowledge possessed by its designers, engineers, fitters and mechanics. This knowledge circulated around firms in different ways. First, by the frequent transfer of personnel between companies, often at the end of each racing season as drivers and engineers moved between teams. Similarly, the demise of some companies and the founding of others, meant personnel were joining new companies and sharing their knowledge and experience. Second, through access to information and technology shared via a common pool of component and service suppliers. Whilst it was not in suppliers' interest to reveal knowledge possessed by other team customers, it might permeate by a process of gradual assimilation. Third, even though the firms were competitive and secretive about their innovations, the culture of the industry was collective. For example, companies in Formula One must conform to governing body regulations. But such changes were approved by a technical working group involving shared discussion by engineers from rival teams. Fourth, information was distributed through the extensive network of industry contacts. For example, a team recruiting a new engineer, may phone a colleague in a rival team for feedback. Whilst vital clues might not be given away, networks and gossip would be crucial to enabling firms to keep up with the competition (Pinch and Henry, 1999).

Thus, Pinch and Henry (1999) argued that the British Motor Sport industry became dominant due to untraded dependencies between firms through the sharing of knowledge about conventions, rules and practices and institutions. They therefore suggested that the British Motor Sport industry is best conceptualised as a close knit '*community of knowledge*'; a geographically-concentrated node of knowledge production on how to construct the best racing cars in the world (Henry et al., 1996; Henry and Pinch, 2000, 2001, 2006; Pinch et al., 2003; Pinch and Henry, 1999).

2.5 Conclusions

First, this Chapter has reviewed a variety of literatures, mainly drawn from the work of economic geographers and urban and regional studies that examine the relationships between firms and the local economies in which they are situated. It began with the illustration of a single firm and its possible permutation of relations with other firms and institutions in the local economy and beyond (Figures 2-1 and 2-2). It went on to situate knowledge uncovered about companies and their wider relations within a framework of

three models and their variations of pure agglomeration, industrial complex and social network firms (Gordon and McCann, 2000). This inquiry demonstrated different patterns of how knowledge is accessed by companies and is shared with other firms and institutions within and beyond the local economy. It is a framework that is developed in the thesis, within the research methodology and the organisation and analysis of empirical evidence.

Second, it illustrated the distinctive character of different types of firms. The pure agglomeration firm, with its looser set of firm or institutional relations, draws knowledge from outside the firm and inside the local economy. This is from the broad range of public and private organisations that share the space; most likely to be urban in character. For the industrial complex firm, knowledge flows vertically, kept largely within the firm and its supplier and customer relations. As many such firms are MNEs (McCann and Mudambi, 2004, 2005), these knowledge flows will be stable, internalised within the vertical structure of the industrial complex locally, nationally and internationally. This is irrespective of whether the factory or plant in the locality might come closer to the hub-and-spoke or the satellite models outlined above (Markusen, 1996). For the social network firm, two patterns are observed. For the trust-led model, knowledge flows are likely to be more vertical than horizontal, based on trust-like embedded relations unlike those ascribed to the industrial complex model. For the competence-based firm, these are likely to be illustrative of trust-like horizontal knowledge flows with competitor firms and appropriate institutions (Iammarino and McCann, 2013).

Third, it is possible that one of these model types may dominate within any one local economy (Gordon and McCann, 2000). For example, a successful city centre economy could have a predominance of pure agglomeration-type firms (Serwicka and Swinney, 2016; Clayton and Serwicka, 2017). Also, there may be a concentration of industrial complex firms on industrial estates. Given the vertical nature of knowledge flows within such firms, it is unlikely that they would represent a clustering with cross-firm relations (McCann and Mudambi, 2004, 2005). However, following the model of the segmented economy introduced at the beginning of the Chapter (Taylor and Thrift, 1982a, b; 1983; Tully and Berkeley, 2004), there is potential for an investigation to identify a diversity of firm types in any local economy. In particular, variations may be observed when comparing larger MNEs and smaller, predominantly privately owned, firms. Returning to the place debate, (see Section 1.3), it is not just that a pure agglomeration model may be more closely associated

with a space-neutral framework and the social network model with a place-based perspective. It is in addition, to anticipate that a distinctive character of places *lies in their particular mix of types of firms and the combination of factors that shape processes of agglomeration, within and beyond the local economy*. And, as a result, what such combinations might imply for the role of governance institutions in those contexts. It is to this, the role of local institutions that the next chapter turns.

Chapter 3 Reviewing the role of governance institutions

3.1 Introduction

This Chapter proceeds to consider the role of governance institutions by addressing Objective 2b:

Objective 2b – Building on evidence about firms to interpret the design and roles for institutions and public policy in local economic development.

To address this objective, Chapter 3 is organised into six sections. Section 3.2 introduces why institutions might be significant in supporting economic development, nationally, regionally and locally, by tracing developments in the literature and evidence since the 1980s. Attention then returns to the framework of the three firm models provided in Chapter 2 – pure agglomeration, industrial complex and social network. Sections 3.3, 3.4 and 3.5 consider implications for each model in the design of institutional responses, drawing on the case studies from Chapter 2, particularly the Tech City and Motor Sport illustrations. Section 3.6 concludes with lessons for the appropriate roles for local governance and other economic institutions, looking across the three different models.

3.2 Why institutions may matter in economic development

From the 1980s onwards, a case has been emerging for why institutions should be considered central to understanding the economic development of nations, regions and localities. This is not to ignore an earlier tradition of writing about the societal contribution of institutions. Indeed, classical economists such as Adam Smith and John Stuart Mill discussed the role of institutions (Coase, 1984), as did late nineteenth and early twentieth-century social scientists such as Tönnies and Weber (Rodríguez-Pose, 2013). Others, such as Veblen and Walton Hamilton, were identified as institutional economists, concerned with how the variety of institutional situations might impact on human behaviour, something neglected in traditional neo-classical economics (Hamilton, 1919; Hodgson, 2000). This interest was followed into the 1950s and 1960s by others such as Gunnar Myrdal and John Kenneth Galbraith. However, writing about institutions took a significant step forward from the 1980s onwards, with a new body of literature which came to be referred to as New

Institutional Economics (Coase, 1984; North, 1990; Williamson, 2000). This emerged in parallel to another shift in focus from government to governance (Rhodes, 1996, 1997; Stoker, 1998).

New Institutional Economics is concerned with how institutions might offer solutions for the conduct of organisations within a competitive marketplace (North, 1991: 98). As North (2003: 1) pointed out, there are two basic weaknesses to applying an unadapted neoclassical framework to processes of economic development. First, it assumes a frictionless world, with no uncertainty and thereby, an absence of transaction costs e.g. for transport and information, and thereby no need for institutions. But, given that our world is uncertain, institutions exist to reduce that uncertainty. Second, the framework is timeless (or static) rather than dynamic. But time creates an environment that is shaped by human agency with the potential of uncertain and varied outcomes. North addressed this by showing how institutional frameworks might vary in contrasting national contexts with different economic performance outcomes, with institutions famously defined as:

'Institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction. In consequence they structure incentives in human exchange, whether political, social or economic. Institutional change shapes the way societies evolve through time and hence is the key to understanding historical change' (North, 1990: 3).

North identified three different interdependent elements that together comprised institutions, or the *'institutional matrix'*: formal rules, informal constraints and enforcement constraints. Formal rules, or formal or hard institutions, are society's precisely defined ways of doing things (i.e. laws, constitutions and regulations), which can be differentiated between political and economic rules. Political rules are defined by the historical and decision-making structure of the *'polity'* (the state as a political entity). Economic rules are spelt out by *'property rights'* (rights over the use and income to be derived from a property). North argued that political rules influence economic performance because they tend to define and enforce economic rules (North, 1990, 1994: 361 and 366; Rodríguez-Pose, 2013: 1037).

In practice, formal rules give a limited indication of everyday behaviour and conduct. Informal constraints (or soft or tacit institutions, are more challenging to identify, since they reflect ways of doing things, in the form of sanctions, taboos, customs, culture and codes of conduct. In practice, they are more significant than formal rules, by being shaped and embedded by the culture of a society. Formal rules can be changed overnight, whilst informal constraints gradually evolve, since beliefs carried forward across generations constitute how we see the world. This may create tensions between formal rules and informal constraints, with consequences for how economies evolve. North illustrated this by comparing the different institutional paths enabled by colonisation in the Americas. In the USA, an institutional framework of complex impersonal exchange evolved to enable political solidity. Whilst in Latin America, an institutional culture of personalistic relationships undermined political stability. Lastly, enforcement characteristics consist of structures that people employ in their dealings with other people, through self-imposed conduct, retaliatory conduct and rules and conditions applied by the State. They apply to both formal rules and informal norms (North, 1990: 117, 2003: 2 and 4; Rodríguez-Pose, 2013: 1038).

In North's framework, organisations are not institutions per se, but are the players shaped by this institutional matrix. It is therefore the interaction between this institutional matrix and organisations that *'shapes the institutional evolution of an economy'* (North, 1994: 361). Organisations are made up of groups or individuals brought together to share a common purpose to achieve objectives. They could include political bodies (e.g. political parties, a local authority and regulatory bodies), economic bodies (e.g. firm, trade unions, business associations), social bodies (e.g. religious institutions, clubs, neighbourhood associations) and educational bodies (schools, universities and FE). An organisation's productivity is shaped by incentives from the institutional matrix of formal rules, informal constraints and enforcement, which, in turn impact, economic outcomes. North argued that it is adaptive rather than allocative efficiency that is the key to long-run economic growth:

'Successful political/economic systems have evolved flexible institutional structures that can survive the shocks and changes that are a part of successful evolution' (North, 1994: 367).

North (1990) was influential in creating a framework to explain why institutions mattered for national development. Subsequent research focussed on how institutions come into

being and why they vary in performance across countries (Acemoglu et al., 2005; Acemoglu and Robinson, 2012, Kay, 2004). Again, a distinction is made between political and economic institutions, with the latter seen to be shaped out of the former. In this framework, economic institutions are important for national economic prosperity:

'Economic institutions matter for economic growth because they shape the incentives of key economic actors in society. In particular, they influence investments in physical and human capital and technology, and the organisation of production. Although cultural and geographical factors may also matter for economic performance, differences in economic institutions are the major source of cross-country differences in economic growth and prosperity' (Acemoglu et al., 2005: 389).

Rodrik et al. (2004) provided further evidence for why institutions matter for economic development by comparing the respective contributions of institutions, geography and trade. This study combined results findings that demonstrated income benefits from trade (Frankel and Romer, 1990) with findings that related institutional quality with differences in colonial settler mortality between places with health hazards (with strong institutions) and less healthy places (with weak institutions) (Acemoglu et al., 2001). As a result, Rodrik et al (2004) concluded that quality of institutions *'trumped'* geography and trade, although implications for policy were unclear, since in practice, it is difficult to quantify quality of institutions. It was also likely that institutions are context sensitive and so performed better in one national setting and less so in another (North, 1990, 1994). As a result:

'The implication is that transferring the formal political and economic rules of successful Western economies to third-world and Eastern European economies is not a sufficient condition for good economic performance' (North, 1994: 366).

Ketterer and Rodríguez-Pose (2016) undertook a systematic study for the period 1995-2009 of the impact of institutional quality and geography on economic growth at a sub-national scale. They used a 'quality of government' data set constructed by Charron et al. (2014), drawing on World Bank country level government indicators and a survey of 34,000 respondents of 184 NUTS level regions in the 15 original members of the EU. They developed four composite indices of government quality to reflect respondents' perceptions of: a) the prevalent level of corruption; b) the rule of law at the local level; c) government effectiveness

and d) the strength of democracy and electoral institutions (or *'voice and accountability'*). These were also combined into an index for regional quality of government. The study found that *'regional government quality emerges as a fundamental driver of economic performance across the EU'* (Ketterer and Rodríguez-Pose, 2016: 27) and that *'institutions rule over geography'* (Ibid: 28). Low corruption and government accountability were found to be particularly crucial for regional economic growth in Europe.

Overall, there is evidence that institutions matter for economic development. Whilst stronger at a national level, there is case at regional and more local levels. And yet, there is not universal support for this position (Steeple, 2010), or as to whether good institutions lead to economic development or the other way around (e.g. Chang, 2011). With this background, attention returns to the three firm models of pure agglomeration, industrial complex and social network, to consider how institutions might relate to each of these frameworks.

3.3 The pure agglomeration model and institutions

The institutional implications of the pure agglomeration model lie some distance from the discussion of institutions so far within this Chapter and far apart from those underlying the social network model. As explained in Chapter 1, an agglomeration-driven approach tends to be sceptical of the role of institutions in locality-centred economic development. More emphasis is placed on the role of efficient markets in promoting agglomeration, particularly in successful places (Barca, 2011; Cheshire et al., 2014). As shown in Chapter 1, this scepticism was reflected in the World Development Report (World Bank, 2009) in advocating nationally designed spatially blind institutions, without regard to local or regional distinctiveness.

As an agglomeration-driven approach will view the urban system through a homogenous rather than a heterogeneous lens, there is likely to be scepticism about a focus on the informal roles of institutions:

'...the majority of studies of existing forms of city governance throughout Europe have stressed the importance of networking, trust and other soft relationship factors in developing successful city-regional governance structure. When combined with the lack of clear evidence on devolution's impact and

effects, this presents challenges in making an objective case for devolution' (Cheshire et al., 2014: 178).

In this regard, Cheshire et al. (2014) reviewed literature, such as Le Galés (2002), Rodríguez-Pose and Bwire (2004) and Pike et al. (2010) that tested for both direct and indirect relationship effects between devolution and urban economic outcomes. Whilst limited support was identified for a clear association, nevertheless, three positive lines of enquiry were identified. These were: the case for experimentation; the appropriate scale of governance; and the role of market-based incentives in housing and land markets (this latter illustration being beyond the scope of this study). Experimentation, for example through City and Growth Deals in England, Scotland and Wales, was welcomed. Policy experiments were seen to provide a source of evidence about '*what works*' (Cheshire et al., 2014; 179) as well as incentivising experimentation and local accountability (Leunig and Swaffield, 2008).

A European study across 122 functional urban regions (FURs) by Cheshire and Magrini (2005, 2009) found that the scale of governance arrangements for a metropolitan area matters for economic performance. Their findings suggest that a positive relationship exists through the extent of coincidence between the city's administrative boundaries with the FUR. Thus, if city governments could operate across the whole of their spatial economy, they were more likely to design effective economic policies which would translate into economic growth:

'Administrative and government arrangements for cities systematically influence their economic growth performance. Where there is a jurisdiction approximating the boundaries of an economically self-contained city-region, growth is stronger, other things being equal' (Cheshire and Magrini, 2009: 107).⁴

There was a note of caution. Not all city governments are equally endowed with incentives to develop effective local growth policies. It might be that the success of cities within a FUR

⁴ This is underpinned by the Tiebout (1956) hypothesis that people relocate from one local authority jurisdiction to another in search for a preferred package of taxation and provision of public goods and services. With the limitation of 'sticky' movement of people, Cheshire and Magrini (2009) approach the promotion of growth as a local public good, providing advantages for forming an effective '*growth promotion club*' of local actors to minimise spillover losses and transaction costs (Cheshire and Magrini, 2009: 87, 107; Cheshire et al, 2014: 170).

tier of government may partly derive advantage from the relative failure of those without such incentives (Cheshire and Magrini, 2009: 108; Cheshire et al. 2014).

In addition, OECD studies have indicated that productivity benefits from city size are likely to be offset by fragmentation of governance (measured by number of local municipalities within the metropolitan area). OECD evidence suggests that for a given population size, a metropolitan area with twice the number of municipalities is associated with around 6% lower productivity. This is because administrative fragmentation can, by illustration, obstruct transport investments and effective land-use planning across the metropolitan area, and in doing so, increase congestion and reduce the city's attractiveness to individuals and businesses. The establishment of a governance body at the metropolitan level may mitigate this effect by half (Ahrend et al., 2014a, b; OECD, 2015, a, b).

As pointed out by Cheshire et al. (2014) and Steeples (2010), Cheshire and Magrini's (2005, 2009) papers have influenced the present dominant UK sub-national policy framework (of city-regions), through City Deals, Combined Authorities and directly elected metro-mayors (BIS, 2010: 29; WG, 2012: 28) (see Sections 1.3 and 1.5) . Going back to observations made in Section 2.4.2 about the pure agglomeration model, the city-region becomes a territorial setting for managing policy formulation and delivery within an agglomeration-driven type framework.

Nathan and Overman (2013) considered implications for institutions in the Tech City case study discussed in Section 2.4.2, in part to illustrate limitations of cluster theory as defined by the Porter (2000) framework (see Section 2.3.2). The definition of the geographical area covered by the Tech City cluster had been made elastic by the way its profile had been publicised by national and local policy makers. There was confusion and tensions over the appropriate mix of horizontal and vertical policy interventions to sustain the cluster. In addition, efforts to raise the national cluster profile of Tech City were having unintended distributional effects. On one hand, it was encouraging new firms to enter the area. But on the other, rising property costs were displacing smaller young firms (Nathan et al., 2013; Nathan and Overman, 2013).

These observations were set in a wider discussion about the appropriateness of horizontal and vertical policy measures; with the former more associated with national space-neutral policy approaches and the latter with more sectoral and/or place-based interventions. Unsurprisingly, by applying an agglomeration-driven framework, Nathan and Overman (2013) recommended targeted horizontal interventions combined with a focus on boosting agglomeration economies. But support was also given to experimentation of more specific spatial interventions and institutional delivery design, particularly within city-regions.

3.4 The industrial complex model and institutions

This Section focuses on the MNE firm and its potential relations with institutions. This is not to argue that the MNE firm will be always characterised, in structure and evolution, by the industrial complex model (Iammarino and McCann, 2013: 217-218, 228). However, the pure agglomeration and the social network types of clustering suggests few locational advantages for MNEs. This is since the rationale for the former lies in informal external knowledge spillovers between local firms in (urban) spaces and for the latter in information spillovers and flexible inter-firm relations centred on the principle of trust. In contrast when making location choices, an MNE will prioritise corporate integration (or internalisation) to control location and distance transaction costs, over opportunities to secure external economies. This does not exclude the possibility that an MNE may seek advantages specific to the firm through alliances with other MNEs, or locality-based institutions (e.g. universities). Nevertheless, the industrial complex model provides the context within which national and locality institutional relations are framed (Phelps, 2000, 2008; McCann and Mudambi, 2004).

Many MNEs are oligopolistic in character, which appears to explain why '*many of the largest firms do not co-locate their knowledge activities with those of their competitors*' (McCann and Mudambi, 2004: 509). Outside of controlling transportation costs, the only reason why an MNE firm might choose to locate amongst a clustering of firms dominated by pure agglomeration or social network type firms would be to gain access to specialist workers. But, as McCann and Mudambi (2004) point out, MNE firms are usually able to recruit the labour they need by being a reasonable distance from, rather than in immediate proximity to, an urban agglomeration. Therefore:

'...the inter-firm spillover arguments in the pure agglomeration and the social network models of industrial clustering are largely not applicable to MNEs' (McCann and Mudambi, 2004: 509; quoted by Phelps, 2008: 462).

Thus, the following discussion of MNEs and institutions is based on a general, but not exclusive, association of MNEs with the industrial complex model (McCann and Mudambi, 2004, 2005). Given the breadth of this literature, there are two sets of issues about the MNE and its potential relations with institutions, which are considered here. The first, is concerned with the role of the State and local institutions as they seek to embed MNE investment in local economies. The second, more broadly focusses on relationships (or '*strategic coupling*') between local and regional territories and the global production networks of firms and institutions within which MNE firms operate and what this means for local economies.

3.4.1 Institutional relations to embed MNE investments

Given the internalisation logic in the industrial complex model, it is not surprising that there has been a long-standing suspicion that the attachment of MNE investments to places is '*being in rather than of their host economies*' (Phelps, 2000: 170). It is also unsurprising that the conceptual framework responding to this challenge lies in the search for an appropriate institutional fix, in response to the spread of globalisation and the advent of neo-liberal policy regimes from the 1980s onwards (Peck and Tickell, 1994). Thus, there are debates about both the role and limitations of the State and the relevance of territory and place in an increasingly fluid global economy, where the movement of capital through MNEs is mobile across nation states. Even if the global economy is not quite borderless, nevertheless, the increasing integration of economic activities across national and international boundaries means that it becomes increasingly important to seek to cultivate the allegiance of foreign capital. This is by attracting greenfield investment and then seeking to embed it within the locality through subsequent repeat investment (Phelps and Fuller, 2000: 224; Yeung, 1998).

In this sense, embedding has a different meaning to that discussed in relation to the social network model based on trust in social relations (see Section 2.3.4). Here it refers to '*the nature and extent of connections between inward investors and host economies*' (White, 2004: 243). This is with emphasis on seeking to both win investment and to sustain it in a way to confer lasting benefit to the host economy (Phelps and Fuller, 2000). However, it implies

a tension. Local institutions have an interest in seeking to deepen MNE investments in the local economy. At the same time, MNEs will reflect on the potential benefits of situating a plant locally compared with exploiting them elsewhere within their international and national network of company operations. There is a risk of uncritically using the term embedded interchangeably without distinction for these two situations. The Oxford English Dictionary defines embeddedness as *'the quality of being firmly and deeply ingrained or fixed in place'*. This resonates where embeddedness is about describing the nature of trust in social relations (Section 2.3.4). However, it is more challenging to see its application in the competition to attract and seek to cultivate the allegiance of capital in an era of neo-liberal policy regimes at all scales from the international to the local (Phelps and Fuller, 2000: 224).

Perhaps here the term 'anchoring' is more appropriate, where there is a fixing by mooring, but with the implication that it is possible for the anchor both to be set and to be raised by the owning MNE. Attempts have been made to bridge these different understandings of embeddedness. For example, Phelps et al (2003: 29-30) have referred to the *'locally embedded MNE'*, the *'local enclave'* and the *'extended enclave'*. However, their study of overseas manufacturing affiliates in Wales and NE England found little evidence for the *'locally embedded MNE plant'* (Phelps et al, 2003: 37). Given the characteristics of the industrial complex model as described above and in Section 2.4.3, this outcome might not be a surprise. The result presents challenges for national and local institutions, of which three are identified and discussed.

First, that whilst nations and localities compete for both greenfield and repeat investment, in practice competitive processes for the allocation of repeat investment take place internal to the MNE, largely beyond control of local institutions (Phelps and Fuller, 2000: 231). Whilst particular attention is given to competition for mobile greenfield investment, repeat investment is quantitatively more important, accounting for more than half of inward investment into the UK. This is often where individual MNE plants compete with each other. Phelps and Fuller (2000) distinguish, based on Birkenshaw (1997), between different types of internal MNE market arrangements for repeat investment. These are: markets for a) intermediate products or services; b) charters or mandates; and c) capabilities. They argue that a) is more likely to be subject to an open competition process between affiliates supervised centrally by the company, whilst b) and c) are more likely to be determined

centrally. When intra-MNE competition is managed by the parent company, there is limited possibility for affiliate companies to upgrade their role in peripheral regions, since the status and roles of affiliates relate to the life cycle of the plant and its products. In addition, experience may confer *'learning curve'* or *'first mover'* advantages. These factors provide an incentive for parent companies to concentrate investment and additional responsibilities at already established plants.

Second, because of MNE investment processes, State, local and MNEs roles become fuzzy. Governments adopt different stances towards MNEs. In the UK context, the policy approach has been to manage MNE relations by seeking to reduce their entry and exit internalisation transaction costs (Phelps, 2000; Phelps and Fuller, 2000). Whilst this has historically enabled the UK to secure a majority share of manufacturing foreign investment flows to the EU, it has led to the particular attraction of relatively lower-technology and labour intensive manufacturing operations (Phelps, 2000: 172). At the same time, local institutions have an interest in seeking to embed (or anchor) firms within their territories. However, the interest of local institutions and those of MNEs may only superficially coincide, as MNEs reconcile local-based advantages with those within their international network of operations (Phelps and Fuller, 2000: 240). The processes for deciding repeat investment described above, suggest a decision-making process under the control of the MNE. Yet, sunk investment costs in places combined with processes surrounding MNE intra-competition, might lead to the politicisation of MNE and national and local institutional relations. As a result, individual MNE affiliates might engage both internally within their company and externally with local and national governments, so that:

'In other words, the sorts of locational hierarchies produced from corporate spatial division of labour are not, if they ever were, determined purely by an economic rationality, but are shaped, albeit at the margin, by the political behaviour of MNEs and their affiliates in an increasingly murky firm-state nexus at the national and local scales' (Phelps and Fuller, 2000: 241).

Third, within these complexities, local institutions seek to develop partnerships with MNEs, for example, through after-care schemes: services offered to companies by national and local institutions to facilitate the start-up or continuance of an MNE plant in its host location (Young and Hood, 1995). A successful strategy should, in addition to addressing local factors

such as shortfalls in skilled labour and infrastructure, *'spend time nurturing MNEs which have existing investments in the area'* (Mudambi, 1998: 256). MNE plants may be prepared to engage with local institutions to protect their own competitiveness. And, local institutions may concern themselves with *'the relatively short-term expediencies of contributing to the competitiveness of individual firms in order to secure economic gains for their communities in the longer-term'* (Phelps and Fuller, 2001: 829). But, overall, examples of after-care may represent forlorn attempts to embed MNEs in the context of a UK policy stance that has centred on minimising both the entry and exit costs of MNEs (Phelps and Fuller, 2000: 240).

Thus, the semi-conductor case study of Chapter 2 illustrates constraints in seeking to upgrade manufacturing affiliates and the weakness of a peripheral region like Wales within broader national and international divisions of labour. This is particularly the case in established industries, where the spatial division of labour may be well-defined and less contestable by peripheral region MNE affiliates and local institutions (Phelps and Fuller, 2000).

3.4.2 Institutional relations within a GPN framework

A broader approach to understand these institutional relations with MNE firms starts from conceptualising regions: *'not as a tightly bounded space, but as a porous territorial formulation where national boundaries are straddled by a broad range of network connections'* (Amin, 2002; Coe et al., 2004: 469). This approach sees local (or regional) development as a dynamic outcome of interaction (or *'strategic coupling'*) between territorial networks and firm global production networks (GPN), defined as: *'the globally organised nexus of inter-connected functions and operations by firms and non-firm institutions through which goods and services are produced and distributed'* (Coe and Yeung, 2004: 471). GPN organisational structures of individual MNE firms are perceived to vary, even within the same industry, influenced by the firm's *'ownership mode, nationality, corporate structure and strategic disposition'* (Coe and Yeung, 2019: 778).

Within this GPN framework, the economic potential of regions is shaped not just by what is going on within them, but also as a result of a wider set of GPN firm, institutional and market relations. This is since the coupling of GPN and regions involves an interface of institutional activities across different geographical and organisational scales (regional, national and

supra-national). Regional development is dependent on the capacity of coupling to enable processes of value creation, enhancement and capture. This is to enable economies of scale and scope, localisation within GPN and configuration of regional institutions to 'hold down' GPNs. Within this framework, regional institutions are not unimportant. This literature particularly emphasises the contribution of local labour markets, through labour's spatial immobility and flexibility in skills: *'The local and the regional become the most important geographical scales through which labour interacts with the strategic needs of key actors in global production networks'* (Coe et al., 2004: 472).

The role of the national state and development agencies embedded in regions are also highlighted. There is also an emphasis on the contribution of regional policy makers in developing knowledge about the assets of their region and their relationship with the needs of GPNs, including across different firms and sectors and the multi-scalar configurations in which their local economy is situated (Coe et al., 2004: 472, 481-2; Coe and Yeung, 2019). Within this approach, it is acknowledged that there are limits to what can be done locally to tie down MNE firms. However, in response, it emphasises the importance of multi-level approaches to encompass the local to the national, in which understanding the needs of the firm, its position within a GPN and the operation of the firm's firm-to-firm and institutional networks is appreciated within the local, regional and national context.

Thus, this Section has focussed on two contrasting approaches to understand relations between MNE firms with industrial complex characteristics with institutions, but with shared features. First, the prioritisation of vertical corporate integration within this model of the firm and second, that the global character of MNE investment impacts on the local embeddedness of firms. The first, focusses on challenges faced by the State and local (regional) institutions seeking to embed (or anchor) MNE investments in place, emphasising limitations in the role of institutions in place. The second, provides a broader perspective through identifying a dynamic process of coupling between MNE GPNs with regions. Whilst acknowledging limitations for local economies to hold down GPNs, it offers a more hopeful perspective of local (and regional) space, not as a bounded territorial construction, but part of a network of different and porous spatial scales, in which local and regional institutions are not unimportant because of specialised and immobile assets, such as the labour market, that MNEs may value at that level.

3.5 The social network model and institutions

The potential for institutions to contribute to the economic development of localities in the context of the social network firm (Section 2.4.4), connect with Granovetter's (1985) positioning of social and cultural relations at the centre of economic processes (Amin and Thrift, 1992, 1994, 1995). They build on the framework outlined in Section 3.2, in which governance institutions are shaped by both formal rules and informal conventions, habits and routes that are sustained over time and space (North, 1990; Hodgson, 1998). Therefore, institutions '*act to stabilise a range of collective practices in a particular territory*' (Amin and Thrift: 1994: 16), so that:

'More generally, this means taking seriously the contention that the economic life of firm and markets is territorially embedded in social and cultural relations and dependent upon: processes of cognition (different forms of rationality); culture (different forms of shared understanding of collective consciousness); social structure (networks of interpersonal relationships); and politics (the way which economic institutions are shaped by the state, class forces, etc.)' (Amin and Thrift, 1994: 16-17).

Amin and Thrift (1994) argue that a place-based approach in a globalised economic system is important for three interconnected reasons to establish a collective approach to build integration and coordination. First, for '*place representation*'; to generate and share stories, collective beliefs and knowledge locally about the global production system. Second, as places of social and cultural interaction; to gather information, build trust and develop shared rules of conduct. Third, as places of innovation; to '*test and track innovations*' and provide '*a critical mass of knowledgeable people*' and supporting '*socio-institutional networks*'. The purpose is to identify new and changing market opportunities and respond to new technological applications (Amin and Thrift, 1995: 100-101). Localised centres that show these characteristics e.g. City of London and Santa Croce sull' Arno (Tuscany), offer the unique ability to be both sites for industrial excellence and illustrations for the consolidation of '*contacts, knowledge and institutions*' (Amin and Thrift, 1995: 101).

It is this analysis that underpins the concept of institutional thickness, to explain why some localities remain growth centres in a globalised economy. It reflects a place-based perspective; that places are increasingly heterogeneous, not with single pre-given identities,

but with multiple meanings and identities, as well as having their own '*internal tensions and conflicts*' (Massey, 1991: 18-19, cited in Amin and Thrift, 1994: 9). Alongside this, localities offer the possibility for mobilising their own distinctive '*practice-based knowledge and expertise*'. By doing so, they may create their own particular *sense of place and local economic integrity* that situates the significance of the local within the global economy (Amin and Thrift, 1994: 9; Pred, 1989: 221).

To provide clarity to what may appear to be an imprecise concept, Amin and Thrift (1994, 1995) point to institutional thickness having four underlying characteristics. First, the presence in the locality of many institutions of different kinds. Some or all will have in common that they '*can provide a basis for the growth of local practices and collective representation in social networks*', and may include:

'...firms, financial associations, local chambers of commerce, training agencies, trade associations, local authorities, development agencies, innovation centres, clerical bodies, unions, government agencies providing premises and infrastructure, business service organisations, marketing boards, and so on'
(Amin and Thrift, 1995: 102).

Second, that there is a high level of interaction between institutions in the locality. This comes from being actively conscious of and engaged with each other, demonstrated by the exchange of information, mutual cooperation and a growing shared common purpose. Third, out of high levels of interaction will come a coalition and collective representation across institutions of what would ordinarily have been sectional or individual interests. This in turn will lead to the sharing of social costs and the '*control of rogue behaviour*' (Amin and Thrift, 1995: 102). Fourth, the development of a culture of shared norms and values, resulting in an awareness of being engaged in a collective enterprise:

'This will almost certainly mean that there is a commonly held industrial agenda which the collection of institutions both depends upon and develops. This will usually be no more than a loosely defined script, although more formal agendas are possible' (Amin and Thrift, 1995: 102).

When these components are successfully brought together, they will produce six outcomes for the locality. First, a persistence (or reproduction) of local institutions. Second, an archive

of commonly held (coded and tacit) knowledge. Third, flexible institutions, able and open to change. Fourth, a high level of innovative capacity, both in the regions and across its firms. Fifth, having trust and reciprocity as a behavioural norm. Finally, the locality holding onto a widely held common purpose that effectively serves to mobilise the region (Amin and Thrift, 1995: 104).

Institutional thickness therefore represents a '*collectivism and corporatisation*' of economic life in the locality that is facilitated by institutional or cultural practices that contribute to successful local economies. It is not the presence of institutions per se that is important. Rather, it is the process of developing institutionalisation by '*codes of conduct, support and practice*' that is particularly significant (Amin and Thrift, 1995: 103). This final observation is important, as an acknowledgment that institutional thickness is not a sufficient condition for economic success (Amin and Thrift, 1994: 17; Benneworth et al., 2017).

Henry and Pinch (2001) review the appropriateness of the four underpinning characteristics of institutional thickness to interpret the Motor Sport Valley case study (see Section 2.4.4). First, it appears that a strong and diverse institutional presence is not a key factor for the resurgence and consolidation of this clustering of motor sport firms from the mid-1960s to the early 1990s. There were just a few regional or local institutions with strong relationships to the motor sport industry, beyond: The Royal Aircraft Establishment at Farnborough; Motor Industry Research Association (MIRA) at Nuneaton; Silverstone Race Circuit; universities (particularly Southampton and Imperial College London) and a local history of motor racing clubs (e.g. 750 club). Nevertheless, out of this limited institutional fabric came graduates and a critical shift in technological paradigm to the motor sport industry through aircraft manufacturing technologies and a localised innovative engineering culture (Henry and Pinch, 2001: 1175).

Second, there were extremely high levels of interaction in the institutional network. These were '*formal and informal, overt and covert*', '*endemic to the workings of the industry*' and its competitive leading edge (Henry and Pinch, 2001: 1176). These drew on two key institutional factors, the network of firms in the industry and the labour market. Together, they produced a highly innovative community founded on constant turnover of firms, firm linkages and staff.

Third, there were patterns of coalition resulting in collective representation and inhibition of rogue behaviour. This was illustrated by the collective response to the EU proposed ban on tobacco sponsorship, which with UK government help, was delayed for seven years. The rogue behaviour of one firm to go against the industry on this issue was challenged very publicly by the other constructors and the industry board (Henry and Pinch, 2001: 1177).

Fourth, that there was a mutual awareness of a common enterprise. This is reflected by the communication of a culture of *'aggressive competition'* and a *'win at almost all costs'* attitude (Henry and Pinch, 2001: 1177). Henry and Pinch (2001: 1175) conclude that on first sight Motor Sport Valley might be seen as an example of *'economic success with an absence of institutional thickness'*. But on closer examination, whilst institutionally thin, the key results reflect the key outcomes from institutional thickness identified by Amin and Thrift (1994, 1995):

'...institutional persistence, an archive of commonly held knowledge, institutional flexibility, high innovative capacity (of region as well as firms), trust and reciprocity, and a widely held common project which serves to mobilise the region with speed and efficiency' (Henry and Pinch, 2001: 1177).

Building on analysis by Henry and Pinch (2001), the following six observations may be made. First, industrial case studies suggest a mix of *'thick and works'* (e.g. Santa Croce, City of London (Amin and Thrift, 1992) and Baden Württemberg (Cooke and Morgan, 1994; Raco, 1999), and *'thick and does not work'* (NE England (Hudson, 1994), Lowland Scotland (MacLeod, 1997) and Sheffield (Raco, 1998). To this *'thin and works'* and *'thin and does not work'* might be added. Within variations between *'thick'* and *'thin'*, leaves the question of how Motor Sport Valley fits in; where firms and labour market become the key institutions rather than (quasi-public) organisations (Henry and Pinch, 2001: 1177).

Second, spatial scale may be important. Amin and Thrift (1994) offer the M4 corridor of SE England as an illustration of *'thin and works'* (Henry and Pinch, 2001: 1178). And yet the corridor secures benefits from being part of a successful, and in investment terms, a privileged region in the UK context (McCann, 2016). This may illustrate that what matters is having access to institutional thickness at different or multi-spatial-scales (Amin and Thrift, 1995: 108).

Third, the issue of time (and path dependency), as well as space, may also be of critical importance. As Henry and Pinch (2001) point out, without the historical legacy of state investment in the aerospace industry, it is highly unlikely that Motor Sport Valley would exist today. Fourth, a careful distinction should be made between institutions that clearly play an integral role in the industrial success of the locality and institutions per se. Henry and Pinch (2001) distinguish between the particular (but thin) institutional contributions to the success of Motor Sport Valley described above, and the later mushrooming of (quasi) public institutions and initiatives that spread after the success of the motor sport industry was established.

There are cautions about the State or even regional actors arriving on the back of a relatively organic successful clustering of firms that may be more about *'political mobilisation of a regional service-class elite than an issue of economic development per se'* (Henry and Pinch, 2001: 1179; Jones, 2001; Lovering, 1999). Similar observations have been made in relation to the Coalition government's response to the Tech City case study from Chapter 2 (Nathan and Overman, 2013). Another example is the region of Lowland Scotland, which had a relatively successful approach to securing inward investment. But this was overturned by regional institutions in order to refocus an approach of finding the path towards becoming the *'intelligent or learning region'*. This overlooked the qualities of the existing version of institutional thickness and the opportunity for a diversity of approaches (Henry and Pinch, 2001: 1180; MacLeod, 1997).

Fifth, drawing on a comparative case study of Sheffield and Cardiff, Raco (1998) points out that the drive to thickness and common purpose can be exclusionary both towards certain local actors and towards certain external sources of investment, and even possibly detrimental to economic progress. This may be where institutional thickness is adopted as a part of a political project as much as in the mobilisation of economic institutions. And, sixth, what Motor Sport Valley highlighted was how key institutional processes came from within industrial and labour market organisation, rather than through the contribution of quasi-public institutions. And yet, as Henry and Pinch (2001: 1180) point out, little knowledge exists of how these types of institutional processes can be effectively mobilised in economic development.

This analysis has shown that there are mixed messages about the concept of institutional thickness as an institutional model. All institutional thickness may not be equivalent, since some regions may have institutions of a rent-seeking or inefficient type, while others might have a better balance between those of community and society, producing better growth-inducing and innovation-stimulating effects (Barca, 2011; Beer and Clower, 2014). There are also questions as to whether too much institutional thickness can itself add to the cost of doing business in a locality by increasing transaction costs (Stimson et al, 2009). Or, as Marshall and Finch (2006) argued, increasing complexity of managing of British cities resulted from a proliferation of agencies due to directives from Central Government (also cited in Beer and Clower, 2014). Instead, the quality and performance of institutions is likely to be more significant than their density, given that similar institutional settings work differently in different places (Farole et al., 2011: 74; Pike et al., 2017: 163).

As a result, a recent trend is to focus on what makes effective place-based leadership, rather than institutional thickness per se; identified by Rodríguez Pose (2013) in a review of '*why institutions matter?*', as a key missing variable. Whilst evidence connecting effective place-leadership to positive economic outcomes is still evolving, there are four points to be made directly relevant to this review and significant to this study.

First, there is relative agreement about key characteristics of effective place-leaders. These are that they: a) boundary span, by openly reaching out to others across administrative, political, geographical and sectoral boundaries to seek common approaches to resolve locality challenges; b) demonstrate referent power, by showing respect for the legitimacy of other players and organisations in different places and roles within the locality; and c) mobilise the expertise of contributions from different communities within the locality to generate informed decisions (Beer et al, 2019).

Second, effective local leadership may be more crucial for more dispersed and peripheral functionally connected localities than in large metropolitan areas, since: '*they are more likely to be overlooked by the processes and priorities of central government*' (Beer and Clower, 2014: 16). Also, governance and decision-making are more dispersed than is the case for metropolitan areas, so it has to be relatively more shared and collective (Benneworth et al, 2017).

Third, there are linkages to be made between place-leadership and the triple (or quadruple) helix model of university interaction between place and its firms through knowledge exchange, civic exchange and the supply of graduates to the local labour market (Hinfelaar and Hildreth, 2019). Fourth, in line with observations from Chapter 1, nations with more centralised systems of governance are more likely to experience local leadership deficits (Beer and Clower, 2014).

3.6 Conclusions

First, this Chapter has built on Chapter 2, by considering how different approaches to local economic development have been influenced by varied understandings of relationships between firms with economic institutions in place. These are underpinned by contrasting views of processes of agglomeration associated with the different firm types and how they access and share knowledge within and beyond the local economy.

Second, at the level of the firm, firm to institution relations will vary under each of the pure agglomeration, industrial complex and social network types of firms. Drawing on Chapters 2 and 3, Figure 3-1 provides a summary of possible characteristics of firm to institution relations, alongside those of firm-to-firm connections for each firm type. Pure agglomeration firms may have no to limited institutional relations that impact on the firm's location in (urban) space. Whilst they draw knowledge by being in close proximity with public and private institutions, engagement is more likely to be informal rather than formal. For industrial complex firms, given their priority to retain internal control of knowledge within the complex, they may have none to limited associative institutional relationships. Such firms may support local charities or engage with local schools to support the teaching of STEM (science, technology, engineering and mathematics) subjects, or join a local partnership committee. They may also join the Board of a Local Enterprise Zone or a LEP Board to influence local economic development policy and spending decisions. Or the firm may engage with the local university or FE College to enhance local provision of apprenticeship training. By comparison, social network, and particularly competence-based firms, are more likely to go beyond associative relationships to build institutional partnerships built on trust, for example with universities. These may share tacit knowledge, solve problems, jointly lobby

and conduct other non-opportunistic trust-like behaviours, such as engaging in joint-ventures (Gordon and McCann, 2000; Lyon, 2000; McCann et al, 2002; Iammarino and McCann, 2013).

Figure 3-1 Firm model to institutional relations

Model	Nature of relations			
	Supplies	Customer	Competitors/ collaborators	Institutions
Pure agglomeration	Transactional	Transactional	None to limited	None to limited
Industrial complex	Stable	Stable	None to limited	None to limited/ associative
Social network	Trusting	Trusting	Trusting	Partnership

Source: Developed by author from analysis in Chapters 2 and 3

Third, as summarised in Figure 3-2, there are variations in institutional governance responses to a clustering of each firm type. The pure agglomeration firm is associated with the agglomeration-driven framework (see Section 1-3) and its scepticism of locally designed governance institutions for economic development, beyond providing scope for experimentation. With the urban system assumed to be homogenous in relation to city size, a common governance approach is promoted for urban areas that enables efficient markets to encourage agglomeration, by seeking coincidence between the administrative boundary of a city and its FUR. For metropolitan areas with subsidiary local governments, these should be minimised to limit administrative fragmentation (Barca, 2011; Cheshire and Magrini, 2009; Cheshire et al., 2014; Ahrend et al., 2014a, b).

At its most limited, the industrial complex association with local institutional governance may be centred around ‘anchoring’ type relationships. This is because of the relative mobility of capital through MNEs across nation states and priority to maintain internal control of company knowledge within their integrated plants and suppliers structure. However, as GPN literature emphasises, there may in practice be opportunities for ‘strategic coupling’ between MNE GPNs and multi-level territorial networks. Local (and regional) institutions may contribute, not through territorial bounding, but as a source of local assets e.g. labour

market, that contribute to the needs of GPN actors through adding to processes of value creation, enhancement and capture (Coe et al., 2004; Coe and Yeung, 2019).

The social network type reflects a different approach, where significance is placed on trust-based firm-to-firm and information spillovers and inter-firm relations. Also, given underlying assumptions that place is heterogeneous, institutional governance solutions may be sought to address the specific context of the geographical, historical, institutional and cultural setting of place.

Figure 3-2 Firm models, agglomeration and institutions

Knowledge flows in processes of agglomeration in firm models		
Pure agglomeration	Industrial complex	Social network
Draws knowledge from outside firm and inside local economy from a broad range of public and private institutions that share the space – most likely urban	Knowledge flows operate vertically within the firm and its supplier and customer relations.	Trust-led – vertical flows Competence – horizontal flows. Both trust-based.

Implication for institutions		
Pure agglomeration	Industrial complex	Social network
<ul style="list-style-type: none"> • Boosting agglomeration economies • Scale and barriers • Limited local experimentation • Targeted horizontal policies 	<ul style="list-style-type: none"> • Anchoring (to embed) with competition for greenfield and repeat investment • <i>'Strategic coupling'</i> of multi-level territorial networks (including local economies) with firms' GPNs, to enable processes of value creation, enhancement and capture (e.g. role of local labour markets, universities) 	<ul style="list-style-type: none"> • Place-centred • Institutional thickness • Place-leadership • Develop institutionally by 'codes of conduct, support and practice'

Source: Adapted by author from analysis in Chapters 2 and 3

Fourth, as illustrated in three case studies in Chapters 2 and 3, there are examples in academic literature of institutional responses to the clustering of pure agglomeration, industrial complex and social network firm types. From a place-based perspective, there may be uncertainty prior to bottom-up investigation, what particular combination of clustering of firm types exists in a local economy context with implications for the design of institutions at

various spatial scales. This is important since institutional frameworks underpinning the processes of agglomeration (or clustering) of different firm types in local economies differ conceptually. These issues are explored further in later Chapters through the context of the Mersey Dee case study.

Chapter 4 Researching a place-based framework

4.1 Introduction

This chapter sets out the research design and method for this study, which may be defined in the social sciences as:

'A way of organising a research project or programme from its inception in order to maximise the likelihood of generating evidence that provides a convincing answer to the research questions [aim and objectives] for a given level of resources' (Gorard, 2013: 8).

In response, this Chapter explains the author's philosophical perspective and choice of theoretical framework as described in Chapters 1, 2 and 3. It explains how the study was conducted through a case study centred on the Mersey Dee through a place-based framework, involving a bottom-up investigation of the interaction of place, institutions and firms within, and relationally, beyond the local economy.

This Chapter is organised in five sections. Section 4.2. describes my ontological and epistemological position for the foundation of this research. Section 4.3 presents the research design as a case study of the Mersey Dee. Section 4.4 describes the research methodology and outlines the choice of methods and data used to address the three elements of a place-based enquiry of the Mersey Dee and their interactions: place; institutions and firms. Section 4.5 provides reflections on my positionality to the research and how these were addressed, including seeking feedback to test research results.

4.2 Philosophical worldview

Cresswell considers that researchers should:

'Think through the philosophical worldview assumptions that they bring to the study, or to the strategy of inquiry that is related to their worldview and the specific methods or procedures of research that translate into practice' (Cresswell, 2018: 5).

Doing so allows the researcher to choose the methodology and data most appropriately meeting the needs of the study and influences the choice of research aim and objectives. The philosophical worldview or theoretical basis of the research plays a critical role in understanding connections between different parts of the research and are essential to understand and critique different research positions. In this respect, the researcher's ontological and epistemological positions are the foundation for research and framework for how the researcher interprets reality (Silverman, 2013: 113; Grix, 2019). Ontology and epistemology are introduced together with an explanation of my position towards both philosophical perspectives.

4.2.1 Ontology

Ontology is the philosophical worldview of the researcher (Cresswell, 2018). It is proposed as the starting point for all research, through which '*one's epistemological and methodological positions logically follow*' (Grix, 2019: 53). As the philosophical study of being, ontology is concerned with '*the existence of, and relationship between different aspects of society, such as social actors, cultural norms and social structures*' (Barron, 2011: 203). As such, it addresses '*claims about what exists, what it looks like and how it is made up*' (Blaikie, 2000:8, cited in Grix, 2019: 53). Grix (2019) suggests that the researcher's ontological position is implicit, even before choosing the subject of research, given that we all have views about how the world is made up and what the most important components of the social and political world are.

Two contrasting ontological positions are that of an objectivist or constructivist. An objectivist sees reality to be objective, so that '*social phenomena and their meanings have an existence that is independent of social actors*'. By comparison, for a constructivist, reality is subjective where '*social phenomena and their meanings are continually being accomplished by social actors*'. It implies that '*social phenomena are not just developed through reciprocal social action but are also in a constant state of revision*'. By contrast to the objectivist, a constructivist appreciates the situatedness of the researcher and believes that reality differs depending on the observer's perspective (Bryman, 2016: 29).

For example, conceptual differences between the perfect institutions and place-based paradigms from Barca's five alternative approaches to development (see Figure 1-2) may

draw on different ontological worldviews. The former, likely reflects an objectivist viewpoint, where perfect institutions have unique features, whose effectiveness is not context dependent and no place-based interdependencies exist between institutions (Barca, 2011: 217). This indicates an objectivist position in that it views organisation *'as a tangible object'* that *'adopts standardised procedures for getting things done'* and seeing culture as *'entirely external'* and having *'an objective reality'* (Bryman, 2016: 29).

The latter more likely reflects a constructivist position. Here, institutions are not unique and are context dependent, designed through the interaction of social agents. Further, knowledge to tailor institutions to place is not known in advance and may only be uncovered through a deliberative process by social agents endogenous and exogenous to specific places (Barca, 2011: 217). In this context neither organisation nor culture are pre-given, reflecting a constructivist position. This is since their meanings are not external to social actors, *'but are built-up and constituted in and through interaction'* (Bryman, 2016: 30).

By investigating from place-based principles, my ontological positioning is constructivist. This is where reality is a context and time-dependent construction, with openness to discover how the heterogeneity of places is shaped by different geographical, historical, cultural, social interactions and institutional settings.

4.2.2 Epistemology

The second aspect of the philosophical worldview is epistemology. It focuses on the knowledge gathering process and is concerned with developing new models or theories that are better than competing models or theories (Grix, 2019: 58). Epistemology is the way the researcher comes to know about what matters in the world. The researcher's epistemological position determines the choice of methodology and methods used in the study. This is whilst recognising that a different researcher's ontological and epistemological positions can lead to contrasting views of the same social phenomena (Grix, 2019).

There are various epistemological positions. Crotty (1998), for example, identifies positivism and post-positivism, interpretism, feminism, post-modernism, critical enquiry (e.g. the Marxist heritage) and its variations. However, within the social sciences literature about

space and place, two contrasting positions of positivism and interpretism are commonly identified, which are summarised below (Davoudi, 2012; Bryman, 2016). Between these straddles a third paradigm of realism that shares '*a foundationalist epistemology with positivism*' whilst also '*allowing for interpretation in research*' (Grix, 2019: 80).

Positivism proposes natural science methods to study social phenomena (Bryman, 2016: 24). In summary, positivists view the world as existing independently of our knowing of it. They seek patterns and regularities in the social, as well as the natural world, employing scientific methods to analyse them. They pursue explanation rather than understanding and may then seek prediction. They emphasise observable and verifiable dimensions in research favouring facts over values, looking for objectivity in research and in establishing regular relationships between social phenomena. In this respect, neo-classical economic theory, is consistent with a positivist position, with its emphasis on prediction hypothesis, equilibrium theory and application of mathematical models (Lavoie, 2011; Grix, 2019). It likely dominates influence on UK spatial planning policy (Davoudi, 2012). It is also consistent with the related space-neutral framework as summarised in Figure 1-3.

By contrast, interpretism is predicated upon respecting differences '*between people and the objects of the natural sciences to grasp the subjective meaning of social action*'. As a result, '*it requires the social scientist to grasp the subjective meaning of social action*' (Bryman, 2016: 29). Whilst there are variations in approach, an interpretism view may be characterised as one where the world does not exist independently of our knowledge of it. It is socially constructed by the interaction of people living not '*in a framework of geometric relationships but in a world of meaning*' (Hubbard et al, 2004, cited in Davoudi, 2012: 431). The emphasis is on understanding not explanation in a social world that is studied from within. Social phenomena do not exist independently of our interpretation of them and so the researcher is '*part of the social reality being researched*'. They stress '*the meanings given to the world in which those studied live*' (Grix, 2019: 77, cited in Williams and May 2000: 59-63). Interpretism puts emphasis on fluidity, reflexivity and connectivity, so that '*space and place are seen as socially and culturally produced*'. Rather than view spatial scales as hierarchical from global to local, they are understood as nodes in a relational settings, where the composition of relations has consequences for the significance of scale (Murdoch, 2006: 21, cited in Davoudi, 2012).

My epistemological position is interpretist, based on an acceptance that knowledge is situated or constructed and that, as a result, our understanding about the world around us is open to our interpretation. Consequently, individuals experience and construct their knowledge about the world differently. This position has implications for the methodology and methods adopted for the conduct of the Mersey Dee case study, which follows. In particular, when combined with my ontological constructivist position, it suggests that a qualitative approach to research is appropriate to seek meaning and understanding in a heterogeneous context (Bryman, 2016).

4.3 Research design

4.3.1 Choice of a case study approach

This Section explains the selection of a single case study for investigation and issues considered in its design, and the choice of the Mersey Dee as the subject for case study research. A case study may be defined as a '*detailed examination*' of a single illustration that may have value for both generating and testing hypothesis (Flyvbjerg, 2006: 229). It is an approach that facilitates the exploration of a phenomenon, using a variety of data sources (Baxter and Jack, 2008). It is particularly relevant to situations where, such as for this project, the objective was to '*explain some present circumstances*' to answer '*how*' and '*why*' questions (Yin, 2014). A case study puts context-dependent knowledge and experience at its centre, which Flyvbjerg (2006: 222) places at the '*heart of expert activity*'. Furthermore, it offers the possibility of being:

'... a necessary and sufficient method for certain important research tasks in the social sciences, and it is a method that holds up well when compared to other methods in the gamut of social science research methodology' (Flyvbjerg, 2006: 241).

Though the purpose was to identify lessons appropriate in local economic development, it did not expect to uncover universal characteristics to apply in all situations. Indeed, to argue so, would be contrary to principles underpinning a place-based approach, in which different places could be expected to have heterogeneous characteristics. Thus, this type of project is particularly appropriate for intensive research design. This is where the primary concern is to understand '*how a causal process works*', from examining a single case or a set of cases

(Sayer, 1984: 242). This compares with an extensive process of research, which is centred on identifying '*common regularities*' and '*common patterns*' of a population (Ibid: 242-243). An intensive approach is purposeful when exploring '*substantial relations of connection*' (Ibid: 243). This is because it seeks to produce an account of '*causal explanation of the production of certain objects or events*', through a study of '*individual agents in their causal contexts*' (Ibid: 243), underpinned by qualitative analysis, such as by interview.

4.3.2 Selection of the Mersey Dee for case study research

Stake (1994: 236) made two helpful points about case study selection. First, he pointed out that, '*case study is not a methodological choice, but a choice of object to be studied*'. And that, '*as a form of research, case study is defined by interest in individual cases, not by the methods of inquiry used*' (Ibid: 236). This should draw the researcher towards '*an understanding of what is important about the case within its own world*', to develop '*its issues, contexts and interpretations*' (Ibid: 242). In this context, the Mersey Dee was selected as the case study both because it was appropriate for exploring issues identified with the aim of this project and as a matter of informed choice. In doing so, it was taken to heart that:

'Qualitative case study is characterised by the main researcher spending substantial time, on site, personally in contact with activities and operations of the case, reflecting, revising meanings of what is going on' (Stake, 1994: 242).

In the UK context, the Mersey Dee is a distinctive economic sub-region that crosses the England-Wales national border, with a population close to one million. As such, it provided the possibility of insights into a two-nation case study. The Mersey Dee is represented by a local authority led partnership called the MDA. At the start of research, the MDA comprised the area covered by Denbighshire, Flintshire and Wrexham in NE Wales and Cheshire West & Chester (CW&C) and Wirral in NW England. Subsequently, in March 2015, Denbighshire left the partnership for budgetary reasons, but having already completed firm interviews by then, I decided to retain Denbighshire firm interview results for reasons clarified later. As a point of explanation, all further reference to the Mersey Dee is as a local economy including Denbighshire. All mention of the MDA is as a local authority led partnership, with membership as at the date/year of reference.

Beyond being a cross-border case study offering comparison between Wales and England, the Mersey Dee is a valuable site for case study research for the following additional reasons relating to its distinctive economic, industrial and spatial diversity and geographical setting. Each of these is discussed in more depth in Chapter 5. First, given that this is a local economy rather than a clustering case study, it was helpful to focus on a place that offered a diverse mix of sectors and types of firms. The Mersey Dee has more than 27,000 registered companies supporting over 380,000 jobs. The area is recognised for its manufacturing economy, which includes significant companies in aerospace, automotive, renewables, pharmaceuticals, food, chemicals and engineering. But it also has strengths in services, including financial services, ICT, tourism and retail. It has a wide range of firms of different sizes from micro to smaller firms to internationally recognised MNE companies. MNEs include Airbus, Toyota, the Tata Group, Innospec, Kellogg's and General Motors (MDA, 2017).

Second, it is interesting as a local economy because of its variety of urban and rural spaces. Given the contemporary focus of UK policy on cities in England and Wales, a central purpose of the research was to consider an area in depth with more mixed spatial qualities. The Mersey Dee has the city of Chester and urban Birkenhead; the former coming within LCR. It also has towns such as Wrexham, Deeside and Ellesmere Port, as well as smaller towns, villages and rural spaces, particularly across Denbighshire.

Third, the Mersey Dee provides contrasting identities to reflect upon. It might be described as a local economy, a locality, a sub-region and even as a city-region. Its labour market is relatively self-contained, with 83% of residents working in the Mersey Dee (Mann and Plows, 2015, MDA, 2017). The area's identities have been shaped from a history of industrial evolution, with industrial decline in the 1980s, symbolised by the 1980 closure of Shotton Steel Works, subsequently followed by economic recovery.

Fourth, the Mersey Dee is interesting institutionally. All the usual local range of economic and governance institutions are found across both sides of the national border, including local governments, FE, universities and a range of business-led organisations. These are brought together within the loose umbrella and identity of the Mersey Dee. The area is also situated within multi-level institutional relations. Across North Wales, this is through the NWEAB; in NW England, by engagement with Cheshire & Warrington LEP (C&WLEP), together with city-

regional governance in Liverpool, under a metro mayor and Combined Authority. Along with the NWEAB, the MDA has sought to define its identity and external relations in the context of the concept of the Northern Powerhouse (MDA, 2017). Each of these factors is relevant to addressing the aim and objectives of this study and has been incorporated in the evolution of the research methodology as outlined below.

4.4 Research methodology and method

4.4.1 Four elements of research

The methodology of a research project is about *'how a particular piece of research should be undertaken'* and is *'understood as the critical study of research methods and their use'* (Grix, 2019: 27). As such it addresses the researcher's *'strategy, plan of action, process or design lying behind the choice and use of methods to the desired outcomes'* (Crotty, 1998: 3) and is driven by the author's ontological and epistemological assumptions. It addresses how the research aim and objectives will be investigated, the methods being used, their justification and consequently, the data sources.

The research was organised around elements as summarised in Figure 4-1, which collectively provide a bottom-up place-based investigation of the Mersey Dee (see Chapter 1). First, to understand what makes a place – considers the appropriateness of two functional representations of place used to describe the Mersey Dee today: as a *'locality'* and as a *'city-region'*. These are explored by examining the Mersey Dee's economic relations both *'within'* and *'without'* the area. This is reflected in labour market flows and firm-to-firm and institutional relations. They are also informed by analysing the Mersey Dee's character and identity, as observed through the history of how it has evolved outwards from its core centres to become the functional economy that it is today.

Second, to investigate the contribution of economic institutions to place – To focus on how institutions, through their formal and informal behaviours, contribute to realising the economic potential of the Mersey Dee, and multi-level, as a part of a region of North Wales into NW England that encompasses the cross-border economy.

Figure 4-1 Framework for research

Stage	Summary
<p>1. To understand what makes a place</p>	<p>The Mersey Dee as a functionally connected place, shaped by flows and relations from both within and outside the area, drawing on two representations of place: a city-region and a locality.</p>
<p>2. To investigate the contribution of economic institutions to place</p>	<p>The role of institutions in seeking to realise the economic potential of the Mersey Dee locally and multi-level from a regional perspective encompassing North Wales into NW England.</p>
<p>3. To investigate firms and economic place</p>	<p>Knowledge about firms situated in the Mersey Dee from their relations with other firms and institutions locally and in the wider economy.</p>
<p>4. To compare the above three perspectives of place with firms and institutions</p>	<p>Findings about the interaction of place with firms and institutions, comparing outcomes with the two representations of place of a city-region, within an agglomeration-driven framework and a locality, within a place-based one.</p>

Source: Author

Third, to investigate the situation of firms in economic place – building on the framework from Chapter 2 to uncover knowledge about how firms relate to place through their relations with other firms and institutions, both locally and outwardly in the wider economy, as well as reasons for their location in the area today.

Fourth, to draw together findings with regard to the interaction of place with firms and institutions, particularly comparing outcomes with the two representations of place of the city-region and locality, within an agglomeration-driven and a place-based framework respectively.

4.4.2 Deductive versus inductive research

Consideration was given to whether to follow a '*deductive*' or '*inductive*' approach to research, or a combination of both. A deductive method is where the researcher starts from what is already known about a subject and its associated theory to develop a framework made subject to testing. For an inductive approach, theory choice is the outcome of investigation which involves drawing generalisable inferences from observations (Bryman, 2016).

This project combines both deductive and inductive elements. Wide reading and writing for journal publication informed the structure of this study. The place-based framework as described in Section 1.3, and the first two of its three underlying principles provide the underlying deductive starting point for this study: first, that local geographical context is key and second that uncovering knowledge embodied in place is essential for policy development. The third, that the state lacks both an understanding and knowledge of local places is explored elsewhere (Hildreth, 2011; Hildreth and Bailey, 2013, 2014) (see Chapter 1). The empirical content of case study research about the interaction of place, institutions and firms in the Mersey Dee, more closely reflects an inductive approach, whilst going iteratively '*back and forth between data and theory*' (Bryman, 2016: 23). Possible sources of literature and data were identified through reading and reflection, which influenced the empirical investigation and were expanded on as the case study was developed.

Understanding firms in place was informed iteratively. Initial enquiry and pilot interviews showed that the Mersey Dee has a diverse mix of firm types and sectors. This informed the choice of theoretical approach as described in Chapter 2 and 3, to investigate firms in place (Markusen, 1994). The starting point of pure agglomeration, industrial complex and social network firms (Gordon and McCann, 2000), enabled interpreting a diversity of firm types within the area, although interrogation of early interview results showed that adaptation was appropriate. For firms likely exhibiting industrial complex characteristics, differences were found between firms investing into the Mersey Dee prior to 1980 ('evolved firms') and those investing there afterwards ('incoming firms'). So, whilst the conclusions of Chapter 7 (and 9) return to the theoretical framework of Chapter 2, the distinction between evolved and incoming firms is explored in the presentation of results. It was found appropriate, because

of their local roots in the area, to group firms likely reflecting social network and pure agglomeration characteristics under the heading of indigenous firms, as outlined in Chapter 8 (and 9), before returning to theoretical considerations in the conclusions.

4.4.3 To understand what makes a place

The starting point to investigate the making of place was two contrasting but overlapping representations of place – as a *'city-region'* and a *'locality'* (see Chapters 1 and 5). In keeping with a place-based approach, the investigation was conducted bottom-up examining two interconnected perspectives.

First, to investigate how the Mersey Dee might be understood as a functionally connected space being shaped from both 'within' and 'without' by people flows and firm relations (Harding et al., 2006; Hildreth, 2007; Jones and Wood, 2013; Jones et al., 2016). The starting point was to characterise both the 'locality' and 'city-region' representations of place from academic sources (see Chapter 1 and 5) and examine how both concepts have been presented in narratives describing the Mersey Dee. This was followed by examining how evidence from different data sources supported or contradicted either of these place narratives. These included:

- Analysis of labour market flows from ONS travel to work data maps (drawn by Başak Demireş Özkul).
- MDA, NWEAB, C&WLEP and WG policy documents content about the Mersey Dee's economic relations internally and externally across North Wales and into NW England.
- Observations from 46 Mersey Dee semi-structured firm interviews regarding their horizontal and vertical firm-to-firm and institutional relations both within and beyond the Mersey Dee.
- Observations from institutional interviews and information exchange about institutional relations within and beyond the Mersey Dee and how these impact upon narrative about place.

Second, from within the same place context, to discover the distinctive character and identity, of the Mersey by how it is shaped by its history, geography and institutional

characteristics. This involved a historical analysis of the Mersey Dee, working outwards from its core centres (Jones and Wood, 2013; Jones et al., 2016), informed by data from books, web-based materials, firm and institutional interviews and policy documents (see Figure 4-2).

4.4.4 Investigating the contribution of economic institutions in place

This Section considers methods and evidence collected to address the contribution of economic institutions in the context of the Mersey Dee locally and from a wider regional perspective, encompassing North Wales into NW England.

Governance and economic institutions contributing to the economic development of the Mersey Dee were identified from their relations with and/or membership of the MDA. They encompassed institutions overlapping the MDA area in North Wales and NW England, local authority and other members of the MDA (see Figure 6-2), the WG and more locally based business partnerships.

There were three issues of interest. First, understanding the foundation, structure, the role and resources available to the MDA and how its contribution had evolved, particularly in response to the development of cross-border working between Wales and England. This involved reflecting on the role of the MDA, both locally and in a multi-level context of North Wales and NW England. Interest was in processes to mediate between institutions in the area over policy and practical issues around collaboration. Whilst the MDA crosses the England–Wales border, it was likely that more regional institutions would operate on one side of the border or the other. There was therefore interest on the implications of this for institutional collaboration across Wales into England.

Second, there was interest in the softer factors that contributed to shaping the conduct of institutions in the MDA area. These included the key historical (or path dependent) milestones and what impact they may have had on the evolution of institutions for the area. For example, on attitudes, outlooks, approaches to cooperation, and how decisions were taken. Also, how the concept of trust (Tabellini, 2010) was reflected in relationships across institutions and within the local economy.

Third, consideration was given to how different institutions in and beyond the MDA area worked collaboratively towards realising the potential of the area. These included evidence for constructive place-based behaviours. For example, whether there was evidence that local institutions showed greater knowledge and responsiveness to observed realities compared with national governments and how local institutions showed capacity to exercise joint problem solving and draw in public and private resources (Turok, 2013).

Evidence was identified from different data sources. First, a review was conducted of policy documents and board papers that were important in influencing the Mersey Dee, from across North Wales, the CW&WLEP area and the LCR (see Figure 4-2). These were supplemented by data from organisational websites, press articles, as well as other local and regional documents. Second, a chronological list of institutional events impacting on the Mersey Dee from 1974 until 2019 was drawn up from books, board papers, WG and other institutional documents and newspaper sources (see Figure 6-1).

Third, institutional interviews and conversations were conducted, as listed in Figure 4-3. These were semi-structured to focus on the three areas of interest given above. Interview questions were adapted to the institutional setting of the interviewee. For example, these varied by organisation, sector, geography and historical observation of events and decision-making. The interviewing process began with pilot interviews (shaded in green), all of whom had association with the MDA. The list then spread out to a wider range of institutional perspectives from across the public and private sectors. In addition, there were a small number of contacts that I was able to turn to for further advice and to test propositions coming out of research findings. These involved several conversations (marked as 'various' in Figure 4-3). To provide anonymity, names have been excluded, with just positions at the time of interview listed. However, many of those listed are recognised for their contribution to this research in the Acknowledgements.

Figure 4-2 Mersey Dee: Key local and regional documents

Date	Strategy, policy or plan	From whom	Description
2004	West Cheshire and NE Wales sub-regional strategy	Consultants GVA Grimley for NW Regional Assembly.	Underpinned 2006 NW Cheshire and NE Wales sub-regional strategy.
2006	NW Cheshire and NE Wales sub-regional spatial strategy 2006-2021	MDA	Provided localities case for the Mersey Dee and influenced NE Wales content of 2008 WSP.
2008	Updated Wales Spatial Plan	WG	Presented the Mersey Dee following 'new locality' principles and drawing on 2004 and 2006 sub-regional documents above.
2012	City-regions in Wales: the case for NE Wales/NW Cheshire	NWEF	North Wales case for Mersey Dee to be recognised by the WG as a city-region.
2012	City-regions (in Wales)	Task & Finish Group (T&FG) for WG	T&FG recommend WG recognition of Cardiff and Swansea Bay as basis for new city-regions in Wales, but not the Mersey Dee.
2013	The Dee Region cross-border economy next steps	Report of Chair of T&FG (E. Haywood) to WG Minister.	The WG Minister commissioned the Chair of the T&FG to carry out a review of the Mersey Dee case. Confirmed not a city-region but recommended actions to enhance the MDA's effectiveness. Most not implemented.
2016	Growth Track 360: connected within an hour	MDA, C&WLEP and NWEAB	Case for substantial rail investment in the North Wales and Mersey Dee region to realise its economic potential.
2016	Growth vision for North Wales	NWEAB	Basis of proposal to UK and WG for North Wales growth deal.

Date	Strategy, policy or plan	From whom	Description
2017	Mersey Dee: our unique city-region	MDA	City-regional case for transport and other infrastructure investment in the Mersey Dee.
2017	Strategic economic plan	C&WLEP	C&WLEP economic strategy.
13 July 2017	MDA Business Plan 2017/18	MDA	MDA business objectives.
2018	North Wales Growth Bid	NWEAB	North Wales Growth Deal bid followed by announcement of £240m funding envelope in November 2018 UK budget.
2018	Linking skills and innovation in the regional growth plan	Hinfelaar, M. for North Wales and Mersey Dee skills symposium	Report on skills and innovation, demonstrating regional cross-border university collaboration on graduate destinations and retention.
2019	National Development Framework for Wales 2020 to 2040	WG	Consultation draft 20-year spatial vision for Wales.

Source: Author

Figure 4-3 Institutional interviews and information exchange

INS reference if cited	Position at time of interview	Institution or other organisation	Timing
INS1	Board Member	Cheshire Professionals	27 January 2015
	Area Director – Cheshire and North Wales	Barclay’s Bank	17 February 2015
	Director	Barsby Associates	17 February 2015
	Business Advisor	Business Wales	24 March 2015
INS2	Director of LEP Support Team	C&WLEP	27 August 2013
	Employer Engagement Team	Coleg Cambria	26 November 2015
	Chief Executive	Coleg Cambria	15 April 2015
	Chair	Deeside Business Forum	5 May 2016
INS3	Not known	CTEch	28 August 2013
INS4	Director of Growth and Prosperity	CW&C	27 August 2013
	Head of Housing Services	Denbighshire Council	10 March 2014
	Economic Development Manager	Denbighshire Council	29 August 2013
INS5	Managing Director	drivenbyq	11 November 2014
	Head of Regeneration and Enterprise Manager	Flintshire County Council	29 August 2013
	Consultant	Formerly WDA	10 March 2014
	Senior Development Manager	FSB	16 February 2015
	Chair	North Wales Business Council	Various
INS6	Commercial Manager and Business Incubation Manager	Optic Centre, Wrexham Glyndŵr University	1 October 2014
INS7	Projects Director	Peel Holdings	12 May 2015

INS reference if cited	Position at time of interview	Institution or other organisation	Timing
INS8	Former local MP, Minister at the Welsh Office	President of MDA	12 March 2014
INS8	Director	Sustainable Building Envelope Centre (SBEC)	1 October 2014
	Taith Coordinator	Taith	29 August 2013
	Head of Engagement and Local Growth	University of Chester	Various
INS9	Director of Riverside Innovation Centre	University of Chester	4 September 2013
	Regional Coordinator	Welsh Local Government Association	4 September 2013 and 12 March 2014
INS10	Chief Executive	West Cheshire & North Wales Chamber of Commerce & Industry (WC&NWCCI)	4 September 2013
	Wrexham Industrial Estate Coordinator	Wrexham Council	18 November 2014
INS11	Member and former Chief Executive	Wrexham Council	11 March 2014
	Assets and Business Development Manager	Wrexham Council	11 March 2014
INS12	Vice-Chancellor	Wrexham Glyndŵr University	Various
INS13	Pro-Vice chancellor Research	Wrexham Glyndŵr University	5 September 2013

Note: pilot interviews are marked

Source: Author

4.4.5 Firms and economic place

This Section describes how knowledge about firms situated in the Mersey Dee was investigated regarding their relations with firms and institutions locally and in the wider economy. This drew on the framework described in Chapter 2, depicted by firm models compared by Gordon and McCann (2000) and an approach to build evidence on a firm-by-firm basis described by Markusen (1994), across sectors, sizes of firm and different ownerships. However, as discussed in Section 4.3.2 above, this involved an iterative process, adapting to the local diversity of firm types and observations from data analysis of results. The concern in this research was more to understand *'how the process works'* rather than to find *'common properties'* or *'general patterns'* of the whole 'population' (or all local economies) (Sayer, 1984; 242-243).

The case for such an investigation was reinforced by institutional interviews. At the start of the project, the following two questions were asked of a senior local government officer with a very broad appreciation of the MDA's role:

'What might you find useful from this study? What do you not understand now about the MDA economy that you would like to know?' (Author).

In reply, it was acknowledged that the extent of private sector led interface across the whole sub-region was not fully understood. However, anecdotally from work that had been done, there were relationships between different business sectors. Knowledge gaps identified were about local supply chains and how embedded larger firms were in the local economy. Also, although the MDA talked about strengths in advanced manufacturing, it was not clear to what extent there was a long-term sustainable set of sectors and how far firms were doing their R&D in the area, rather than just production. Finally,

'We do not understand enough about what the barriers are to grow the economy and what we could do here in the MDA to overcome them? This is either through positive or proactive interventions or by removing some of those barriers' (INS4).

A system was followed to identify, approach and interview a selection of firms in the MDA area. As stated above, the Mersey Dee has some 27,000 registered companies. However,

many of these are micro and may be local in their trading activity. Once companies with a turnover of over £1 million are considered, this total reduces to 700 (including retail/foundational firms). With the focus of this study being on the functional and relational importance of place, it was appropriate that interviews were conducted with firms with horizontal and vertical firm-to-firm and institutional relations that were both local to and external from the Mersey Dee. This steered the study towards small to large firms.

Three criteria were used to inform choice of firms to interview. First, to provide a mix of privately-owned companies, who might be indigenous to the area, and MNE firms. Second, that firms were externally focussed beyond the MDA, nationally or even internationally, in some combination of their customer, supplier, other firm and institutional relations, similar to '*exporter*' firms described by Serwicka and Swinney (2016). Third, that firms largely reflected the primary industrial sectors found within the MDA area, including aerospace, automotive, chemicals, engineering, food, nuclear, renewables, financial services, ICT and tourism. Another key sector, retail, was excluded for not being sufficiently externally focussed. Most of the firms had a turnover of over £1 million, however, there was flexibility in this. For example, in the Wirral, which is a relatively small firm economy, this was harder to achieve.

Consideration was given to firm identification and selection from within the criteria set out above. A total of 50 companies were interviewed of which 46 were found to conform to the above criteria and were included in the primary analysis of company results in Chapters 7, 8 and 9. The four remaining firms were micro or small companies that had only limited local relations and on analysis, added no new information. Given that a point of 'saturation' had been reached, they were not included with the core 46 interviews. A further four firms were interviewed for their institutional insights and contributed to that part of the analysis (see Figure 4-3 above). As a result, having gone through all the firm interview transcripts, none of firm interview data was wasted. Overall, conversations were held with 8% of the 700 firms in the area with turnover above £1 million (which includes retail companies excluded from this study). In terms of choice of firm, a randomised approach was not thought to be appropriate or likely to offer any real benefits. This is because there was a limited number of firms that were identified, for example by the WG, as being particularly strategic to the area, as anchor

or regionally important companies. It was also likely that access might not be granted into firms in all cases, which proved to be the case.

Given the chosen firm selection criteria, it was important to identify firms on an informed basis. A start was made by drawing on spreadsheet data based on SIC codes of firms from the ONS Business Register and Employment Survey. However, this was beyond my data skills and was complicated by larger firms not being registered in the area or with multiple entries. A more fruitful approach was to draw on local knowledge of firms held by officers in the five local authorities with responsibility for business support, communications and retention services. The resulting sampling approach was a combination of two methods. First, purposeful sampling, which is a non-probability form of sampling to identify participants in a strategic way, in order to ensure that those firms sampled are relevant to addressing the aim and objectives of the study (Bryman, 2016:408). The other approach, of then following up leads from local authorities and firms, represents a variation of a form of snowballing where:

'...initial contact may be made with a member of the population who will lead the researcher to another member of the population' (May, 2011: 101).

And:

'This process continues until the researcher is satisfied that their data is sufficient for the purpose of the study, or time, possible interviewees and/or resources run out!' (May, 2011: 145).

It is acknowledged that the approach taken may have limitations, such as omitting voices and opinions of those not identified by this process (Ibid, 2011). This in turn could limit the possibility of generalising in relation to the overall population of MDA firms. However, this is balanced by two factors. First, the limited overall size of the population of firms to draw upon, reinforced by the fact that some selected firms chose not to take part. Second, there might be criticism about validity if firms perceived to be of strategic importance to the local economy had not been offered an interview. In addition, as outlined in Section 4.5, a distinctive feature of this approach was to test validity by seeking feedback from interviewed firms and other firms in different audience settings.

A structured process to select, arrange, conduct and transcribe interviews was followed in each of the five local authority areas, as set out in Figure 4-4, working with local authority officers' with knowledge of and responsibilities for business liaison. The MDA secretariat also contributed a valuable role in arranging interviews and maintaining the interview timetable.

The outline of my draft letter sent by the local authority requesting an interview is provided in Figure 4-5 below. This was topped and tailed to reflect who from the local authority was sending the letter and was updated through the process. A semi-structured interview format was used following the questions set out in Figure 4-6 below. This had two advantages. First, it enabled a consistent approach to be taken to each interview covering the same ground in each case, enabling comparison across interviews. Second, it still allowed probing questions where the interviewee raised interesting issues that suggested further elucidation or clarification. As indicated in Appendix 1, interviewees were invited to sign an informed consent form covering ethical issues.

A list of all the interviewees' firms and their roles at time of interview is provided in Figure 4-7, with the core 46 interviewees analysed in Chapters 7, 8 and 9 not marked by asterisk. Names have been excluded to anonymise the data. Figures 4-8 to 4-12 provide summary background on the 46 analysed interviews by local authority area: Denbighshire, Flintshire, Wrexham, CW&C and Wirral. For reasons of confidentiality, the name of the firm and interviewee are not listed in these tables, but instead firms are provided with a code reference. In addition, these Figures summarise the firm's location, industry sector, firm size (large - 250 plus employees, medium - 50 to 249 employees, and small - 10 to 49 employees) and public or private ownership. The Figures also identify a categorisation of the firm used in the analysis of results in Chapters 7, 8 and 9, which distinguishes between evolved, incoming and indigenous firms. A coding sheet for marking and systematically comparing interview results after the interviews were transcribed is given in Appendix 2. Firm interview data was supplemented by a web-based search for local information about each of the firms, including the firms' websites and press coverage and any information published by the WG and other regional institutions.

Figure 4-4 Steps followed for firm interviews in each local authority area

Step	Objective	Who working with	Outcome
1. Prepare firm interview questions	To prepare a set of questions to discover how firm relates to local economy.	Test out with supervisors and other academics in field.	Completed semi-structured questionnaire.
2. Agree firm interview arrangements with local authority	To agree organisational arrangements with local authority.	Local authority MDA strategy group member.	Agreed arrangements for organising interviews in local authority area.
3. Identify potential firm interviews	To draw up a long-list of firms in local authority area meeting selection criteria.	Local authority business liaison officer.	Long list of potential firm interviews in local authority area.
4. Review long-list of firms	To review long list to see if any firms ought to be excluded or any key firms missing from list. Complete short-list.	Local authority business liaison officer.	Complete shortlist of firms to approach for interview.
5. Email letter to shortlisted firms.	To approach shortlisted firms to arrange interview.	Local authority business liaison officer.	Contact made with shortlisted firms.
6. Agree availability for interviews	Provide availability in order for interviews to be arranged.	MDA secretariat.	List of available dates for interview.
7. Follow up emailed letter to arrange interview	To confirm firm willingness to participate and set time/date for interview.	MDA secretariat.	Participation confirmed. Interview arranged.
8. Visit firm to conduct interview	To conduct semi-structured interview with firm.	Interviewed firms.	Conducted interview. Cleared ethics statement and agree recording. Send thank you letter by email.
9. Transcribe interview and code	Transcribe interview from recording Code each interview.		Code interview transcripts ready for analysis and comparison.

Source: Author

Figure 4-5 Letter to firms sent out by local authorities requesting an interview

Mersey Dee Alliance Research

I am writing to request your assistance with a research project supported by the Mersey Dee Alliance (MDA). This is by taking part in a series of interviews of firms in [local authority].

The aim is to improve understanding of the role, identity and performance of the functional economy that stretches from NE Wales across Chester, Ellesmere Port to the Wirral. Taking part will involve an interview of around 45-60 minutes. The research is being undertaken by Paul Hildreth, a researcher from University College London.

I am contacting companies based in [local authority area] to ask if you would be willing to contribute to this important project by taking part in an interview. This will take between 45-60 minutes. The areas that Paul will be covering are:

- Your firm's background to being in [local authority area]?

- The advantages and disadvantages to the firm from being in this location?
- What ways does the firm use the local economy (e.g. employees, supply chains, access to markets and suppliers, local partnerships)?
- Those factors which are important for the development and growth of the company?
- Which ways does the firm connect to the wider UK and global economy (e.g. supply chains, sales, partnerships and collaboration)?
- How might public policy (national and local) contribute to the success of your business or otherwise (e.g. infrastructure and transport investment, innovation, business support, education and skills)?

Any information that you share in the interview will be treated in confidence. However, the results of the study will be presented to the Members and Board of the MDA to help inform policy and will be published. The interviews are being extended across the MDA area in Wales and England. Paul would be very happy to share the overall results with participants in the study.

If you are willing to take part, an appointment will be arranged for the interview.

Yours sincerely,

Source: Author

Figure 4-6 Firm interview questions

1. What is your firm's background to being located in [local authority area]?
 - a. How did the firm come to be set up in [local authority area]? Why this location?
 - b. When? Was it a start-up or did it move to the locality (and if so when and where from)?
 - c. What is the size of the firm? What is its annual turnover?
 - d. Is the company part of a wider group of companies? If so, what role does it play within the group e.g. HQ, branch plant?
2. What are the advantages and disadvantages to the firm from being in this location?
 - a. What are the positive advantages of being here?
 - b. What are the disadvantages?
 - c. Does 'place' have any particular meaning to the company? How would you define it for your company? Could you be anywhere? Or are there reasons why you are here?
 - d. How important is the identity or history of the area to your business?
 - e. How do you fit into the 'local place'?
 - Local connections? Local roots?

- Involved in the local community?
- Firm draws on local specialisms, skills etc?
- Business community?
- Business partnerships?
- What you do fit with local identity?

3. What ways does the firm use the local economy?

- a. Access to supply of suitable employees? How would you rate this area for access to labour?
- b. How important are the relative costs of being here? How would you rate this area in terms of costs (e.g. site/property; employee; transportation)?
- c. How important is access to customers (e.g. North Wales/NW England; rest of UK; overseas (and if so what markets)?
- d. How well connected is the area to your markets? How important is this?
- e. Does the firm have similar specialisms to other locally based companies? If so, does it find that helpful e.g. sharing knowledge or information?
- f. Is the firm (or its directors) active within local business led institutions and networks e.g. Chamber of Commerce; IoD; CBI; MDA innovation network meetings?
- g. How important are local supply chains?

4. What are the factors that you consider are most important for the development and growth of the company?

5. In what ways does the firm connect to the wider UK and global economy:

- a. Through supply chains?
- b. Through sales and markets?
- c. Through collaboration with other companies?
- d. Through the use of Internet and other technology?
- e. The way it approaches innovation?

6. What are the barriers to growth? What stops you doing what you want to do for the growth of the Company?

7. What do you want public policy to do for you?

- a. How has the process of devolution to Wales (in England) affected your business?
- b. What do you think about WG [UK government] policy towards business development etc.?
 - Are there specific policies that you would highlight?
- c. What about UK government policy towards business development?

- d. What about particular areas of Welsh and UK government policy?
- Reduction of ‘business regulation’?
 - Better access to capital investment?
 - Key investments in transport or ICT infrastructure (giving examples of what would be important)
 - Business support services (which ones)?
 - Access to improved skills and education?
- e. Either WG or UK: what would you want policy to do for you?
- f. Does working across different countries affect your Company’s performance?
8. Any other final thoughts on this area as a business location?
- a. Do you see yourselves as a:
- Local company?
 - North Wales [NW England] Company?
 - UK Company?
 - Global Company?

Source: Author

Figure 4-7 Firm interviewees

Firm	Position held at time of interview	Date of interview
A C Refrigeration	Managing Director	16 April 2015
Airbus	Government Affairs Executive	14 September 2014
Airbus*	Head of Manufacturing Engineering	2 February 2016
Altimex	Director	18 March 2015
Anwyl Construction	Director	8 July 2014
Avox	Chief Operating Office	18 November 2014
Ball Packaging	Assistant Plant Manager and Plant Manager	5 September 2014
BASF Coatings	Managing Director	14 September 2014
Bibby Precision Engineering	Accounts Manager	15 April 2015
Brother Industries	Plant Manager	12 November 2014
Cammell Laird	Chief Executive	16 April 2015

Firm	Position held at time of interview	Date of interview
Capenhurst Nuclear	Managing Director	8 January 2015
CAV Aerospace	Distribution Manager	14 September 2014
Chester Zoo	Managing Director	6 February 2015
Clarground	Managing Director	26 March 2015
Defence Electronics and Components Agency*	Support Services Director	2 February 2016
Encirc	Managing Director	6 February 2015
Fineline Printing*	Director	9 July 2014
Fourth Wall Creative	Managing Director	26 March 2015
GrowHow	HR & Public Affairs Director	9 February 2015
Heat Trace	Managing Director	10 February 2014
Hoya	Managing Director	19 November 2014
Ifor Williams	General Manager	9 June 2014
Innospec	Director	18 March 2015
Jones Bros.	Managing Director	10 June 2014
Kelloggs	Plant Director	14 November 2014
Kent Periscopes	General Manager	9 July 2014
Marshall Aviation Services	General Manager	2 October 2014
Mbna	Director of Corporate Affairs	18 March 2015
Microtech	Managing Director	12 November 2014
MPE Interiors	Directors	27 March 2015
MWL	Director	19 November 2014
P&A Group*	Marketing Manager	10 November 2014
PlumbNation*	Managing Director	27 March 2015
Pumptec	Managing Director	17 April 2015

Firm	Position held at time of interview	Date of interview
Remsdaq	Managing Director and HR Manager	30 September 2014
RSK	Associate Director and Sales Consultant	25 March 2015
Ruthin Precast Concrete	Associate Director	8 July 2014
Sharp	General Manager HR and General Affairs	20 November 2014
Shortlist	Managing Director and Director	17 February 2015
Snowdonia Cheese	Managing Director	8 July 2014
Tata Chemicals	Employee Communications, PR & Community Engagement Manager	27 January 2015
Tata Steel	Site Manager	29 September 2014
Thomas Hardie Commercials*	Deeside Depot & Group Marketing Manager	4 September 2014
Toyota	Senior Manager General Affairs	14 September 2014
Toyota	Senior Manager General Affairs	2 February 2016
UCML	Managing Director	19 November 2014
Unilever	Vice President Open Innovation	16 April 2015
UPLEC	Business Development Director	25 August 2015
Vigo IT solutions*	Director	14 April 2014
Village Bakery	Master Baker	13 November 2014
Waterco	Managing Director	11 June 2014
Westbridge	Managing Director	14 September 2014
Wockhardt	Head of Finance	18 November 2014

Note: Names marked * not part of 46 core interviews but contributed by interview or through participation in round-table meetings and views have been considered in the findings.

Source: Author

Figure 4-8 Denbighshire firms analysed

Firm coding	Location	Industry (SIC code*)	Large, medium or small	Ownership	Category
DEN 1	Ruthin	Water projects consultancy (42910*)	Small	Private	Indigenous
DEN 2	Corwen	Manufacture automotive trailers (25990, 28302)	Large ⁵	Private	Indigenous
DEN 3	St Asaph	Precision optical instruments (26701)	Small	Private	Indigenous
DEN 4	Ruthin	Civil engineering (42110, 42130, 42910, 42990)	Large	Private	Indigenous
DEN 5	Ruthin	Concrete manufacturing (23690)	Small	Private	Indigenous
DEN 6	Rhyl	Food manufacturing (10512, 46330)	Medium	Private	Indigenous
DEN 7	Rhyl	Building construction (41100, 41201, 41202)	Medium	Private	Indigenous

Note: * Companies House (2015).

Source: Author

⁵ Second manufacturing site in Deeside, Flintshire.

Figure 4-9 Flintshire firms analysed

Firm coding	Location	Industry (SIC) code	Large, medium or small	Ownership	Category
FLT 1	Deeside	Aerospace manufacture (30300)	Small	Private	Incoming
FLT 2	Deeside	Automotive manufacture (29100)	Large	MNE	Incoming
FLT 3	Deeside	Chemical manufacture (20140)	Medium	MNE	Incoming
FLT 4	Deeside	Metal packaging manufacture (25920)	Medium	MNE ⁶	Incoming
FLT 5	Deeside	Iron and steel manufacture (24100)	Large	MNE	Evolved
FLT 6	Deeside	Electronics manufacture and security services (26512, 80200)	Medium	Private	Indigenous
FLT 7	Hawarden	Aerospace manufacture (30300)	Large	MNE	Evolved
FLT 8	Hawarden	Aerospace manufacture (30300)	Medium	Private ⁷	Evolved
FLT 9	Holywell	Furniture manufacture (31090)	Large	Private	Indigenous

Source: Author

⁶ Company has changed ownership since interview.

⁷ Company plant at Hawarden has ceased trading since interview.

Figure 4-10 Wrexham firms analysed

Firm coding	Location	Industry (SIC code)	Large, medium or small	Ownership	Category
WRE 1	Wrexham Industrial Estates	Fabricated metal manufacture (25990)	Small	Private	Indigenous
WRE 2	Wrexham Industrial Estates	Office equipment manufacture (28230)	Medium	MNE	Incoming
WRE 3	Wrexham Industrial Estates	Food manufacture (10710)	Large	Private	Indigenous
WRE 4	Wrexham Industrial Estates	Food manufacture (10.6, 10.7) ⁸	Large	MNE	Incoming
WRE 5	Wrexham Industrial Estates	Electronic testing manufacture (26511, 61900)	Small	Private	Indigenous
WRE 6	Wrexham Industrial Estates	Pharmaceutical manufacture (21200)	Large	MNE	Evolved
WRE 7	Wrexham Industrial Estates	Data processing (63110)	Large	Private ⁹	Indigenous
WRE 8	Wrexham Industrial Estates	Electrical installation (43210)	Small	Private	Indigenous
WRE 9	Wrexham Industrial Estates	Optical lens manufacture (32990)	Large	MNE	Incoming
WRE 10	Wrexham Industrial Estates	Information technology consultancy (62012, 62020, 62030, 62090)	Small	Private	Indigenous
WRE 11	Wrexham Industrial Estates	Electrical manufacture (3290)	Large	MNE	Incoming

Source: Author

⁸ Company is registered at Manchester office.

⁹ Has become publicly owned subsequently closed as functions have been transferred abroad since interview.

Figure 4-11 Cheshire West & Chester firms analysed

Firm coding	Location	Industry (SIC code)	Large, medium or small	Ownership	Category
CHE 1	Northwich	Chemicals manufacture (20130, 20590)	Large	MNE	Evolved
CHE 2	Ellesmere Port	Nuclear fuel processing (24460)	Medium ¹⁰	Government owned	Evolved
CHE 3	Ellesmere Port	Bottle manufacturer and recycling (32990)	Large	MNE	Incoming
CHE 4	Chester	Zoological Gardens	Large	Charity	Indigenous
CHE 5	Ellesmere Port	Fertiliser manufacturer (20150)	Large	MNE	Evolved
CHE 6	Helsby	Electrical cable manufacture (27320)	Medium	Private	Indigenous
CHE 7	Near Chester	IT employment consultancy (78109)	Small	Private	Indigenous
CHE 8	Ellesmere Port	Chemical manufacturer (20130)	Large	MNE	Evolved
CHE 9	Near Chester	Electronic components manufacturer (26110)	Small	Private	Indigenous
CHE 10	Chester	Financial services (64999)	Large	MNE	Incoming
CHE 11	Helsby	Environmental consultancy (70100)	Large	Private	Indigenous

Source: Author

¹⁰ Medium for interviewed firm, but large if included employment of holding company on site.

Figure 4-12 Wirral firms analysed

Firm coding	Location	Industry (SIC coding)	Large, medium, small	Ownership	Category
WIR 1	Birkenhead	Creative designs manufacture (82990)	Small	Private	Indigenous
WIR 2	Birkenhead	Specialised cleaning services (81100, 81210, 89222)	Small	Private	Indigenous
WIR 3	Birkenhead	Ship repair and outfitting (33150)	Small	Private	Indigenous
WIR 4	Bebington	Specialised machinery manufacturing (28990)	Small	Private	Indigenous
WIR 5	Birkenhead	Refrigeration equipment services (46680, 47990)	Small	Private	Indigenous
WIR 6	Birkenhead	Ship manufacture and repairs (3731)	Large	Private	Evolved
WIR 7	Port Sunlight	Soap and detergent manufacturer/R&D (20411)	Large	MNE	Evolved
WIR 8	Bebington	Machinery repairs (7623)	Small	Private	Indigenous

Source: Author

4.5 Reflexivity

Bryman (2016: 388) argues that *'social researchers should be reflective about the implications of their methods, values, biases and decisions for the knowledge of the social world that they generate'*. Reflexivity thus involves considering the researcher's own beliefs, judgements and practices during the research process and considering how these may have helped influence the research. It has relevance, as in my case, when the researcher's positionality in gathering knowledge is interpretist, where my understanding of the world is open to interpretation with individuals experiencing and constructing knowledge differently (see Section 4.2.3). Reflexivity occurs when the researcher understands connections between the researcher and the study by reflecting on their personal experiences and how these may shape their interpretation of results. It draws on experiences with the research problem and its spatial setting. Also, particularly, with those studied, given that in interpretist research the

researcher is typically engaged in a sustained and intensive experience with participants (Bryman, 2016: 388; Cresswell and Cresswell, 2016).

I came to the Mersey Dee case study, to build on what I had observed and reflected on at a national level, from working in the UK government (Hildreth, 2007, 2009, 2011; Hildreth and Bailey, 2013, 2014). I was aware that I had already developed insights about the area. In 2009, I wrote the LCR case study for a study of northern England City-regions commissioned by the former Northern Way (Centre for Cities et al., 2009a, b). *'City Relationships'* examined economic relationships between people and firms within the five largest City-regions in the North – Leeds, Liverpool, Manchester, Newcastle and Sheffield. Then, Chester was identified within the LCR. The Director of Regeneration for CW&C and the then MDA's lead officer were jointly interviewed for this project. Subsequently, in 2012, the MDA responded to a call for evidence by the WG's City-region's Task and Finish Group (T&FG) (WG, 2012), examining the appropriateness of a city-regional approach for delivering economic benefits to Wales. I was invited by the MDA to coordinate a response from the NWEAB's predecessor, the North Wales Economic Forum (NWEF) (NWEF, 2012) on why Mersey Dee should be designated as a city-region.

In choosing the Mersey Dee, I recognised that there were both advantages and disadvantages that impacted on my situation as a researcher. The primary advantage related to the need to engage in a sustained and intensive experience with the case study area and its participants. Building a relationship with a local economy area with no prior relations is challenging. Achieving open access to firms and institutions requires establishing trust, for which a vital prerequisite is a relationship of inter-social relations (Sayer, 1979). It was invaluable for the conduct of research that such a position had already been established. I was able to develop good working relations with the MDA Board and with other key stakeholders from across the then five local authorities. As the MDA saw value in my research, they offered practical support in booking interview appointments with companies and institutional stakeholders and received progress reports to the MDA Board. I was able to observe deliberations of the MDA Board and was given open access to Board papers.

The disadvantage was the risk of institutional capture, from being influenced in my interpretation of results by the policy agenda of the MDA and other local and regional

institutions. First, I was very aware that this could be a problem. Given my prior experience of working in local and national government, it was something that I was sensitive to. Second, consequently, I reached a clear understanding with the MDA at the start of the project that my research and its findings would be fully independent and that they would be rooted within a theoretical context. Third, it influenced the design of the project by putting the firm interviews at the centre of my results, as described in Chapters 7, 8 and 9. Compared with my knowledge of working in and with institutions, I had less experience of interviewing firms. What I would learn would be, for me, new knowledge that would give me fresh insights into the place debate. I could approach them with an open mind, whilst being aware of the possibilities of being told what the interviewee thought I might want to hear or representing a particular agenda.

To enable '*an active process of self-reflection*' (Cochrane, 1998: 130), I sought to continually test interviewee and other research data in interactive ways. These included: seeking feedback from interviewed firms; giving presentations to different institutional audiences in the MDA area and answering questions; presenting reports and evidence to the MDA Board and to local authority committees; holding small roundtable discussions with companies in the area about the results; participant observation by contributing to an MDA skills focus group and giving evidence to a WG review of funded research and Innovation in Wales. A list of presentations and other events to share progress and results of research is provided in Figure 4-13.

Figure 4-13 Sharing and testing research results

Event and location	Date	Title	Format
MDA Board University of Chester	11 July 2013	The potential of medium-sized and smaller cities and their surrounding functional areas – the case of the MDA.	Report Presentation
MDA Board Llay industrial estate, Wrexham	27 November 2013	The potential of medium-sized and smaller cities and their surrounding functional areas – the case of the MDA: update.	Presentation
Flintshire Business Week Ewloe, Flintshire	7 October 2014	Strategic economic development for the MDA.	Presentation
Denbighshire County Council, Economic and Community Ambition Board Ruthin, Denbighshire	11 November 2014	To provide feedback on results from Denbighshire firms.	Report Presentation
MDA Board Glyndŵr University, Wrexham	25 March 2015	Progress on doctoral research.	Presentation
DCLG, London	11 November 2015	Firms and location: reflections from companies in the MDA area.	Presentation Post-presentation report
Deeside Enterprise Zone Board Deeside Industrial Estate, Flintshire	11 December 2015	Summary of results from Flintshire firm interviews.	Report Oral presentation
Roundtable meeting with Flintshire firms Coleg Cambria, Connah's Quay, Flintshire	2 February 2016	Roundtable discussion of results from Flintshire firm interviews.	Report Roundtable discussion

Event and location	Date	Title	Format
MDA Board Chester Zoo, Chester	24 March 2016	Progress on study on MDA economy.	Report
Wrexham Professionals Ramada Plaza Hotel, Wrexham	12 May 2016	Wrexham, NE Wales. Northern Powerhouse and beyond.	Presentation
Wrexham Council Employment, Business & Investment Committee Wrexham	24 May 2016	Summary of findings from Wrexham firms for consultation.	Report Presentation Question and answer scrutiny discussion.
Flintshire Business Week Soughton Hall, Flintshire	29 September 2016	Studying firms, understanding the MDA: part one – advanced manufacturing.	Presentation
WC&NWCCI Chief Executives' lunch St David's Hotel, Ewloe, Flintshire	13 October 2016	Studying firms, understanding the MDA: part one – advanced manufacturing.	Presentation
MDA Board, Airbus, Broughton	21 November 2016	MDA labour market.	Presentation on behalf of Başak Demires Özkul and author, based on a longer presentation to the Regional Studies Association Winter Conference on 24 November 2016.
Regional Studies Association Winter Conference, London	24 November 2016	Place, economy and manufacturing in the city and the region.	Joint presentation with Professor David Bailey comparing manufacturing in the Mersey Dee and West Midlands.

Event and location	Date	Title	Format
Evidence for review of government funded research and innovation in Wales (Reid Review)	15 June 2017	Studying firms, understanding the Mersey Dee economy: advanced manufacturing.	Presentation at request of Review to evidence gathering session at WG offices in London.
MDA Board, Cambria Business School, Northrop	23 November 2017	Mersey Dee economic research project: building on Wrexham research study.	Shared presentation with Rebecca Lowry from Wrexham Council on impact of Wrexham case study on council economic development policy. (See Chapter 9).

Source: Author

Two illustrations are provided where my findings were triangulated with firms and institutions. First, by invitation, a short report was presented to the Deeside Enterprise Zone Board on 11 December 2015 on Flintshire firm interview results (Hildreth, 2015). This was followed-up by an afternoon's roundtable discussion with three Deeside based MNEs and Flintshire County Council (Flintshire Council) officers, to discuss the report's findings in more depth. The second opportunity arose through a request to present to and discuss Wrexham firm results with the Wrexham Council Employment, Business and Investment Committee, as part of their local economy scrutiny review (Wrexham Council, 2015). In response, I prepared a five-page summary paper that was sent to Wrexham interviewed firms for feedback. Of 12 firms (11 in the core group), eight replied providing constructive and supportive feedback of the findings and key messages. The report (Hildreth, 24 May 2016; WCBC, 24 May 2016) made five policy recommendations to Wrexham Council, as summarised in Figure 4-14. These were subsequently adopted by the Council, as reported to the MDA Board on 23 November 2017 in shared presentations, with Wrexham Council (Lowry, 2017; Hildreth, 2017). The Minute of the Wrexham Committee dated 7 September 2016 Board stated:

'This work was not commissioned or supported by the Council but provides an independent perspective on the local context within which businesses are operating. The interviews that he (Mr Hildreth) conducted with Wrexham companies and what they told him not only helped us understand business needs in Wrexham but also the wider Mersey Dee cross-border economy' (Wrexham Council, 7 September 2016).

Figure 4-14 The key messages to Wrexham Council

1. Appreciate that Wrexham's success is because it is well linked locally and to markets and how it has invested in physical and connectivity infrastructure but needs to build on that investment to respond to changing market conditions.
2. The provision of vocational and technical skills is critical for the future of the Wrexham economy. It is vital to work strategically with Coleg Cambria and Glyndŵr University on present and future skills needs of the area.
3. Be aware of the challenges faced by MNE companies in the area and embrace the strategic importance of growing indigenous companies for the future development of the local economy.
4. Recognise that offering a 'single point of contact' for businesses is more important than business service provision.
5. Tackle inconsistency of high-speed Broadband provision in the area.

Source: Author

In summary, I was conscious that *'each locality brings to that situation its own specific history and its own character'*, whilst being *'imbued in wider social structures'* (Massey, 1984: 8, cited in Cochrane, 1998: 2131). In interviewing, I sought to be sensitive to the particular local circumstances, whilst remembering the wider context within which the Mersey Dee operates. As a result, I gave local interviewees a full opportunity to speak for themselves, whilst keeping a critical distance (Cochrane, 1998).

Chapter 5 Understanding the Mersey Dee as a place and an economy

5.1 Introduction

This Chapter describes the Mersey Dee as both a place and an economy. It examines the area by how people live their lives and firms conduct their business. This acknowledges that places are not islands but relate to other places through the flows and interactions of people and firms (Hildreth, 2006, 2007; Jones and Woods, 2013; Jones et al, 2016). These might include movements from home to work, home to shop, home to home in housing moves, home to cultural entertainment, as well as how firms relate to their customers and suppliers (Harding, et al., 2006; HMT et al., 2006). At the same time, places provide their distinctive identity and character shaped by history, geographical and social settings and institutional characteristics (Hildreth, 2007; Jones and Wood, 2013; Hildreth and Bailey, 2014).

This approach is consistent with two contrasting representations of place and economy used to describe the Mersey Dee and areas overlapping with it; as a *'locality'* (Jones et al., 2016; Mann and Plows, 2016) and as a *'city-region'* (MDA, 2017). The city-region and localities concepts have been owned by the MDA at different stages in its history; the former during its formative years and the latter since 2012, reflecting the dominant narrative in UK sub-national economic policy about cities and agglomeration (Section 1.4). The city-region case emphasises the Mersey Dee's labour market self-containment, economic scale and competitiveness and the urban dimension to its character (Section 3.3):

'Think 'UK Cities', and places like Edinburgh and Bristol come to mind, yet they're only marginally larger than the Mersey Dee' (MDA, 2017: 5).

The locality case is presented in a study of *'new localities'* in Wales that draws on *'an examination of the geographies of flows that produce and reproduce the various territorial shapes of contemporary Wales'* ((Jones et al., 2016: 6). It centres on three related ways of representing localities as objects for research. First, as *'absolute space'* – bounded areas, such as local authorities, recognised politically and administratively for the delivery of public services. Second, as *'relative space'*, identified by their cores and not their boundaries and not being necessarily consistent with formal administrative geographies:

'In this perspective, the boundaries of localities are relative, fuzzy and sometimes indeterminate, contingent on the processes and phenomena being observed and shaped by dynamics within, outside and between localities'
(Jones and Wood, 2013: 35).

Third, as *'relational space'* – nodes within wider networks connected by *'spaces of flows'*. Each of these captures a different expression of the multifaceted and multi-dimensional features that are uniquely configured in a given locality. A functioning locality is required to have both: a) *'material coherence'* – having institutional structures that hold locality together and provide vehicles for collective action; and b) *'imagined coherence'* – in which locality residents share a sense of identity with the place and each other, leading to shared patterns of behaviour and geographical reference points (Jones and Wood, 2013: 35-36). Following this framework, Jones et al, (2016) approached their study of localities in Wales from identifying the core – cities, towns or other geographical areas – and worked outwards to build an understanding of coherence as a locality. It adopted an approach towards interpreting the Mersey Dee consistent to the WSP (WG, 2008).

The objective of this Chapter is to draw on these two representations to interpret the Mersey Dee as a place and an economy. In light of the distinction between rhetoric, policy and base in the narrative of sub-national economic policy (Section 1.4), that difference might lie in presentation as well as substance. In other words, the dominant urban narrative has influenced the MDA to present a city-region case to regional and national audiences.

The next section outlines the Mersey Dee's spatial and economic character. The tracing of the historical evolution of the area follows, centred on, as suggested by a localities approach, the Mersey Dee's five core residential and employment centres: Chester, Wrexham, Deeside, Ellesmere Port and Birkenhead (see Figure 5-1). A review of the Mersey Dee's spatial character and history is given in the light of the city-region and locality approaches. Finally, concluding observations follow that illustrate how understanding the Mersey Dee as a place and an economy may have affected the shaping of institutional governance of the area, as considered further in Chapter 6.

Figure 5-1 The Mersey Dee (including Denbighshire) and core urban centres



Source: This image is reproduced with the permission of the Mersey Dee Alliance (MDA)

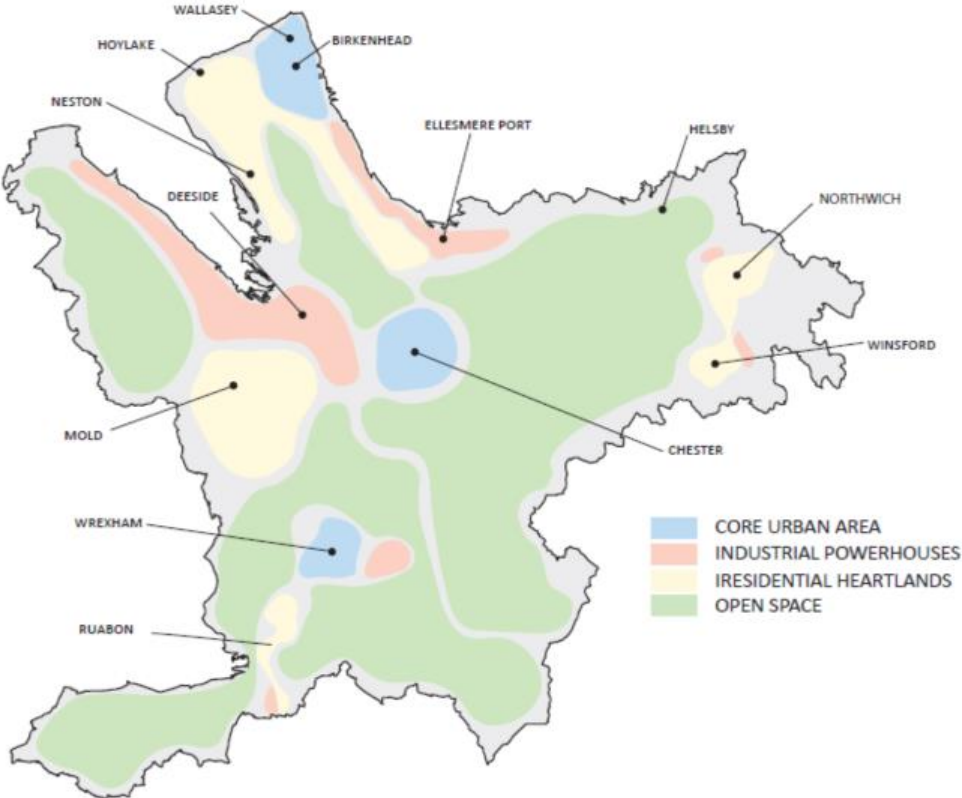
5.2 The Mersey Dee spatial economy

5.2.1 The spatial character of the Mersey Dee

This section introduces the spatial character of the Mersey Dee and its economy. Overall, the area offers a distinctive spread of urban, industrial, residential and rural spaces (MDA, 2017) (see Figure 5-2) that the MDA summarise as having:

'Space to grow and space to live. Our area includes some of the most diverse and impressive geography in the UK – where coast meets the hills and mountains – alongside unique assets like Pontcysyllte Aqueduct and Chester's City Walls which add profile and placemaking values that businesses can connect with' (MDA, 2017: 4).

Figure 5-2 Mix of urban, industrial and rural character of the Mersey Dee (excludes Denbighshire)



Source: Source: MDA, 2017: 4. This image is reproduced with the permission of the MDA

The primary urban centres of Chester, Wrexham and Birkenhead, Ellesmere Port and Deeside are both residential and industrial locations, which with the Wrexham Industrial Estates provide strategic concentrations of industry. Collectively, Chester, Wrexham, Deeside, Ellesmere Port and Birkenhead account for almost 40% of the area’s population of 946,000. There are smaller, more residential towns such as Denbigh, Ruthin, Rhyl, Ruabon, Buckley and Mold in NE Wales; Helsby, Northwich and Winsford in CW&C and Hoylake and Heston in the Wirral. Beyond the urban and industrial centres and towns, much of the space is largely rural in character (Figure 5-3).

Figure 5-3 Rural Ruthin and the Vale of Clwyd



Source: Author

Chester is the single recognisable city in the Mersey Dee. It (Figure 5-4) might be described as a regional services city; a city that has historically grown through supplying employment and retail and other services to its surrounding area (Hildreth, 2006). Given its attractive historic centre, with intact city walls, roman heritage, a medieval core, cathedral and zoo, Chester is a visitor destination of national importance. Nevertheless, with a Primary Urban Area (PUA) population of around 120,000, it was too small to be included in the UK government's State of the English Cities report (Parkinson et al., 2006) and the Centre for Cities data set of UK cities, where the lower PUA population cut off point has been 150,000 (Centre for Cities, 2017).

Figure 5-4 Urban, the City of Chester



Source: Author

Wrexham is the largest town in North Wales, with a population of around 62,000. Along with Deeside (population 54,000), it has contributed to the NE Wales economy, through large industrial estates. Ellesmere Port, with a population of around 56,000 is an important economic centre in the local authority area of CW&C. Birkenhead, in the Wirral forms part of the LCR, looking across the River Mersey to Liverpool. It is not only a residential centre, with a population of around 89,000, but has a distinctive economic role associated with the history of the Cammell Laird shipyard. Industry extends southwards along the waterfront into the contiguous urban settlements of Bebington and Port Sunlight, home of Unilever. Denbighshire, by contrast, is largely rural in character with areas of outstanding natural beauty in the Vale of Clwyd and Clwydian Range of hills. Inland it has the historic towns of Denbigh, with a castle build by Edward I, and Ruthin. St Asaph was awarded city status in 2012 but only has a population of 3,355. On the coast are the seaside towns of Rhyl and Prestatyn, both of which represent significant regeneration challenges.

5.2.2 A functional representation of the Mersey Dee

Later discussion about the Mersey Dee as a city-region or locality, will focus on the area as a common labour market area. However, as illustrated in Figure 5-5, based on Office for National Statistics (ONS) travel to work area (TTWA) criteria of at least 75% self-containment by residents working and workers living in the area, the Mersey Dee comes within four neighbouring TTWA. These are within Figure 5.5, titled by ONS as Chester (with the south of Flintshire), Wrexham, Birkenhead and Rhyl (covering Denbighshire and north of Flintshire).

Figure 5-5 Travel to work areas in the Mersey Dee, 2011



Source: Based on ONS 2011 travel to work data. Drawn by Başak Demireş Özkul

ONS identified that in the UK between 2001 and 2011, travel to work journeys over 10 kilometres long increased significantly, whilst shorter journeys below 10 kilometres reduced. These shifts largely reflected differences in commuting behaviour between higher qualified/educated/skilled workers, travelling longer distances, and lower qualified/educated/skilled workers travelling shorter distances (ONS, 2015). This is relevant to the different conurbations.

Back in 2001, the TTWA boundaries for the same geography grouped around four TTWAs were titled: Chester & Flint; Wirral & Ellesmere Port, Wrexham & Whitchurch and Rhyl & Denbigh. There were significant changes within and across these between 2001 and 2011. Chester's TTWA expanded to the north, south, east and west. Notable changes included the opening of a new corridor down the mainly dual carriageway A483 from Chester past Wrexham towards Shrewsbury. Chester merged with Ellesmere Port in the same TTWA. At the same time, TTWA areas for Birkenhead and Wrexham contracted. Part of the explanation for these changes might lie in the relative distribution of qualified/skilled/educated jobs around the area.

Figure 5-6 maps commuting flows in the Mersey Dee in the setting of NE Wales and NW England. It suggests a functionally connected economy, with labour market flows joining-up across the area to create polycentric qualities. However, the concept of polycentricity is challenging with different meanings over variable spatial scales from: a) inter-urban – a polycentric urban region characterised by decentralisation from networks of larger to smaller cities; b) inter-regional – as reflected in the European Spatial Development Perspective (ESDP) to disperse economic activity from concentrated urban regions; and c) intra-urban – the outward diffusion of cities to smaller settlements within their own local spheres of influence (Davoudi, 2003; Hall and Pain, 2006; Hall and Tewdwr-Jones, 2011; Rauhut, 2017).

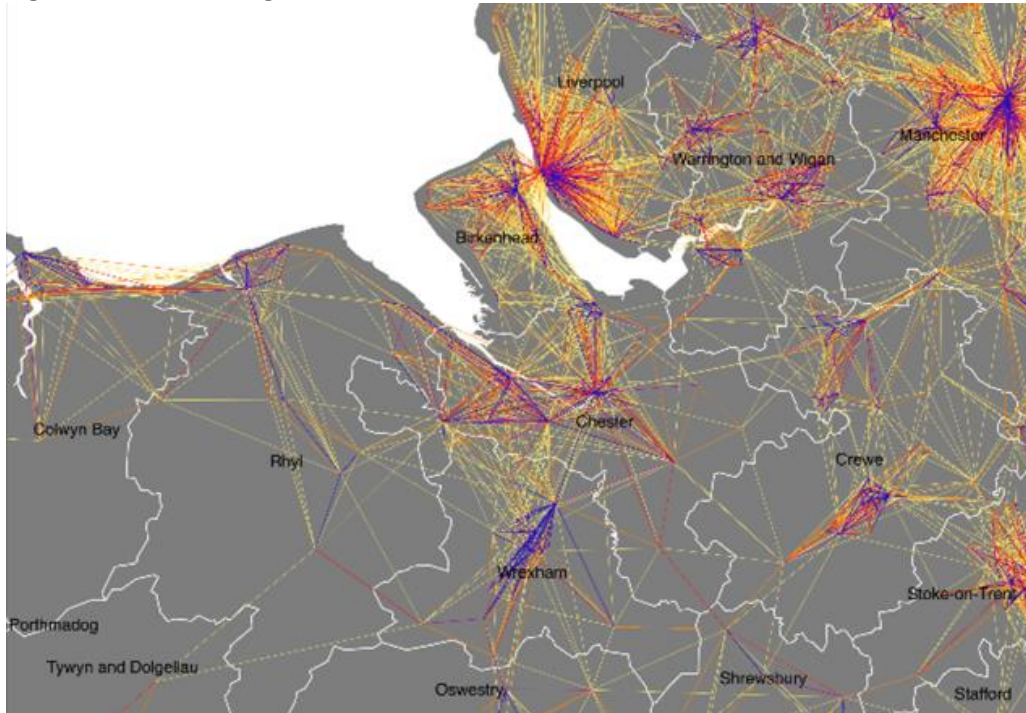
For a polycentric pattern of development, the Mersey Dee is unusual by having only one small city and a rural character and limited functional linkages into a larger city, such as its neighbour Liverpool. The area is also different with its concentration of manufacturing employment located primarily on large industrial estates rather than urban centred employment, outside of Chester and Birkenhead. As a result, much of its employment is neither urban in character, nor having been dispersed from urban areas. Labour market connections between Chester and Deeside and Ellesmere Port are particularly strong with Wrexham also linked by travel to work movements into the rest of the Mersey Dee. Wrexham also forms a more localised labour market. The diagram further identifies a nodal role for Birkenhead within the Wirral.

The combination of these factors has resulted in 'functional polycentricity' – from the spatial organisation of firms, as much as 'morphological polycentricity' – from the distribution of

urban settlements of different sizes (Hall and Pain, 2006). Thus, as illustrated in Figure 5-6, the Mersey Dee most closely fits the description of an inter-urban model of distributed patterns of employment, with *'the tendency of economic activity to cluster in several interacting centres'* (Davoudi, 2003: 982; Özkul and Hildreth, 2016). This is where its mix of manufacturing and services industry has been shaped from its own distinctive and complementary industrial settlement history between villages, towns, a city and large industrial estates, as described in Section 5.3. This functional connectivity of the area was underpinned by interviewee observation that *'the location is very good, because within one hour's drive time you have got everything really'* (INS5). And, also, as another interviewee observed about the Mersey Dee: *'it does make sense in context of being a geographical area'* because *'it is organic and is happening anyway'* (INS3).

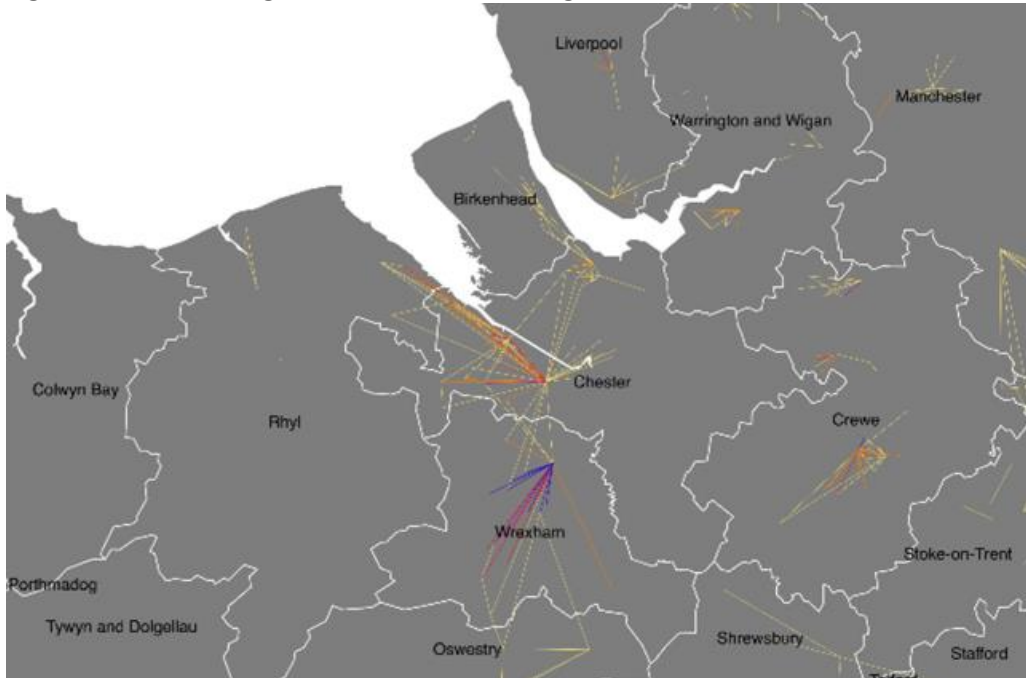
Figures 5-6 to 5-8 show sub-sets of overall TTWA movements. Figure 5-7 illustrates TTWA movements for manufacturing. Of interest is the relative distance of journeys between Flintshire, Chester and Ellesmere Port, across the English-Welsh border. This compares with the more localised travel to work journeys within the manufacturing sector around Wrexham, re-confirming the picture illustrated by Figure 5-6. Figure 5-8 shows a subset of TTWA movements that apply to finance and insurance. These show the relative significance of Chester compared with other centres within the Mersey Dee in this sector. Wrexham does have an emerging finance sector, but the current scale of movements is too small to show up on the map.

Figure 5-6 Commuting flows for all industries



Source: Drawn by Başak Demireş Özkul, based on ONS 2011 travel to work areas and daily commuting flows (All industries)

Figure 5-7 Commuting flows for manufacturing



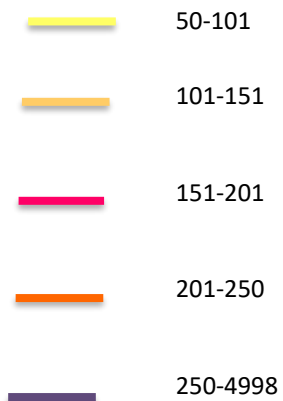
Source: Drawn by Başak Demireş Özkul, based on ONS 2011 travel to work data travel to work areas and daily commuting flows (manufacturing industries)

Figure 5-8 Commuting flows for finance and insurance industries



Source: Drawn by Başak Demireş Özkul, based on ONS 2011 travel to work data travel to work areas and daily commuting flows (finance and insurance industries)

Legend for Figures 5-6 to 5-8, with numbers for daily community flows



5.2.3 Sectors, employment and skills in the Mersey Dee

The Mersey Dee is distinguished by its high share of manufacturing employment; Chester and Wrexham TTWAs are almost twice the England and Wales average of 10%. At the same time, the area provides a strong combination of finance and manufacturing employment, but with finance and manufacturing employment being found in different locations. Growth sectors for the Mersey Dee (see Figure 5-9) are complementary to those identified by the NWEAB (for North Wales) and the C&WLEP (for CW&C and Chester, Cheshire East and Warrington local authority areas).

Figure 5-9 Priority growth sectors in the Mersey Dee, North Wales and Cheshire & Warrington LEP

C&WLEP Key Growth Sectors	North Wales Employment and Skills Plan - Priority Areas	MDA
<i>Logistics and Distribution</i>		
	<i>Construction</i>	
	<i>Tourism and Hospitality</i>	<i>Tourism and Retail</i>
<i>Digital</i>	<i>Creative and Digital</i>	<i>ICT</i>
	<i>Food and Drink</i>	<i>Food</i>
<i>Financial & Professional Services</i>	<i>Finance & Professional Services</i>	<i>Financial & Professional Services</i>
<i>Chemicals</i>		<i>Pharmaceuticals and Chemicals</i>
		<i>Aerospace</i>
<i>Manufacturing</i>	<i>Advanced Manufacturing</i>	<i>Automotive and Engineering</i>
<i>Life Sciences</i>	<i>Health and Social Care</i>	
<i>Energy and Environment</i>	<i>Energy</i>	<i>Energy (including nuclear/renewables)</i>

Source: Hinfelaar, 2018

For labour market qualifications, Figure 5-10 shows TTWAs above and below average for no to Level 1 qualifications and for Level 4 qualifications. Both Wrexham and Rhyl (along with Liverpool, Warrington and Wigan) have above 40% of people employed with no or Level 1 qualifications. By comparison, Chester and Birkenhead (along with Crewe and Manchester) have below average percentages at Level 1. The highest concentration of Level 4 qualifications is in Chester (and Crewe). In Wrexham, Birkenhead and Rhyl (together with

Liverpool and Manchester) the proportions with Level 4 are below the national average. Based on the earlier cited ONS evidence that longer distances are travelled by higher qualified/educated/skilled workers compared with lower qualified/educated/skilled workers, the picture described above is complementary to that which emerges from Figures 5-6 to 5-8, suggesting that Chester TTWA is a more highly qualified labour market than Wrexham TTWA, within the Mersey Dee.

This section has shown how the Mersey Dee is functionally connected, with a diverse mix of industrial sectors combining strengths in services and manufacturing. But also, within the area, there are places with more localised economies, such as Wrexham. The next section builds on this picture by describing the historical development of core centres of the Mersey Dee and how this might have contributed to shaping the identity, place and economy of the area as it is today.

Figure 5-10 Proportion of labour force with no or Level 1 qualifications

Source: Drawn by Başak Demireş Özkul, based on ONS 2011 travel to work data

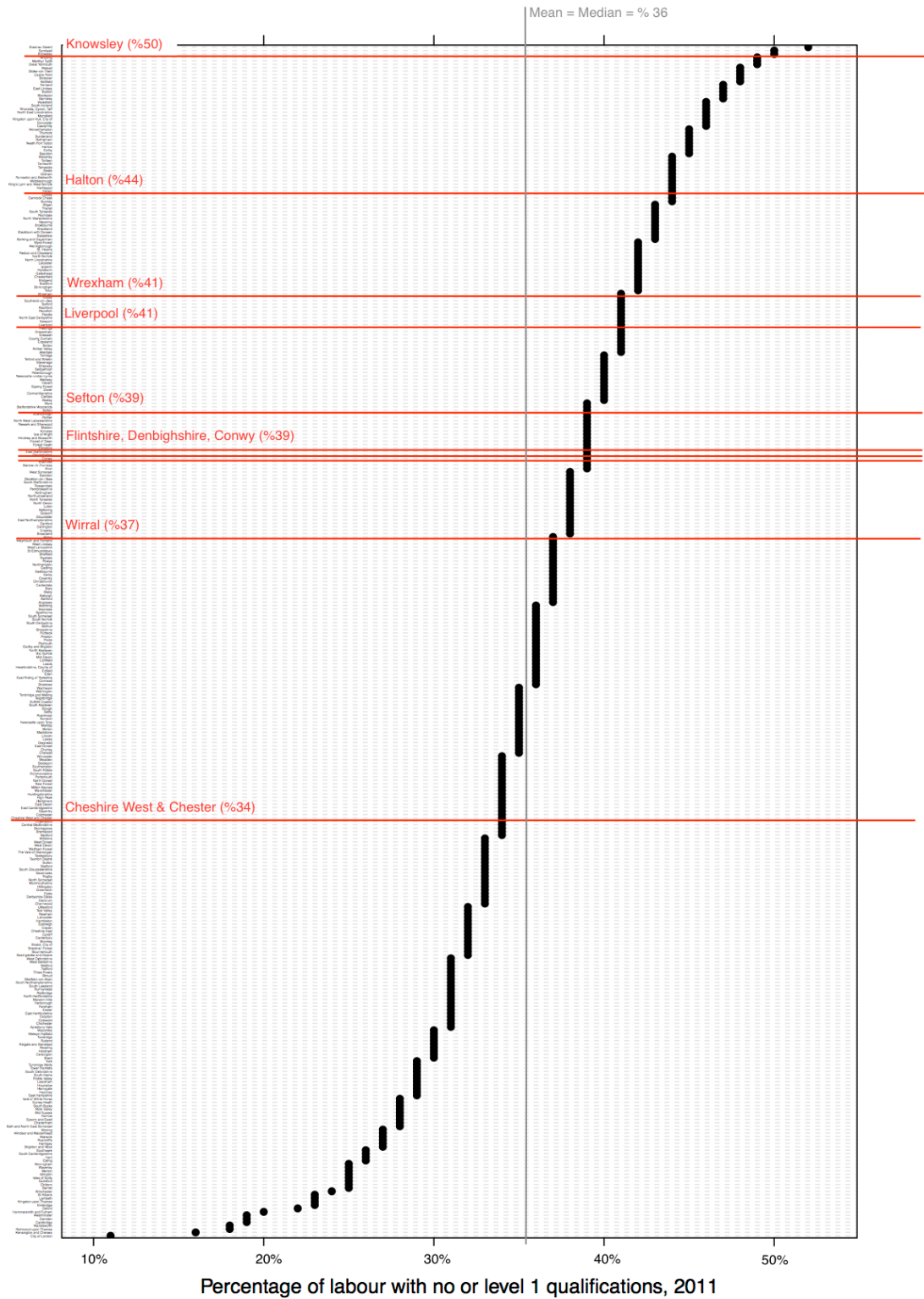
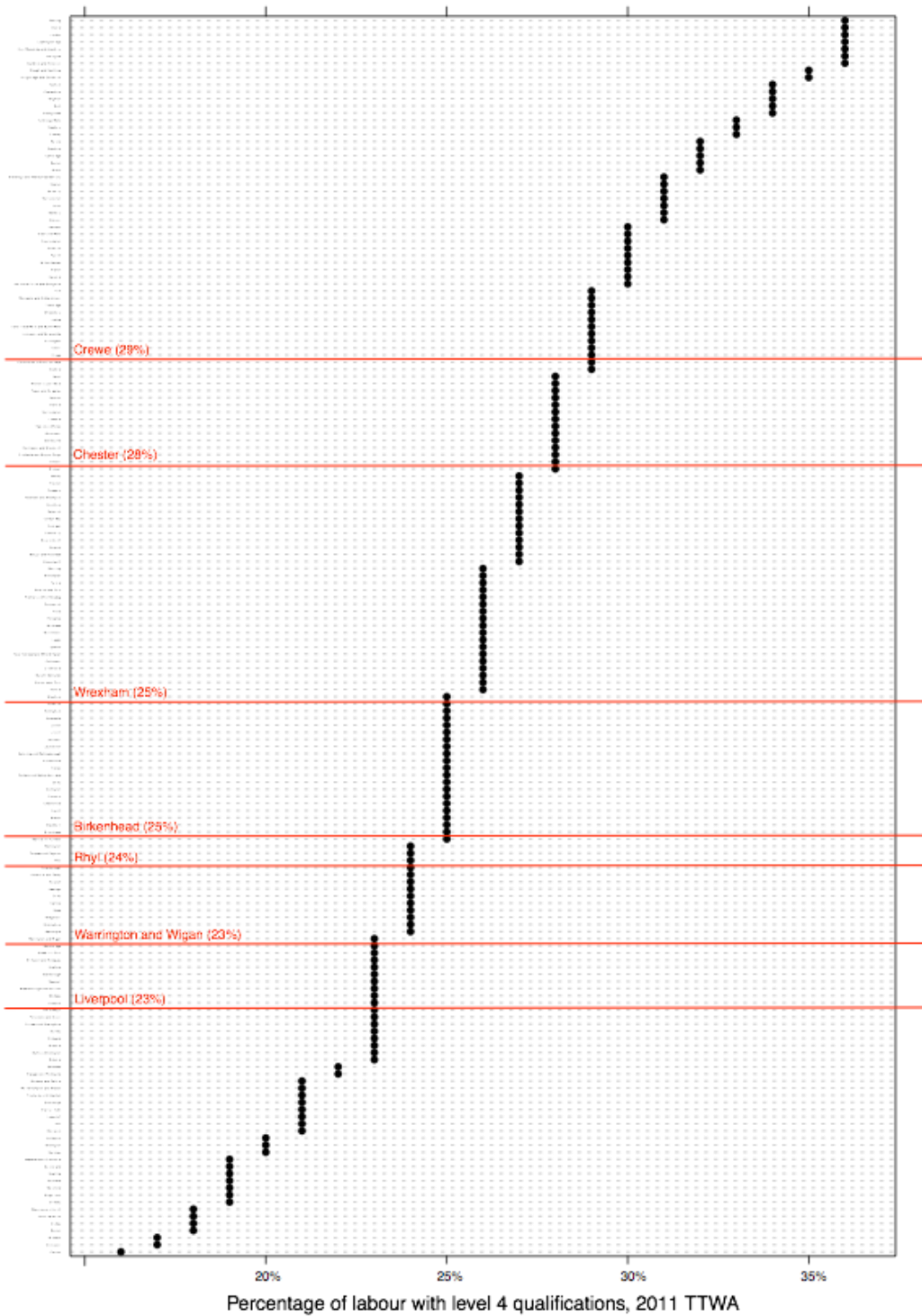


Figure 5-11 Proportion of labour force with Level 4 qualifications

Source: Drawn by Başak Demireş Özkul, based on ONS 2011 travel to work data



5.3 History of Mersey Dee as a place and an economy

5.3.1 Introduction: three time periods

This historical review of the Mersey Dee follows a new localities methodology that:

'...leads us to start by Identifying localities by their cores – whether these be towns or cities or geographical areas – rather than as bounded territories and working outwards to establish an understanding of their coherences' (Jones et al.,2016: 8).

Consistent with this approach, analysis starts from the five core centres of the Mersey Dee: Chester, Wrexham, Deeside, Ellesmere Port and Birkenhead. In addition, the present-day economy of the area, its development priorities (see Chapter 6) and its functional inter-relationships have been shaped through the historical development of these five centres. Their history is reviewed in relation to three broad time-periods that in particular ways contribute to understanding the Mersey Dee story: pre-industrial revolution (Roman Britain to end of the 17th century); 18th and 19th century; and 20th century until today. A summary of key milestones for each period and their legacy implications for today is provided in Figure 5-12.

5.3.2 Pre-industrial revolution period

Understanding the pre-industrial revolution period reveals how Chester developed to gain its modern-day role and identity. Chester was founded by the Romans in AD 70, leaving the large Roman amphitheatre and City walls foundations as a reminder of their presence. Chester went into decline after the collapse of the Roman Empire. Its recovery began in the Saxon period, resulting in the central street plan that exists today. The city expanded through and beyond the middle ages, with occasional setbacks along the way.

However, the built legacy of the city underpins its attractiveness as a visitor destination. This includes the castle, an abbey (later the cathedral), the city walls and the Chester Rows of medieval covered walkways. Chester had a port on the River Dee that both predated, and was initially more significant, than that of Liverpool (Aughton, 2008). But this declined from

the mid-1700s onwards and finally closed in the 1960s. Chester had established leather and wool industries in the 16th and 17th centuries and had a shipbuilding industry. But on entering the 18th century, Chester took a very different path in its development from the other four centres. Indeed, the industrial revolution largely passed Chester by. It grew in its role as a market town serving the area around it, rather than as a location for heavy industry as emerged a few miles to the east into Wales. By 1801, Chester had a population of 15,000 making it an important urban centre. This historical legacy is critical to how interviewees perceived the city, as illustrated by these typical quotations:

'Chester, as a city, has an all-round positive view. If you ask anyone "what do you know about Chester?", even if they know the thinnest of details, and may only have been there in their youth, they are likely to say, "oh it is lovely, an all-round town, it is great". So, there are no negative connotations at all. It is pretty, friendly, with minimal rough areas. You would struggle to find something to say, so we kind of incorporate that a little bit into our image' (CHE7).

And:

'Chester is a lovely city. It's a lovely place in the world to live and therefore what you find is it's not difficult to recruit here' (INS1).

In addition, Chester remains a small city, *'more like a market town'* (INS2), so that:

'Chester is a small city and has more in common with towns such as Shrewsbury than it does with cities like Manchester and Liverpool. It has a very town feel about the city' (INS9&10)

And yet, *'Chester has a robustness about it that does not make it susceptible to a particular downturn or elimination of a particular technology' (INS9&10).*

Figure 5-12 Selection of key milestones in the history of Mersey Dee core centres

Period	Core Centre	Milestone	Legacy
Pre-industrial revolution (Roman Britain to late 17 th century)	Chester	Built environment including: <ul style="list-style-type: none"> • Roman amphitheatre and wall foundations. • Saxon street layout. • Medieval city walls, castle, abbey (cathedral), Chester Rows. 	Foundations to Chester being: <ul style="list-style-type: none"> • Important visitor destination. • Emergence as regional retail, commercial and service centre.
	Wrexham	Establishment as a market town.	Foundation to becoming largest town in North Wales.
Industrial and post-industrial revolution (18 th and 19 th century)	Wrexham	Emergence as centre for coal mining Bersham iron factory/Brymbo smelting plant ('iron mad' Wilkinson).	Industrial legacy as one of Europe's early leading ironworks.
	Deeside	Emergence as centre for coal mining.	Factor for location of steel industrial works from 1896.
	Ellesmere Port	Docks and canal building at entrance to River Mersey estuary and close to Manchester Ship Canal.	Strategic location opens industrial development.
	Birkenhead	Shipbuilding industry established 1828. Hamilton Square and Birkenhead Park.	Shipbuilding industry. Park, inspiration for Central Park, New York.
20 th century until today	Chester	Chester Business Park, city centre retail. University of Chester.	Reinforces Chester's regional service city role.
	Wrexham	Closure of coal mines, iron and steel and rayon industries, replaced by industrial estates. Building of ordinance factory in Second World War, leads post-war to Wrexham Industrial Estate. Creation of Formation of Wrexham Glyndŵr University	One of the largest industrial estates in the UK. Coordinated new inward investment onto industrial estates.
	Deeside	Steelmaking industry at Shotton. Opening of Deeside Industrial Estate. Second World War aircraft manufacture at Broughton.	Closure of Shotton Steel Plant in 1980. Coordinated new inward investment. Airbus wing manufacture today.

Period	Core Centre	Milestone	Legacy
	Ellesmere Port	Stanlow Oil Refinery/energy industry sector/Vauxhall. Out of town retail.	Energy and nuclear industry. Port Arcades and Cheshire Oaks retail centre.
	Birkenhead	Expansion decline and resurrection of shipbuilding. Lever Brothers/Sunlight Village.	Cammell Laird shipbuilding and repair. Unilever global innovation centre.

Source: Author

5.3.3 Industrial and post-industrial revolution

By contrast, of the other four centres, only Wrexham was more than a small village at the beginning of the 18th century. During the 16th century, it was just one of a handful of towns in Wales with a population at or slightly above 1,000 (Davies, 2007), at this stage growing as a market town. By the mid-18th century, its population had expanded to more than 2,000 inhabitants (Lambert, n.d.). However, Wrexham's transformation came in the industrial revolution, symbolised by the management of Bersham iron factory by John Wilkinson ('Iron Mad Wilkinson') from 1762 and the later opening of a smelting plant at Brymbo in 1793. By 1790, Bersham was one of Europe's leading ironworks: '*Wilkinson produced all the cylinders used in Watt's steam engine and the armies of several countries depended upon the cannon he developed*' (Davies, 2007: 316). The steel works was located close to the expanding coal industry. In the 19th century Wrexham also had successful brewing and leather industries.

The industrial revolution also impacted on Ellesmere Port, Deeside and Birkenhead, but in contrasting ways. The town of Ellesmere Port grew up on the site of earlier villages at the outlet of a canal section between the River Mersey at Netherpool and the River Dee at Chester that opened in 1795. The early development of the town centred on the docks, but the opening of the Manchester Ship Canal in 1894 expanded the industrial role of the area. Deeside had small settlements going back to Saxon times, such as the hamlet of Shotton. However, its expansion only began with the development of coal mining in the area from the 18th century, which in turn led to the later association of Shotton with the iron and steel industry from the end of the 19th century.

In the early 19th century Birkenhead was still only a tiny hamlet, separated from the impact of the industrial revolution in neighbouring Liverpool by the River Mersey. The start of the transformation of Birkenhead was enabled by the introduction of a service crossing the River Mersey by steam paddleboat from 1817. At first, Birkenhead had a short life as a tourism resort. However, from 1824 William Laird and his son John established a boiler works and a shipbuilding yard (Laird, Son & Co.). In 1903, the company merged with a Sheffield firm Johnson Cammell & Co. to become Cammell Laird, a company at the forefront of shipbuilding in the UK. From 1824, William Laird also laid out the foundations of the town with Hamilton Square. An ambitious project was Birkenhead Park, planned by Sir Joseph Paxton, which

became inspiration for Olmstead's design of Central Park, New York. As an interviewee centrally involved in the modern-day regeneration of Birkenhead summarised:

'Looking back in history, Birkenhead and this area was back in the early 1800s already a pioneering place. It was the first place to have a tram in Europe and to have a submarine. It had the first publicly gifted park in the world. There is lots of pioneering engineering that took place in Birkenhead. So back in the early 1800s, it was a hotbed of pioneering thinking. (INS7).

The Birkenhead to Chester Railway, planned by George Stephenson, was constructed in the late 1830s. The first tramway scheme in Europe was inaugurated to run from Woodside to Birkenhead Park and in 1886 the Mersey Tunnel opened to connect Birkenhead to Liverpool by road. Around 1887, William Hesketh Lever (later Lord Lever) purchased 56 acres of largely unused land slightly to the south of Birkenhead on the River Mersey. By 1880 this had become a factory to manufacture soap and a purpose-built village for his workers called Port Sunlight. A first R&D laboratory was erected on the site, which today has evolved into a major manufacturing and R&D site for the MNE Unilever.

5.3.4 20th Century and beyond

By the start of the 20th century, settlement patterns underpinning the future character of the Mersey Dee were in place. By 1901, Chester's population grew to 38,000. It continued expanding as a regional services centre, centred on retail, finance and tourism industries. Chester also achieved university status in 2005; being first founded as Chester Diocesan College and then the UK's first purpose-built teacher training college in 1839. Subsequent university expansion encompassed the Thornton Science Park at Ellesmere Port, the NW Food Research Development Centre and campuses in Warrington, Shrewsbury, Wirral.

The other four centres developed from their 18th and 19th century industrial roots, to become important manufacturing centres today. Wrexham grew into the 20th century on the back of the traditional industries of coal and steel, with its population passing 18,500 by 1931. But the key milestone for industrial development came in the Second World War, with the construction in 1941 of a Royal Ordnance factory covering 2,500 acres on former agricultural land just outside Wrexham. The site was chosen for its distance from German bomber bases in Europe and for having good rail links and a local labour supply. During its operation from

1942 to 1945 it employed many thousands. Its large geographical spread was to minimise munition damage from possible aerial attack.

From 1947 into the early 1950s, the old ordinance site was converted into the present-day Wrexham Industrial Estate, by the Welsh Industrial Estates Corporation (Morgan, 1981). During the 1950s onwards, major firms were attracted to open factories on the estate. These included Dunlop's, Firestone Tyres, British Celanese (sold to Courtauld's) and Fisons, all of which closed in the late 1970s and 1980s. These closures of immediate post-war investments coincided with the decline of traditional industries in the area. Gresford Colliery closed in 1973, Bersham Colliery in 1986 and Brymbo Steel Works in 1990 (Lambert, n.d.). Consequently, with local unemployment rising over 20%, something had to be done, as reflected on by a former chief officer of Wrexham Maelor Borough Council:

'I originally joined Wrexham Rural District Council in 1969. It was just at a time when the authority was feeling the ongoing effects of the coal mine closures. The Vauxhall Industrial Estate had been opened on the site of a former coal mine a year or so previously. There was clear evidence that other coal mines were nearing the end of their lives. They employed many thousands of men and associated facilities which meant that the threat to the job market was very serious indeed' (INS11).

An intensive coordinated response to attract inward investment onto the Wrexham Industrial Estate was provided by the recently formed WDA, the former Welsh Office and Clwyd County Council and Wrexham Maelor District Council local authorities from the mid-1970s into the 1980s. Further industrial estates opened up around Wrexham on brownfield former colliery sites. These included the Vauxhall Industrial Estate at Ruabon and the Gresford Industrial Estate, the site of an earlier major colliery disaster. Local authority Chief and Deputy Chief Officers were even offered a bonus for work to mitigate the local effects of unemployment, by handling industrial enquiries provided by the WDA. As a result:

'Council Chief Officers were committed to act at any time of day or night to meet industrialists who would want to look at the area from the point of view of establishing companies there. There was reasonable financial assistance from central government to create new jobs' (INS11).

In terms of development support:

'The firms would be expected to provide funding, but the Welsh Office would also assist with development costs. The general guidance was that subsidy was made available of up to £40,000 a job in terms of initial grant support from the Welsh Office (through the WDA). On occasions they would provide finance towards the building of a factory or a loan to be repaid. They would also build factory units as incubators and offer them at low rents to assist companies to develop entrepreneurial activity' (INS11)

Also, to encourage the firms:

'We were able to offer a fast service in terms of providing a possible location for the site that the firm might be interested in, infrastructure that was already available, a design facility in terms of work of architects and engineers, a fast response and a good relationship with the Welsh Office and Secretary of State and the WDA, as their contribution accelerated' (INS11).

Whilst speed and coordination of response were important for attracting firms, the local authority also took commercial risks on occasions. The largest purchase was the former Courtauld's site, which had two huge blocks on it. One was demolished and the other is now known as Redwither Tower. Courtauld's gave the site to the Council for £1, but:

'It was a risk taking the site on because the Council had to borrow a considerable amount of money, over £2 million at the time, for the refurbishment of the site. There was always the possibility that things might not work out terribly well. But so far it has been a success story' (INS11).

These efforts successfully attracted international firms to open plant factories on the Wrexham Industrial Estates. Investing firms included: Hoya in 1980, Kellogg's in the mid-1980s, Brother Industries in 1985 and Sharp Industries in the same year, all of whom remain on the estates today.

The Wrexham Industrial Estate now occupies some 550 hectares. It is the largest industrial estate in Wales, the second largest in the UK after Trafford Park in Manchester and one of the largest in Europe. As of 2011 it hosted some 300 businesses providing some 7,000 jobs, with key sectors represented being engineering, pharmaceuticals, electronics, chemicals and food processing (Wrexham.com, 2019). The UK's largest open prison, HM Prison Berwyn, opened in 2017 on the estate on the former Firestone factory site. Wrexham also became the site of the other university in the Mersey Dee. Wrexham Glyndŵr University, formed from

various pre-existing colleges, achieved university status in 2008 and is one of the youngest universities in the UK.

Deeside's industrial foundations lay in coal mining. But in 1895, the Summers Family purchased 40 acres of Dee Marshland on which they established Shotton Steelworks. The expansion of Shotton Steelworks led to the creation of communities in the area to house the influx of workers. John Summers was nationalised in 1951, but denationalised in 1954, returning to the property of John Summers and Sons. However, the steel industry was nationalised again in 1967 and John Summers and Sons became part of British Steel. At the height of the industry, the Shotton site employed 13,100 workers in 1968 (Atkinson, 1998-2006). However, in 1980, under the Thatcher Conservative government, the Shotton Steel Plant saw the biggest loss of jobs in a single day in Western Europe, when around 6,500 people were made redundant. The decision to make these cuts had been made some years earlier by the Ted Heath government. But there was a passionate campaign to save the works, with the Steel Workers Action Committee taking the fight to Westminster. The local MP, now Lord Barry Jones and President of the MDA, was in the centre of the campaign to get the decision reversed (Daily Post, 3 March 2016). On 17 July 1979, the then Barry Jones MP for Flint East, said in the Parliamentary debate about the Shotton Steelworks:

'The point at issue is that at least 6,000 jobs are to be lost. The workforce of 10,800 resides in one sub-region, and by any estimate, 7,000 or more live in my constituency. That is a large concentration of steel workers. The only skill possessed by the great majority of steel workers is the great skill of making steel. Most of them left school at the age of 14, and for a generation they have been working making skilfully some of the best steel in the world' (HC Deb, 17 July 1979).

However, in considering the wider economic context, the pressure to close the site became overwhelming. When the Shotton Steel Works crises reached its height, year on year inflation was 27%, reinforced by the earlier decision by the OPEC nations to quadruple the oil prices in November 1973:

'This had a significant impact on steelmaking because much of it was fired by oil. Certainly, the ageing open hearth furnaces at Shotton were vulnerable. The processes at Port Talbot were more modern and less at risk' (INS8).

The closure remains a key milestone today in the industrial history of the area. At the time it was a calamitous event marking the end of the story about old traditional industries in NE Wales. The Shotton redundancies came alongside the end of the coal mining industry and the closure of the former Courtauld's rayon factories in NE Wales.

But it also proved to be the beginning of a new kind of industrial revival for Deeside (Heggarty and Byrne, 2013), alongside that for Wrexham, marked by sustained overseas inward investment to both areas. Up to the closure, there had been little interest from the employers, trade unions or local government to achieving a broader based economy:

'Flintshire was over-dependent on three staple industries, each of which was hugely vulnerable to global influences, which wiped out two. These two were steelmaking and rayon making' (INS8).

After 1980, that changed. It helped that the third industry in Deeside was aircraft manufacturing. As with Wrexham, the Second World War was instrumental in leaving a major legacy on the industrial landscape of the area. This was through the establishment in 1939 of a 'shadow factory' at Broughton to produce Vickers Wellington and Aero Lancaster bombers. Over more than 75 years, this site subsequently went through several generations of aircraft manufacture to become the wing manufacture site for Airbus, with the company connecting its present development to its previous history:

'The success and growth of Airbus, Broughton has seen the expansion of the site, the development of new technology and investment into the community and young people throughout Wales, throughout, maintaining a strong connection with its rich and cultural history.' (Daily Post, 11 September 2014).

Following the closure of Shotton Steel Works a programme of new investment was coordinated through the Welsh Office, the WDA and the then Clwyd County Council. As in Wrexham, this investment was centred on the creation of a new industrial estate on the site of the former Steel Works. Today the Deeside Industrial Park is recognised by the WG as an Enterprise Zone. It extends for some 2,000 acres, and contains internationally known employers, such as Toyota and Tata Steel. An observation was that:

'Deeside Industrial Estate has come on leaps and bounds and has put Flintshire on the map. That is done by some great work by the economic development team in Flintshire and those businesses within the industrial estate who have created a forum and energy around the place' (INS9&10)

Some two miles to the east of the Industrial Park is Broughton, but still part of the Enterprise Zone. This is home to Airbus UK, the most well-known employer in NE Wales, on the site of aircraft manufacture since the Second World War. This location has received some £2 billion of new investment, creating some 3,000 new jobs and currently employs some 7,000 people and manufactures all the Airbus aircraft wings, as part of a high-value integrated supply chain across the EU, with aircraft being assembled in the South of France at Toulouse.

On their website, Toyota explain why the company chose to invest in the UK and in Deeside in 1989. This was because of *'the strong tradition of vehicle manufacture in Britain, with a large domestic market for our product'*. In addition, good industrial transport linkages to customers and their British and European supply partners were advantages, alongside an excellent workforce and favourable working practices. These were aided by a positive approach towards inward investment by the British government and by local government: *'at that time, the company saw the UK as a very beneficial place to do business, if you wanted a European base'*. English language may also have played a role being *'very much the second language in Japan, making communication and integration so much easier'* (Toyota, n.d.).

Unusually, the company took the decision to separate the engine plant, located in Deeside, from the vehicle manufacturing plant in Burnston, Derbyshire. The company considered both sites offered similar advantages. Either would be easy to develop pieces of land of suitable size with support services and infrastructure. Both offered a large skilled and flexible workforce, with good transport connections and, in each case, the *'local authorities showed great enthusiasm and willingness to assist'*. Officially, the reason given was that:

'... the location of the engine plant alongside the vehicle manufacturing plant at Burnston would have reduced Toyota's long-term capacity to expand at that site and indeed would have restricted the opportunity for both plants to expand.' (Toyota, n.d.).

However, Peter Walker MP, the then Secretary of State for Wales, suggested that political considerations had contributed to separating the two operations. In his memoirs, he pointed out that the main plant had been expected to come to Wales, but then '*inexplicitly*' went to Derby. It became clear that the Prime Minister, Margaret Thatcher had personally intervened to offer Toyota financial incentives to go to Derby, in the light of criticism from the then Department of Trade and Industry (DTI) that inward investment was going to Wales and not to England:

'The Toyota boss said that he appreciated my understanding, but he did have difficulty when approached by the Prime Minister. She had told him that the government would provide financial arrangements as good as those being offered in Wales, but after all he had done, he was still anxious to locate a factory in Wales. He said he would be putting the engine plant in Wales and subsequently did so' (Walker, 1991: 216-217).

Ellesmere Port avoided a similar trauma of decline and rebuilding to that of Wrexham and Deeside. From 1900 to 1930, Ellesmere Port emerged as an industrial centre, with a concentration of companies in the energy and nuclear industries. The Stanlow Oil Refinery was opened in 1920 and in 1962, Vauxhall constructed a car plant. In 1951, the area was designated as an overspill town for Liverpool and later became a retail centre with the Port Arcades shopping centre, and more recently Cheshire Oaks.

In Birkenhead at the turn of the 20th century, the shipyard was renamed Cammell Laird, a famous name in British industrial history. Over its history, Cammell Laird built more than 1350 ships, including many civil and navy vessels (Cammell Laird, n.d.). After a troubled period, including temporary closure, the shipyard reopened in 2008 under the Cammell Laird name. Unlike in Liverpool, where the docks were constructed along the River Mersey, Birkenhead docks were designed as an inland system (see Figure 5-13). Through the 19th into the early 20th century, industries had been located alongside the docks. However, the area declined into the 20th century and the docks closed, so that Birkenhead '*was gutted by the collapse of the shipbuilding industry and engineering and the docks*' (INS9&10). The area was acquired by Peel Holdings, who have been pursuing the Wirral Waters project to regenerate the docklands area.

South of Birkenhead, but part of the same continuous urban area, is Sunlight Village. This is where William Hesketh Lever started producing Sunlight soap in 1884, having acquired a large site to build a factory and construct a purpose-built village for his workers. In the late 1920s the company merged with Margarine Unie to become the global company, Unilever. Today the Sunlight factory is the company's global innovation centre for both hair and laundry products (Unilever, n.d.).

Figure 5-13 View from Birkenhead across Wirral Waters towards Liverpool



Source: Author

5.3.5 Centres with complementary roles

This section has shown that historical and industrial change reinforced rather than undermined functional linkages and sense of identity across the Mersey Dee. As a result, the Mersey Dee has five main centres, with different histories that are complementary in their economic roles to each other across the England-Wales national border. Analysis of economic relationships between a large city and neighbouring smaller cities (Lucci and Hildreth, 2008; Centre for Cities, 2009a), demonstrates that the nature of economic linkages between places is not just due to contrasting impacts of external agglomeration economies. The economic character, history and industrial structure of adjacent places will also play a role. For the Mersey Dee, the combination of Chester's regional services and communications hub roles for the area, combined with the evolution of settlements and industry in Deeside, Wrexham, Ellesmere Port and Birkenhead has reinforced the character of the Mersey Dee as a cross-border economy. A question is how might the Mersey Dee be best described? The next

section looks at the two options introduced at the beginning of the Chapter: as a city-region or locality.

5.4 Two overlapping but different conceptions of the Mersey Dee

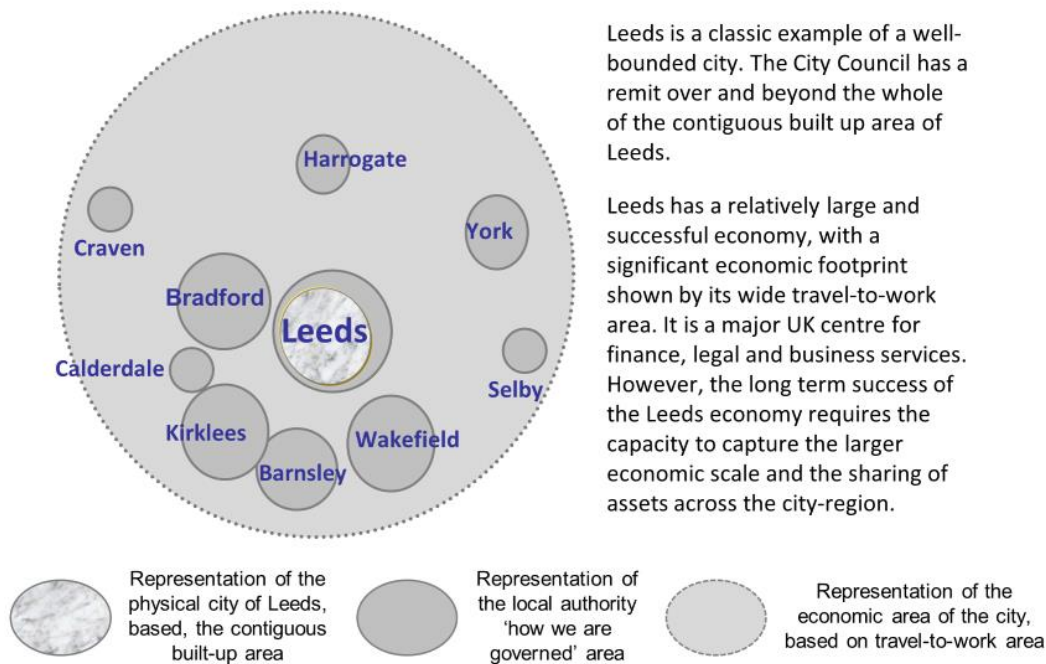
5.4.1 Mersey Dee as ‘our unique city-region’

The title of this section reflects the name of a prospectus published by the MDA in March 2017, to promote the case for wider recognition of the economic potential of the Mersey Dee and as a place for transport investment (MDA, 2017). From the evidence shared above, it might not be obvious how the concept of a city-region could be applicable to the Mersey Dee. A city-region is traditionally associated with the economic dynamism of large cities on their surrounding hinterland, as illustrated by this classic definition by Jane Jacobs:

‘City-regions are not defined by natural boundaries, because they are wholly the artefacts of the cities at their nuclei: the boundaries move outward – or halt – only as city economic energy dictates’ (Jacobs, 1984: 35).

So, for example, in Northern England, the term has been applied to Greater Manchester and LCR, with their Metro Mayors and Combined Authorities and to Cardiff, in Wales, the recent recipient of a City Deal. A diagram of Leeds City-region, shown in Figure 5-14 and originally drawn by the author, was used by both the UK and Welsh governments in publications to illustrate the city-regional concept.

Figure 5-14 Leeds City-Region



Source: Original diagram by author. Included in HMT et al., 2006 and WG, 2012.

As previously recognised, the Mersey Dee has no large city that may make claim to shaping the economy of its surrounding region by its own scale, economic energy and dynamism, even though the area does offer a distinctive spread of urban, industrial residential and rural economies that are functionally interconnected (see Figure 5-15).

Nevertheless, the city-region concept might not be disregarded. In 2012, the NWEF was invited to submit a case for city-region status for NE Wales and NW Cheshire to the WG, as a part of its own T&FG City-regions Review led by Dr Elizabeth Haywood (WG, 2012). In the submission, the following case was made:

'We believe that the area around Wrexham, Deeside and Chester, forming a core part of the wider geographic area, offers considerable potential to evolve as a functional city-region. It offers the opportunity to secure economic growth and employment in the immediate area and for the wider North Wales economy. The evolution of a strong functional economy in NE Wales and NW Cheshire would be complementary to development of the Newport, Cardiff and Swansea economies in South Wales. In combination, they would offer the prospect of more balanced overall development of Wales' (NWEF, 2012).

In response, the WG asked Dr Haywood to undertake her own independent review of the Mersey Dee city-region case. Dr Haywood concluded that whilst the area was unique in the UK in its cross-border nature, nevertheless:

'The area does not constitute a city-region in any recognised sense of the term: it is not largely urban and the only 'city' is small. Despite cross-border interaction for business and leisure purposes, there simply is not the requisite density and scale for a genuine city-region' (Haywood, 2013: 2).

Yet, the MDA envisages the Mersey Dee as *'our unique city-region'* that is *'a city in scale with opportunities abound and a vision to deliver'* (MDA, 2017: 1). Behind this lie several claims for the Mersey Dee being distinctive as a *'city-region in all but name...'* (MDA, 2017: 1), not all directly related to the city-region concept. First, for its unique position in the UK as a cross-border economy, with similar cross-border daily travel to work movements each way between England and Wales (see Figure 5-16). This is with some 83% of residents also working within the area.

Figure 5-15 Mersey Dee cross-border travel movements



Source: MDA, 2017:4. This image is reproduced with the permission of the MDA

Second, the claim for being a location of industrial and commercial activity of national importance, with sectoral strengths in advanced manufacturing, aerospace, consumer products, energy, oil, chemicals and materials and medical and pharmaceuticals. Third, from its strategic position on TEN 22, the trans-European link from Dublin to Gothenburg, as well as forming the 'Gateway to North Wales' on the A55. Fourth, due to the size and scale of its economy. It was pointed out that the area generates some £22 billion in Gross Value Added (GVA), more than that of Cardiff, Swansea and Newport combined. It has a population of 940,000 people, around 380,000 jobs, has some 27,000 registered companies of which around 700 generate a turnover of over £1 million (MDA, 2017). Because of its economic scale and extent of self-containment. A case is made that:

'Due to its polycentric nature, the Mersey Dee area is not immediately identifiable in the way that a traditional city is. It is a 'constellation city' – it has a functional cross-border economy, shared labour market and a GVA equal to half of the entire Welsh economy' (MDA, 2017: 3).

A relevant factor to why a city-region case is presented, lies not just from the area's distinctiveness, but also its geographical position: physically close to Greater Manchester and overlapping with LCR; with the Wirral sharing membership of both the MDA and the Combined Authority. The city-region case is made partially in response to the Northern Powerhouse concept (MDA, 2017). This is to gain attention for investment alongside northern city-regions when the dominant rhetoric arising from sub-national economic policy is to emphasise cities as 'drivers of growth' (HMG, 2011).

5.4.2 The Mersey Dee as a locality

As set out in a recent study of 'new localities' in Wales (Jones et al., 2016), a parallel case may be made for the Mersey Dee to be recognised as a locality, where:

'The attributes of localitiesdo not easily translate into discrete territorial units with fixed boundaries. Labour market areas overlap, as do shopping catchment areas; residents consider themselves to be part of different localities for different purposes and at different times; the reach of a town as an education centre may be different to its reach as an employment centre; and so on' (Jones et al., 2016: 8).

Central to a localities approach is to acknowledge the reality of how people operate their lives across different parts of localities for different reasons (e.g. working, shopping, education, culture etc.). The starting point to identify localities, as acknowledged earlier, is to begin from their core – the cities, towns or geographical areas – and then work outwards to establish an understanding of their coherence as a locality.

The Jones et al. (2016) study included case studies from different areas across Wales, including one by Mann and Plows (2016) for North Wales. This analyses contemporary socio-economic change and development across the A55 corridor that straddles the North Wales coast from Flintshire in the east to Gwynedd in the west. In doing so, a clear distinction was made between the rural NW and the industrial NE, the latter coming within the Mersey Dee. This case study drew on interviews from local public agencies, groups and individuals' experience where: *'we were interested in the lived-in policy-worlds occupied by policy-makers and those on the receiving end of their endeavours'* (Jones et al., 2016: 12). NE Wales stakeholders were likely to *'position themselves in relation to the border with England'*, describing their locality *'in terms of borders and flows'*, particularly in economic terms (Mann and Plows: 2016: 108-9).

This (new) localities approach was consistent with the treatment of the NE Wales area within the WSP, as one of six areas - Central, NE, NW, Pembrokeshire, SE and Swansea Bay – in Wales with fuzzy boundaries that were shaped by *'different linkages involved in daily activities'* of working, shopping, education and culture etc. (WG, 2008: 4). At first sight, the Plan might suggest a Wales-centric perspective of the Mersey Dee. However, it drew on the West Cheshire and NE Wales sub-regional spatial strategy 2006-2021 for the cross-border economy that was originally commissioned by the four counties partnership (MDA, 2006). In doing so, the Plan recognised the significance and inter-dependence of the cross-border economy between NE Wales and NW England and that: *'For Flintshire, Wrexham and Denbighshire, the cross-border linkages to the wider area of Chester and Cheshire are crucial'* (WG, 2008: 53).

'The communities within NE Wales are diverse but can broadly be characterised by large industrial areas, traditional seaside resorts and rural market towns, all experiencing varying rates of growth and decline. The future development and potential of many of these communities is inter-dependent with those on the

English side of the border. If Deeside does well, Chester does well and if Chester does well, Deeside does well. The strategy for both NE Wales therefore aims to bring together distinct elements of the cross-border area of Flintshire, Wrexham and West Cheshire with the more self-contained parts of Conwy and Denbighshire in order to spread opportunities and reduce inequalities’ (Ibid: 54).

And:

‘The cross-border area contains the strategic hubs of Wrexham, Deeside and Chester. It includes Broughton and extends to Ellesmere Port. Whilst these centres have quite different characteristics, they are considered to bring a combination of strengths to the cross-border sub-region. (Ibid: 54-55).

The aim is not just to benefit the NE Wales economy, but also the wider geography both east and west, in which the Mersey Dee is recognised as providing a key role:

‘It will be a place, where the strengths of prosperous areas are enhanced and the benefits of economic growth are maximised through linking areas of opportunity with areas of need in regeneration. Working towards this vision, the Mersey Dee Alliance will play a key role in delivering the spatial strategy through close collaboration and continued partnership working across NE Wales, West Cheshire and the Wirral’ (Ibid: 53).

Overall, the Plan identified several key opportunities and challenges for NE Wales and the cross-border Mersey Dee economy. These not only in effect endorsed strategic collaboration across the MDA area, but they also defined a potential agenda for the MDA itself.

Three opportunities were highlighted. First, the Wrexham-Deeside-Chester hub was identified as being of strategic importance to the NE Wales and Mersey Dee economy; strengthening these hubs by investment in future employment, housing, retail, leisure and services ought to be a priority. Second, that the future development and potential of many of the communities in NE Wales was inter-dependent to those on the English side of the border, emphasising the importance of sustainable travel links and improving accessibility. Road linkages and rail corridors were identified as key to spreading opportunity and development westwards. Third, given that NE Wales was strategically located on two Trans-European Network priority axes means that it was crucial that existing cross-border partnerships continue to be built with international, regional and local stakeholders to

achieve an integrated and joined-up transport strategy and its implementation between England, Wales and the Republic of Ireland.

In addition, five key challenges for the area were also identified. First, whilst there has been a resurrection of the cross-border economy, the manufacturing sector was seen to be vulnerable to changes in the global economy. This was from low cost competition from new and emerging areas and exchange-rate fluctuations. NE Wales has a high number of relatively large international employers, outside of which the economy is dominated by micro-employers, with little in-between. Maintaining the competitiveness of the manufacturing sector was of critical importance for the prosperity of the area and beyond, as is the establishment and growth of indigenous employers.

Second, NE Wales had a structural weakness of a relative lack of graduate level employment. In addition, employers in the area identified a lack of basic skills and relevant vocational skills within the workforce, together with a skills mismatch in specific sectors (e.g. high value manufacturing). Thus, a focus on key economic sectors providing employment opportunities was suggested together with collaboration with employers to raise skill levels in the workforce.

Third, it was important to support sustainable economic development by the provision of complementary strategic employment sites across NE Wales to both retain and attract high quality employers. In doing so, the Plan recognised that there were sufficient or even surplus levels of employment land allocated in land use plans, but the quality might not always be suited to future requirements of employers who may need smaller units for service-based firms or high value manufacturing.

Fourth, the provision of adequate ICT infrastructure throughout the area was identified as being increasingly crucial for firms to both locate and adapt to change in the application of modern technology. It was also seen as having the potential to contribute greatly in the rural economy. Fifth, there was a need to maximise the benefits from economic growth by seeking to link areas of opportunity with areas in need of regeneration, such as along the coastal corridor (Rhyl and Prestatyn) and in more rural areas.

5.5 Conclusions

First, this Chapter has conceptualised the Mersey Dee as a cross-border place and economy. This is by comparing two contrasting notions of place used by policy makers and in the academic literature to characterise the area: as a city-region and as a locality. Both share a functional interpretation of the Mersey Dee being shaped by how firms and people operate across space. The city-region case reflects an agglomeration-driven focus on the concentration of economic scale, achievement of competitiveness and urban identity. This is to situate it alongside its metropolitan neighbours of LCR and Greater Manchester and the Northern Powerhouse concept. It speaks to the UK government's agglomeration-driven framework, where the city-region is the spatial scale of choice within urban-centric and competitive forms of sub-national policy (Harrison, 2017: 55). By comparison the locality argument draws on a place-based understanding of the 'material' and 'imagined' coherence of the area centred on its absolute, relative and relational qualities, which in turn have been shaped from its historical, industrial, social, cultural and institutional evolution. (MDA, 2006; Haughton et al., 2010; NWEF, 2012; Mann and Plows, 2016; MDA, 2017; Beel et al., 2020). Whilst the Mersey Dee is a functionally connected economy, little evidence was identified to support the city-region case, whilst the locality case is stronger.

Second, to understand the Mersey Dee involves a place-based bottom-up investigation, reflecting a locality framework (Jones and Wood, 2013; Jones, 2016, 2017). This Chapter has illustrated that the heterogeneous 'place' qualities of the Mersey Dee have been shaped by its historical, social and industrial development, as explored by through the relative evolution of its five core centres of Chester, Wrexham, Deeside, Ellesmere Port and Birkenhead. The result is a functionally interconnected economy, with different centres that have both grown independently, but also are inter-dependent in shaping the area's common identity, particularly through its shared labour market. As the ONS travel to work area analysis shows, at 75% containment, the strongest functional relations are cross-border between Flintshire and Chester. Wirral TTWA looks two ways, towards Wirral as well as the Mersey Dee. Wrexham TTWA, connecting into the rest of the Mersey Dee, has a more localised labour market. However, if a higher level of self-containment is employed (see Figure 5-15), the labour market of the Mersey Dee becomes an integrated labour market.

Third, as a consequence, the area has elements of a distinctive intra-urban (and rural) relational polycentric character that combines urban and rural and to connect its one small city to its manufacturing employment centres located primarily on large industrial estates rather than within its urban centres. As a result, much of its employment is neither urban in character, nor dispersed from urban areas. Thus, from within an intra-urban polycentric model, the Mersey Dee best fits the description of *distributional patterns of employment*, with *'the tendency of economic activity to cluster in several interacting centres'*, where functional relationships are shaped by distinctive and complementary industrial and settlement patterns between villages, towns, a city and large industrial estates (Davoudi, 2005: 982). This pattern offers opportunities for the spread of economic sectors and diversification of the economy. For workers, it offers choices in where to live and work. It is possible to live in any of the centres in the Mersey Dee and travel to another with less congestion and land costs than would be the case in a metropolitan environment (Özkul and Hildreth, 2016). There is support for this from the NDFW, which, alongside an imperative for North Wales to collaborate in its functional connections with CW&C, proposes *'National Growth Area'* status for Deeside and Wrexham (alongside Swansea Bay and Llanelli with Cardiff, Newport and the South Wales Valleys). These have *'more than one centre'* with *'scope to distribute homes, jobs and prosperity according to the needs of the region, and potentially reduces the reliance on individual centres to provide jobs and opportunities'* (WG, 2019: 5, 49).

Chapter 6 The institutional governance of the Mersey Dee

6.1 Introduction

Chapter 5 illustrated how, through its settlement and industrial history, the Mersey Dee developed a polycentric distributional pattern of employment that is central to its identity as a unique cross-border economy in the UK. It was shown that in conceptualising its distinctive character, the area has been presented as both a city-region (MDA, 2017; NWEF, 2012) and as a locality (Mann and Plows, 2016; WG, 2008). This Chapter builds this analysis by shifting focus to the MDA, as the institution that collectively, as well as through its local authority and other partners, seeks to realise the *'sustainable potential of the Mersey Dee region'* (MDA, 13 July 2017: 1).

This Chapter is organised in five sections. Section 6.2 introduces the MDA partnership, to consider its formation, structure, role and resources. Consideration is given to how the MDA has sought to become effective in achieving its partnership objectives. Section 6.3 situates the MDA regionally in the *'complex political and partnership environment'* (MDA, 13 July 2017: 1) within which it operates. This is of critical importance as it works multi-level with regional partners in North Wales (NWEAB) and in NW England (C&WLEP and LCR) to secure public and private investment to the area. Section 6.4 returns to the central issue of the Mersey Dee's conceptual identity. The MDA has consistently sought to convey what is distinctive about the area and why it matters. As an illustration, how the MDA presented its case for the Mersey Dee to be recognised as a city-region is reviewed. Key institutional events that are background to, or are covered in this Chapter, are listed chronologically in Figure 6-1 below. This Figure distinguishes between events centred on the MDA, governance institutions in North Wales and NW England and the Welsh and UK governments.

Figure 6-1 Key institutional events impacting on the Mersey Dee

Date	Event	Institutions
1974	The <i>Local Government Act (LGA) 1972</i> replaced an earlier local government structure in Wales from 1889 by eight new top-tier ('counties'), sub-divided into lower-tier districts. Clwyd County Council covered all NE Wales, with lower tier districts - Alyn and Deeside, Colwyn, Delyn, Glyndwr, Rhuddlan, Wrexham Maelor.	Local government in Wales
1974	LGA 1972 led to the creation of Greater Manchester and Merseyside. There were also boundary changes to Cheshire with the transfer of Wirral to Merseyside and eastern parts of the county to Greater Manchester and Derbyshire. The Borough of Warrington was also formed in 1974.	Local government England
1986	Abolition of two-tier metropolitan counties in England, including Greater Manchester and Merseyside county councils and their replacement by respectively ten and five unitary councils.	Local government England.
1990s	MDA formed from shared economic, social and environmental interests across West Cheshire, Wirral and NE Wales. Chester, Cheshire, Ellesmere Port and Neston, Flintshire and Wrexham local authorities were original members.	MDA
1996	The <i>Local Government (Wales) Act 1994</i> reorganised local government in Wales to create a unitary structure. The former Clwyd County Council was divided into Flintshire, Wrexham and Denbighshire, with area to its western boundary going to Conwy.	Local government in Wales
1998	Creation of North West Regional Development Agency (NWDA), to lead on economic development, and North West Regional Assembly (NWRA) (an indirectly elected regional chamber), as part of reform of regional governance across England, under the <i>Regional Development Agencies Act 1998</i> .	Regional Development in England
1998	National Assembly of Wales formed following a national referendum and the passing of the <i>Government of Wales Act 1998</i> .	Government in Wales
1998	Warrington and Halton became unitary authorities independent of Cheshire County Council, apart from for fire and policing.	Local government in England

Date	Event	Institutions
2004	<i>Northern Way</i> initiative launched by John Prescott MP, the then Deputy Prime Minister with a RDA-led strategy designating eight city-regions across Northern England, including LCR.	UK government and RDAs
2006	The Four Counties Partnership of Chester, Cheshire, Ellesmere Port and Neston, Flintshire and Wrexham local authorities and WG commissioned the development of the NE Wales West Cheshire Sub-Regional Spatial Strategy.	MDA
2007	<i>Governance of Wales Act 2006</i> gave formal separation to the WG and the National Assembly of Wales, with latter given powers to make laws for Wales in defined areas.	Government in Wales
April 2007	New MDA Partnership formed from a merger of the original partnership with the Four Counties Partnership and the addition of Denbighshire.	MDA
April 2009	Cheshire County Council and its district councils abolished and replaced by two unitary authorities: CW&C and East Cheshire.	Local government in England
2010-2012	Abolition of NWDA ends its partnership and funding support of the MDA.	MDA
2011	Private sector-led LEPs formed to be the primary vehicle for sub-national economic development in England, replacing former RDAs. These include Cheshire & Warrington LEP (C&WLEP) and LCR.	UK government
2011	In a national referendum, Wales votes in favour of giving the National Assembly of Wales further law-giving powers.	Government in Wales
Autumn 2011	The WG established a T&FG to submit practical proposals to Ministers on evidence for city-regions as economic drivers and to identify potential city-regions in Wales.	Government in Wales
December 2011	Wrexham Glyndŵr University became full member of the MDA.	MDA
2012	St Asaph (Denbighshire) awarded city status in Queen's Diamond Jubilee celebrations. St Asaph was selected ' <i>to recognise its wealth of history, its cultural contribution and its</i>	UK government

Date	Event	Institutions
	<i>metropolitan status as a centre for technology, commerce and business.</i> It was historically the seat of a bishopric.	
April 2012	NWEF presented a case to the WG T&FG for NE Wales and NW Cheshire to be recognised as a city-region.	MDA
July 2012	The WG announced support for TF&G recommendations to recognise Cardiff Capital Region and Swansea Bay City-region as city-regions. The NWEF city-region proposal is not supported, although it is suggested that the MDA be strengthened.	WG
November 2012	University of Chester became member of MDA.	MDA
March 2013	Dr Elizabeth Haywood presented a review report on next steps for <i>'the Dee cross-border economy'</i> commissioned by Edwina Hart AM, the then Welsh Minister for Business, Enterprise, Technology and Science.	WG, MDA
25 March 2013	WG published Dr Haywood's review of the Dee region case, with a short period of public consultation.	WG
15 May 2015	MDA Chair and Vice Chair gave a public response to Dr Haywood's findings supporting a <i>'strong cross-border region'</i> and sought implementation of Dr Haywood's recommendations to strengthen the MDA.	MDA
August 2015	MDA Chair met with UK Minister for Local Growth and the Northern Powerhouse, James Wharton MP and Parliamentary Under Secretary for Wales, Alan Cairns MP at Coleg Cambria about cross-border collaboration. There was agreement that North Wales needed to be part of the Northern Powerhouse plan.	MDA, UK government
July 2016	NWEAB present a 'growth vision' to respond to the invitation by Ken Skates AM, the WG Cabinet Secretary for Economy and Infrastructure (Welsh Economy Minister) to develop a Growth Bid for North Wales.	Local government in North Wales
July 2016	Publication and launch of cross-border Rail Task Force Prospectus – Growth Track 360.	MDA
2 March 2017	Welsh Economy Minister published WG vision for improvements to transport services and infrastructure within North Wales and NE Wales Metro across the border with	WG

Date	Event	Institutions
	England. Commitment given to nearly £600 million of investment over coming years.	
March 2017	Launch of Mersey Dee Growth Prospectus: Mersey Dee – our unique city-region.	MDA
27 June 2017	Guto Bebb MP, Under Secretary of State for Wales, visited North Wales to underline UK government support for a growth deal for North Wales, with discussions with businesses and local authority and university representatives.	UK government
July 2017	Work began on the Halton Curve, a 1.5 mile stretch of track that brings back into use the section of railway line connecting the Chester/Warrington line and the Liverpool/Crewe line at Frodsham Junction, allowing direct train services between North Wales and Liverpool.	WG
14 July 2017	Welsh Economy Minister announced funding for first phase of a new Advanced Manufacturing Research Institute in Deeside.	WG
14 July 2017	Welsh Economy Minister announced opening of the UK's first development bank in Wrexham in October 2017 to provide growth finance and business support to attract and retain SME firms.	WG
12 April 2018	Energy & Clean Growth Summit, The Heath, Business & Technical Park, Runcorn, Cheshire.	MDA
28 September 2018	North Wales and Mersey Dee Skills Symposium at Clwyd Theatr Cymru to focus on ' <i>working across borders to links skills and innovation to local growth</i> '.	MDA
29 October 2018	UK Chancellor of the Exchequer announces an allocation of £120m towards the North Wales Growth Deal, which aims to channel over £500m worth of public and private money into a series of projects aimed to boost the North Wales economy.	UK government
19 June 2019	Ken Skates AM announces that the £20m WG investment into the Advanced Manufacturing Research Centre under construction at Broughton will be known as AMRC Cymru, managed by the University of Sheffield AMRC.	WG
2 July 2019	A joint session of the Welsh and UK governments with the NWEAB and private sector partners identified requirements	WG UK government.

Date	Event	Institutions
	for the heads of terms agreement for the North Wales Growth Deal.	
4 November 2019	Secretary of State for Wales and WG Minister for International Relations signed the Head of Terms for the North Wales Growth Deal (NWGD).	UK government and WG
31 January 2020	Team leading implementation of the NWGD announced	NWEAB

Sources: Business Live, 4 November 2019; Deas et al., 2015; Deeside.com, 31 January 2020; Gov.UK, 4 November 2019; MDA, n.d., July 2012, 10 April 2013, 27 November 2013, 30 January, 2014, 10 April, 2014, 14 July 2016, 2017, 13 July 2017; National Assembly for Wales, n.d.; Welsh Business News, 1 November 2018; WG, 2 July 2019; Wikipedia, July 2018.

6.2 The Mersey Dee Alliance as a partnership

6.2.1 MDA formation and membership

The MDA operated as an informal partnership during the 1990s. This was as an opportunity for the then local authorities of Cheshire County Council, Chester City and Ellesmere Port and Neston District Councils in NW England and Flintshire Council and Wrexham County Borough Council (Wrexham Council) in NE Wales to share common economic, social and environmental issues. Then in 2006, the Four Counties Partnership of Cheshire, Chester City, Ellesmere Port and Neston, Flintshire and Wrexham local authorities with the WAG, commissioned the development of the NE Wales and West Cheshire Sub-Regional Spatial Strategy (MDA, 2006).

The completed strategy reflected the shared history of partnership working in the area. It recognised that, even though a ‘soft’-non statutory space for dealing with specific issues, rather than ‘hard’-formal territory of governance with statutory responsibilities and legal obligations for democratic engagement and consultation, space of governance: *‘the West Cheshire and North East Wales area possesses considerable economic dynamism and cross-border attraction already, creating pressures on the planning systems of the two jurisdictions’*. And also, that: *‘the ‘discovery’ of the cross-border region has been an important political awareness raising exercise for all concerned’* (Haughton et al., 2010:153). The strategy provided a non-statutory framework for greater cross-border cooperation between

NE Wales and West Cheshire. As described in Chapter 5, it became influential by shaping content of the WSP for NE Wales (WG, 2008) and underpinned the locality case for the Mersey Dee (Mann and Plows, 2016).

In April 2007, a new MDA partnership was formed from a merger of the original partnership with the Four Counties Partnership and the addition of Denbighshire Council. With subsequent membership changes, this is the MDA that exists today. Wrexham Glyndŵr University joined from December 2011 and the University of Chester in November 2012. Wirral Metropolitan Borough Council and Merseytravel were members but were succeeded by LCR Combined Authority in 2018. In March 2015, Denbighshire Council left the MDA, for reasons of budgetary pressures. The present members and key partners of the MDA are listed in Figure 6-2.

Figure 6-2 Membership and key partners of the Mersey Dee Alliance



Source: MDA, 19 July 2019

6.2.2 Structure, role and resources of the Mersey Dee Alliance

The MDA is a voluntary partnership with no formal legal status. Members contribute an annual subscription of £10,000 per annum (2018/19) to support the work of the partnership. CW&C is the accountable body responsible for the budget and employment of the supporting MDA staff team. The partnership Board normally meets three times a year; in March

(including its Annual Meeting), July and November. It is chaired by a member representative from one of the five local authorities, with the vice-chair from another local authority. Both actively represent the MDA, for example at Ministerial meetings. The Chair is appointed for a two-year period on a rotating basis, usually succeeded by the Vice Chair. The MDA Board is provided policy support by the Strategy Group of officers from the constituent local authorities and other MDA members. This is chaired by a senior officer from the local authority of the current MDA Chair. The Board and Strategy Group are provided policy and administrative support by the MDA senior officer and programme officer. From 2016, the Board elected a President for the MDA, currently Lord Barry Jones, who has made a lifetime contribution to the area, including as a former government minister in Wales.

The MDA has three priority aims for the partnership. First, to raise awareness about the assets and growth potential of the cross-border economy. Second, to improve cross-border transport connectivity. Third, to improve the efficiency of the cross-border labour market and skills development. These were underpinned by five objectives. First, to work with key local and regional partners to address economic opportunities and challenges, particularly transport connectivity, development sites, skills and business support. This included shaping devolution growth deals on both sides of the border. Second, to work with universities, FE and schools to secure a future high skilled workforce, to meet industrial needs, particularly in key sectors. Third, to continue to raise the profile of the Mersey Dee and the growth potential of the cross-border economy *'to ensure that it is a serious contender for investment by business, industry and the UK and Welsh governments'*. Fourth, to support businesses within the Mersey Dee through the MDA's Innovation Network Business Breakfasts. Fifth, to ensure that the partnership retains capacity to respond to external pressures and opportunities (MDA, July 2018).

6.2.3 Reflecting on the role for the MDA

The above priorities emerged from reflection about how the MDA might most appropriately contribute towards realising the sustainable potential of the Mersey Dee region. It is notable how the MDA has clarified its remit and focus compared with 2012. Then the partnership's objectives were aspirational, but less specific. They were to enhance the profile and identity of the cross-border region and to develop its competitiveness. Under these were activities

to: develop knowledge economy networks; to focus on key business sectors (advanced manufacturing, energy and environmental technologies, and business and financial services); and to continue to exert influence in securing improved infrastructure.

This growing specificity was aided by the MDA being open to listen to external advice. As discussed below, in 2013, Dr Elizabeth Haywood provided feedback to the MDA about the unsuccessful city-regional case of 2012. In 2014, Mickledore was commissioned to prepare a '*growth and investment prospectus*' to enable the MDA to focus on where it would be most effective. This report found that '*the MDA has an essential role to play, echoed by the work done in cross-border regions across Europe*'. It recommended that:

'...the MDA only undertakes work where there is no other organisation with a more central role to play – or organisation that stands to gain more benefit. The work of the MDA could therefore be summarised as promotion of the economy and assets of the area on a cross-border basis, influence funding and only undertake detailed project work on the clearly cross-border issues of transport and skills' (Mickledore, 2014: 7).

The Mickledore report was followed in 2014 by an internally led review of the MDA's future direction, led by the then Chair (Councillor Pat Hackett) and Vice Chair (Councillor Bob Dutton), supported by MDA Strategy Group officers. It was also provided external advice by Dr Elizabeth Haywood. This review recommended key principles for the MDA to follow. First, that it was uniquely placed to facilitate cross-border collaboration and champion economic priorities with the UK and WG and with regional stakeholders including the NWEAB, C&WLEP and LCR. Second, the MDA must be capable of demonstrating meaningful engagement with the business community to enhance its credibility and influence. Options included adding private sector representation onto the Board or ensuring that business community views were considered in shaping cross-border priorities. Subsequently, the Chair of the North Wales Business Council (NWBC) has regularly attended MDA Board meetings. Business engagement was also strengthened through the Growth Track 360 campaign for rail investment in North Wales. Third, the organisation of the MDA was strengthened by extending the term of office for the rotating Chair from one to two years and by creating the role of President, to raise its external profile. Fourth, that the MDA should develop high level policy messages to the Welsh and UK governments. This was taken forward through the establishment of the cross-border All-Party Parliamentary Group (APPG) in 2016 and in the

publication of the Mersey Dee prospectus in March 2017 (MDA, 22 July 2014; MDA, March 2015, MDA, 2017).

6.3 Situating the Mersey Dee Alliance in a regional context

6.3.1 A complex political and institutional geography

The Mersey Dee is positioned strategically between North Wales and NW England, illustrated in Figure-6-3 by Chester's central position. In this geographical context, the MDA functions within a complex multi-level political and institutional environment (see Figure 6-4) and is uniquely placed to bring regional partners together to address challenges that arise from different policy contexts and administrative arrangements on both sides of the England-Wales border. This, for example, provides an important opportunity for the MDA to contribute to devolution and growth deal bids for Cheshire and Warrington, to the UK government, and for North Wales with the NWEAB, to the WG (MDA, 2017).

Figure 6-3 Strategic position of the Mersey Dee between North Wales and NW England



Source: Diagram from Growth Track 360 (MDA et al., 2016). This image is reproduced with the permission of the MDA

Figure 6-4 Overlapping local authority territorial representation across the MDA and regional partnerships

Regional Partnerships	Territorially inside the MDA	Territorially beyond the MDA
NWEAB*	Flintshire, Wrexham	Anglesey, Gwynedd, Conwy, Denbighshire**
LCR*	Wirral	Halton, Knowsley, Liverpool, Sefton, St Helens
C&WLEP*	CW&C	Cheshire East, Warrington

*Note: As indicated in Figure 6-2, LCR is a member of the MDA and NWEAB and C&WLEP are key partners.

**Note: Denbighshire left membership of the MDA in March 2015.

Source: Author

6.3.2 North Wales

As described in Section 1.4.2, Wales operated a more centralised approach towards sub-national economic development compared with England. Consequently, there were no sub-regional or local institutions that parallel, for example, England’s LEPs. Since the abolition of the WDA in 2006, local authorities took lead responsibility for local economic development. As outlined in Chapter 5, for several years the NWEF fulfilled a role as a combined public (local authorities) and private and non-statutory membership (including FSB, CBI Cymru, the IoD, Wales Cooperative, TAITH and the Wales Council for Voluntary Action) partnership. The NWEF ended in 2012, following withdrawal of its funding support by the WG.

Following this, in 2012 the six local authorities in North Wales (Anglesey, Gwynedd, Conwy, Denbighshire, Flintshire and Wrexham) formed the NWEAB to ‘give specific attention to regional economic issues and to identify collaboration and sharing resources opportunities’ (Gwynedd Council Cabinet, 24 July 2012: 1; North Wales Local Authorities, 2012). Replacing the NWEF, the NWEAB sought to develop consensus about local economic development initiatives to promote economic growth across North Wales. In evidence to the National Assembly of Wales enquiry on city deals, the NWEAB identified the six North Wales local

authorities, Bangor and Wrexham Glyndŵr universities, Grŵp Llandrillo, Menai and Coleg Cambria FE colleges, the NWBC, the MDA and the Snowdonia, Anglesey and Deeside Enterprise Zone chairs as members. The WG is represented at meetings (National Assembly of Wales, 5 April to 3 May 2017). Parallel to and working closely with the NWEAB, as the private sector umbrella body for the cross-border region, was the NWBC.

From 2016, the NWEAB's work was dominated by the development and then implementation of a North Wales growth bid. A submission was invited by the UK government with support of the WG, through Ken Skates AM, (Welsh Economy Minister). This bid provided an opportunity to balance City Deal growth bids approved for Cardiff Capital Region and Swansea Bay City-region for an estimated value of £1.2 billion and £1.3 billion respectively. In July 2016, the NWEAB published a 'growth vision' for North Wales with support from all the regional partners. The vision was of an economy *'powered by high value economic clusters throughout North Wales'* (NWEAB, 2016: 2). Particular cluster strengths were identified in energy, advanced manufacturing and digital industries. To underpin this, economic connections were recognised to Ireland, through Holyhead Port, and to the Northern Powerhouse, since *'the economy of North Wales is intrinsically linked and closely aligned to the NW of England'*, so that:

'Cross-border collaboration will take place on the delivery of strategic projects, such as transport, and the development of key high value clusters which will boost economic performance and productivity' (NWEAB, 2016: 3).

The vision was underpinned by proposals for substantial road, rail and site investments, amounting to over £1.8 billion across North Wales (including £750 million for electrification of the North Wales railway network). Comparable spending commitments for the whole of the Northern Powerhouse have been estimated at around £7.8 billion, including £6.69 billion for transportation infrastructure (Lee, 2017:486-487). In practice, many of the NWEAB growth bid aspirations for railway and road investment improvements were addressed in the WG's own vision for North Wales and NE Wales Metro investment (WG, March 2017), with £600 million committed for North Wales transport infrastructure projects. Funding for another project in the vision document – the establishment of a new Advanced Manufacturing Research Centre at Broughton – was subsequently announced by the WG Economy Minister, and on 19 June 2019, that it would be named AMRC Cymru.

The North Wales Growth Bid was prepared in 2017 and 2018 (NWEAB, 2018). It evolved into twelve project clusters under three themes: *'Smart North Wales'* (technology and innovation, energy projects, strategic sites and premises, business growth hub); *'Resilient North Wales'* (housing enablers, skills and employment) and *'Connected North Wales'* (digital infrastructure, regional transport hub). Between these three themes, £384 million of Growth Deal funding was sought, broken down between £343 million for capital and £55 million for revenue projects. In terms of governance, the six North Wales Councils agreed in principle to the establishment of a Joint Committee to oversee and implement the North Wales Growth Deal after its approval. The six Local Authority Leaders would be the voting members, and the Committee would include non-voting representatives of key partners, including Bangor and Wrexham Glyndŵr universities, Grŵp Llandrillo and Coleg Cambria FE institutions and the NWBC (National Assembly for Wales, 5 April to 3 May 2017).

The Growth Deal Proposition was reviewed by the UK and WG, resulting in a reduced funding envelope of £240 million being announced in the November 2018 Budget. The revenue-funded projects were taken out and capital funding was scaled back with a shortfall of some £40 million. The heads of terms were signed by both governments in November 2019. Whilst the Growth Vision document referred to the cross-border economy, none of the projects put forward under the Growth Deal had cross-border elements. The funding package and governance structure was focussed on North Wales. This compares unfavourably with the Borderlands Growth Deal across the South of Scotland and North of England, with up to £394.5 million investment into the five local authority areas on both sides of the border that make up the Borderlands, with up to £265 million coming from the UK government and £85 million from the Scottish government and the remainder from other partners (Gov.UK, July 2019).

6.3.3 NW England: Cheshire and Warrington and Liverpool City-Region

The C&WLEP area of CW&C, Cheshire East and Warrington was also progressing a Devolution Deal with the UK government. A Cheshire and Warrington Growth Deal worth £15.1 million was signed by the then Universities, Science and Cities Minister, Greg Clark MP on 26 February 2015. This gave support to key projects for infrastructure improvements in Crewe to support 'Crewe High Growth City', a new public services hub in Ellesmere Port Central

Development Zone and the construction of a high-level bridge crossing the Manchester Ship Canal from the A56 as well as opening up land for development south of Warrington town centre. This was in addition to the LEP being awarded £142.7 million from the Local Growth Fund in July 2014.

Subsequently, proposals by the LEP and its local authority partners for a Devolution Growth Deal for Cheshire and Warrington were submitted to the UK government on 4 September 2015 (C&WLEP, 27 September 2015). In terms of governance requirements required for approval by the UK government, it would be common in format to Devolution Deals agreed for example for Cambridgeshire and Peterborough, Greater Manchester and LCR and would involve having a Combined Authority and a directly elected mayor for the area covered by the local authorities of CW&C, Cheshire East and Warrington. Progress with the submission was held up because of political differences, with the bid being rejected by Warrington councillors in 2016. It was reported that Labour councillors were divided over whether to join LCR or pursue a deal within the C&WLEP area. In February 2017, Warrington council resolved to agree to join the bid. However, since then progress on the deal and Combined Authority appeared to fizzle out, although in October 2019, the Chief Executive of Warrington Council commented that this position may be reviewed. Yet, about the present UK devolution model on offer added: *'...one size does not always fit all, perhaps we need a different model for places inside cities and outside cities'* (Warrington Guardian, 18 October 2019).

The position of LCR was further advanced. A devolution agreement was confirmed by the government on 17 March 2015, giving the city-region greater control over transport, skills, business support and other areas of responsibility. In line with the devolution agreement, LCR has a Combined Authority and Steve Rotheram was directly elected as Mayor on 4 May 2017. This arrangement left Wirral as both a member of the LCR Combined Authority, together with the local authorities of Liverpool, Sefton, St Helens, Halton and Knowsley, as well as having membership of the MDA. This was resolved when LCR became a member of the MDA in 2018, with Wirral Council being the lead representative for the city-region, alongside the Combined Authority and LCRLEP at MDA Board Meetings.

6.3.4 Growth Track 360

Within the context of the evolution of the North Wales and Cheshire and Warrington and LCR devolution proposals, the MDA has sought to actively influence outcomes on both sides of the border, as demonstrated by Growth Track 360. Growth Track 360 is the product of the North Wales and Mersey Dee Task Force, that drew in turn on earlier work by the NE Wales Integrated Task Force (2013) and its underpinning evidence (AECOM, 2013). Its leadership group represented the public and private sectors: NWEAB, C&WLEP, LCR Combined Authority and the MDA. It is underpinned by a promotion campaign and strong business and key stakeholder support, with the aim of securing *'door-to-door travel to work journeys of an hour or less'*. On behalf of the MDA, CW&C led at officer and member level to coordinate a cross-border alliance campaign to secure £1 billion of rail improvements.

Growth Track 360 proposed several key elements. These include: the electrification of the line from Crewe to North Wales to link the region to HS2 and enable fast London trains to continue to Bangor and Holyhead; the doubling of frequency of trains between the North Wales Coast Line and Wrexham to Manchester through Chester; investment in new, modern, better equipped rolling stock; creating new services between Liverpool and Liverpool Airport to North Wales and Wrexham via Chester (Halton Curve); doubling journey frequency between Wrexham and Liverpool via Deeside and Bidston; improving facilities and capacity at stations, including introducing a smart ticketing system to make journey planning cheaper and simpler and a new approach to franchises to improve services and upgrades to signalling and line speeds to reduce journey times (MDA et al., 2016). There has been progress with the announcement of daily services from Wrexham General to Liverpool Hope in spring 2019.

6.4 Seeking an identity for the Mersey Dee

6.4.1 A sub-regional strategy for the cross-border economy

An important factor underpinning the MDA's search for a coherent identity for the Mersey Dee relates to its uniqueness, in UK terms, as a cross-border functional economy. On one hand, it has been about achieving recognition, accessing funding and overcoming administrative complications, when two governments were involved and in a crowded field of competing and cooperating centres:

'The operation of the economy across a border has resulted in under-recognition for the importance of the area in terms of institutional support and associated funding programmes. It is considered likely that the area would gain greater recognition if the entire area was on one side of the border or the other' (Mickledore, 2014: 5).

On the other, the MDA's cross-border position also presents opportunities. The MDA was able to join in a regional case for recognition of being seen as part of a sectoral or urban extension of the Northern Powerhouse from NW England across into North Wales. Also, the aftermath of City Deals for Cardiff Capital Region and Swansea Bay City-region, opened the opportunity for the MDA to contribute to a Growth Deal for North Wales as outlined above.

As described earlier, an important early stage in defining the Mersey Dee's identity came with the West Cheshire/NE Wales sub-regional spatial strategy 2006-2021 (MDA, 2006). Its contribution to the WSP and the NW Regional Spatial Strategy supported the case for the formation of the current MDA partnership in 2007. The strategy evolved from a study about the sub-region produced by GVA Grimley in 2004 (GVA Grimley, 2004). This envisioned a core area of Chester and Ellesmere Port and Neston in England, together with Flintshire and Wrexham in NE Wales. It also identified a '*wider reference area*' that included Denbighshire, the Wirral and the Frodsham-Helsby sub-area of Vale Royal, Warrington and Halton. The vision for the sub-region was as '*an area able to compete successfully in the regional and global marketplace*' in which '*the area's special characteristics are pursued to the benefit of both the sub-region and the Liverpool city-region*' in which '*the strengths of individual centres are recognised*' and that the '*quality of life of the residents of the sub-region is paramount*' (MDA, 2006: 5).

6.4.2 Entering the city-region debate

However, a shift in identity was promoted as cities became increasingly central to both the rhetoric and substance of sub-national economic policy, first in UK (England) policy as described in Chapter 1 and subsequently in Wales. This was taken up in Wales from autumn 2011. Dr Elizabeth Haywood was asked by the WG to chair a T&FG, with the objective:

'To decide, on the basis of objective evidence, whether a city-region approach to economic development will deliver an increase in jobs and prosperity for

Wales as a whole. If this is the case, what parts of Wales should be included and what is needed for the approach to be successful?’ (WG, 2011: 2).

As the T&FG report sets out, ‘city-regions have the potential to be an important economic driver for Wales in the coming decade’ (Ibid: 5). In a context of global urban growth, increasingly ‘cities are the engine of economic growth and catalyst for creativity and innovation’ (Ibid: 5) and that overall:

‘The argument for developing a policy response encompassing the needs of city-regions has grown more powerful as a result of globalisation. Increased commuting ranges and general mobility have widened the economic impact of cities. The result is that existing administrative boundaries have become less representative of the real parameters of cities, and city-regions provide a realistic economic development focus for cross-boundary collaboration across urban areas’ (Ibid: 16).

The T&FG acknowledged that Wales does not have large cities, as per the OECD definition of a metropolitan area as a functional urban area with at least 500,000 inhabitants (Ahrend et al., 2014a, b), even in comparison with the rest of the UK. However, the report pointed out that Wales has two regions in SE Wales (population of 1.4 million) and SW Wales (population around 700,000) of significant population size. In that context, the study reviewed a variety of possible city-region outcomes for Wales:

1. No city-regions in Wales.
2. Between one to three city-regions in South Wales:
 - a) One for the whole of the former industrial South Wales;
 - b) Two with SE Wales and Swansea Bay; or
 - c) Three for Cardiff, Swansea and Newport.
3. One city-region in North Wales along the A55 corridor or one in North Wales/NW England: Wrexham, Deeside and Chester (namely the Mersey Dee).

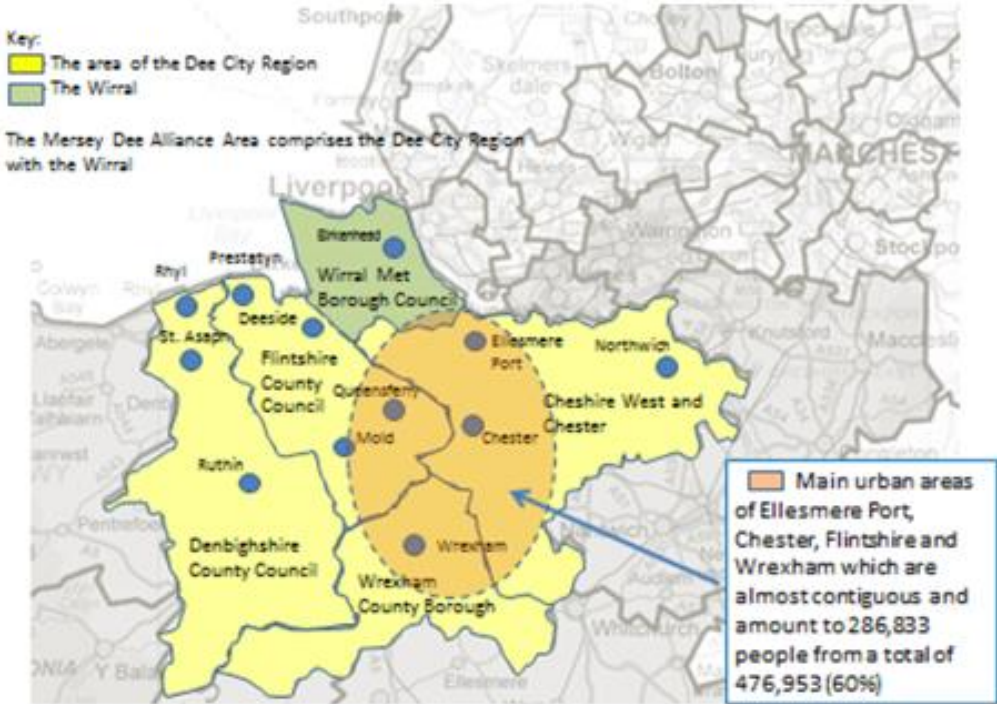
A case for the core area of the Mersey Dee, based around Wrexham, Deeside and Chester (see Figure 6-5) to be recognised by the WG as a city-region in Wales, was presented to the T&FG in evidence from the then NWEF in April 2012 (NWEF, 2012), supported by the MDA:

'The evolution of a strong functional economy in NE Wales/NE Cheshire would be complementary to development of the Newport, Cardiff and Swansea economies in South Wales. In combination, they would offer the prospect of more balanced overall development of Wales' (NWEF, 2012: 3).

The case was underpinned by evidence for the self-containment of the cross-border labour market – the Mersey Dee economy being equivalent by GVA to half of the Welsh economy – and the area's industrial, locational and institutional assets (as discussed in Chapter 5). WG recognition as a city-region would offer opportunities: first, to enable infrastructure development across the Wales-England border; second, to enhance cross-border labour market planning, training and development; third, to utilise cross-border universities' support for business and sector growth in the area. In conclusion:

'Overall, we believe that there is a significant opportunity here for the Welsh Government. Our area has demonstrated a dynamic response to the challenge of industrial structural change. Our economy has been transformed to become a nationally important centre for advanced manufacturing and modern services. We believe that we can do much more and are collectively committed as partners to grow our economy. Giving formal recognition that we have something very distinctive to offer through cross-border city-region collaboration would only benefit Wales' (NWEF, 2012: 11).

Figure 6-5 Mersey Dee Alliance and the Dee City-region diagram from the North Wales Economic Forum paper to the City-Regions Task and Finish Group



Source: NWEF, 2012. This image is reproduced with the permission of the MDA

Having considered the different options summarised above, the final report of the T&FG recommended that only two city-regions in South Wales be formally recognised: Cardiff Capital Region and Swansea Bay City Region. The main evaluation factors influencing this decision were:

‘...critical mass; traffic flows; community identification; exiting structure of governance, and the fact that our cities contribute less to the economy than cities elsewhere in the UK, and we need to ensure that contribution grows’ (WG, 2012: 4).

These recommendations were subsequently accepted by the WG, and both Cardiff Capital Region and Swansea Bay City Region have subsequently benefitted from City Deals, with support from the UK government.

In its deliberation, the T&FG also reflected on whether NE Wales (as part of a cross-border region into NW Cheshire) should also be recognised as a city-region. Having considered the same five factors listed in the previous quotation, the T&FG concluded:

'Whilst we believe it is important to strengthen existing cross-border relations in NE Wales (and recommend doing so through the Mersey Dee Alliance), we find insufficient evidenceto support recognition of a city-region there' (Ibid: 4).

Nevertheless, the recommendations supported strengthening of the MDA as a regional strategic body:

'Recommendation 6: We recommend that everything possible is done, by concerned local government and, where necessary, the Welsh and UK Governments, to strengthen the Mersey Dee Alliance as a regional strategic body and give it the powers it needs to deliver sustainable growth in jobs and prosperity in NE Wales. The Group would be willing to discuss with local authorities and business groups how best the region might take matters forward' (Ibid: 8).

Following publication of the T&FG city-regions report in July 2012 and in the light of concerns expressed by North Wales Assembly Members, Dr Haywood was asked by the then WG Minister for Business, Enterprise, Technology and Science to undertake a review of the evidence relating to NE Wales (see Figure 6-6 for terms of reference). There were worries that recognition of two city-regions in South Wales would put North Wales at a relative disadvantage for investment and for access to the next round of European Structural Funds (outside of convergence areas) and other EU funds.

Figure 6-6 Terms of reference of Dr Haywood's next steps review for Dee region cross-border economy

Terms of reference of Dr Elizabeth Haywood's review of the 'Dee region cross-border economy' commissioned by the Welsh Minister for Business, Enterprise, Technology and Science

- In light of representations, to assure that no evidence for North Wales has been overlooked in regard to the five factors of population, density, travel patterns, community identification and governance that suggest the viability of a city region.
- To examine the ways in which cross-border relationships can be strengthened.
- To identify what would be required for the Mersey Dee Alliance to have a more strategic role, as recommended by the Task and Finish city regions report.
- Where possible to identify potential ways in which North East Wales could achieve similar benefits to those of a city region, as outlined in the Task and Finish city regions report.

Source: Haywood, 2013: 3

Dr Haywood conducted a series of interviews with Assembly Members and other stakeholders in the MDA and reviewed the case in the light of factors evaluated by the T&FG as set out in Figure 6-7. Dr Haywood concluded that whilst there was a strong cross-border functional economic region, consisting of Wrexham, Chester, Deeside and Ellesmere Port:

'The area does not constitute a city-region in any recognised sense of the term: it is not largely urban and the only 'city' is small. Despite cross-border interaction for business and leisure purposes, there simply is not the requisite density and scale for a genuine city-region' (Haywood, 2013: 2).

Nevertheless, encouragement was given to the MDA:

'It is, however, unique in the UK in its cross-border nature: both its strength and its potential should be recognised at both Welsh and UK government level, with funding, systems and processes put in place to exploit this potential' (Haywood, 2013: 2).

Dr Haywood made four recommendations. First, that *'to become a strategic force for the region'*, the MDA would need to receive relevant powers and funding. It would also need to alter its structure to engage the private sector and HE and FE. Second, the MDA should be given authority to establish a cross-border labour market plan and skills agenda. Third, the MDA should lead in promoting the region for investment, making a virtue of its cross-border character. Fourth, a memorandum of understanding between the Welsh and UK

governments should be reached covering cross-border transport planning, that is binding on independent bodies such as Network Rail.


The MDA public response (see Figure 6-8) welcomed recognition ‘*that there is a strong cross-border functional economic region consisting of Wrexham, Chester, Deeside and Ellesmere Port, and that it is unique in the UK in its cross-border nature*’ and supported Dr Haywood’s recommendations. Although none of the recommendations were subsequently implemented by the WG, notably relevant powers and funding, momentum was created by raising the profile of the MDA within the North Wales and Cheshire & Warrington regional context.

Figure 6-7 Issues reviewed by Dr Haywood in relation to the Dee region city-regional case

<i>Issues addressed by Dr Elizabeth Haywood in reviewing the Dee city-region case</i>
1. <u>No city in North Wales</u> - Interviewees agree that there is no city on the North Wales side of the border.
2. <u>Chester is a small city</u> – Chester is below the minimum PUA population threshold of 125,000 for inclusion in Centre for Cities list of UK cities.
3. <u>Little affinity with Manchester or Liverpool</u> – Chester was identified in early proposals for a LCR, but there are few links between local authorities, except for Wirral.
4. <u>What is a Dee city-region?</u> - There are varied views for identifying a Dee city-region.
5. <u>Economic size of the Dee region</u> – The GVA Figure of £21 billion for the Dee region cited in the NWEF report includes Wirral (part of LCR) and Conwy, making a truer figure of £14 billion.
6. <u>Functional self-containment</u> – The region is clearly self-contained, with 83% of all travel to work trips starting and finishing in the area.
7. <u>Lacking a central business district</u> - Chester and Wrexham combined, ‘do not realistically have the requisite density and scale’ in central business district or districts.
8. <u>Developed knowledge communities for research and skills</u> - The Dee region does not contain a ‘large strong university although Chester and Glyndŵr have niche strengths’.
9. <u>Lack of an agreed identity</u> – Interviewees were unable to define an identity for the Dee region, other than for the strength of the manufacturing sector.
10. <u>Cultural identity</u> – The two sides of the border are very different social entities.

Source: Based on Haywood, 2013: 4-9

Figure 6-8 MDA response to Dr Haywood's review of Dee region city-regional case



Review of the Dee Region Cross-Border Economy – Next Steps

Response from the Mersey Dee Alliance (MDA)

The MDA Board has considered Dr Haywood's Report and welcomes the recognition that there is a strong cross-border functional economic region consisting of Wrexham, Chester, Deeside and Ellesmere Port, and that it is unique in the UK in its cross-border nature.

Given this, MDA believes the region is deserving of special recognition and strongly supports the statement in the Report that the strength and potential of the area "should be recognised at both Welsh and UK Government level, with funding, systems and processes put in place to exploit this potential". Moreover, we believe that in determining the nature of the "funding, systems and processes" to be put in place, the region merits priority equal to that accorded by the Welsh Government to the designated City Regions in South East Wales and Swansea Bay.

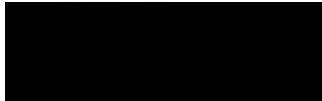
The MDA Board welcomes the recommendations in the Report as a means of strengthening cross-border collaboration and exploiting the region's economic potential. They represent a considerable step forward for cross-border working and will enable MDA to become increasingly effective in driving cross-border economic growth.

However, we recognise, and are committed to the principle, that implementation of the recommendations can only be achieved through active collaboration with Welsh and UK Governments and with other relevant Agencies, including the Economic Ambition Board for North Wales and the Cheshire and Warrington and Liverpool City Region LEAs.


Given that economic growth is dependent on many inter-related factors, one aspect of particular interest to the Board is whether the proposed MoU on cross-border transport planning could be extended to cover other significant cross-border policy and planning issues.

While not wishing to pre-judge the outcome of the Review, MDA is currently considering how we can take forward the recommendations. Initial proposals will be presented to the MDA Board at its next meeting in July.

Dr Haywood's Report highlights opportunities for partners to work together to overcome barriers unique to cross-border region and to deliver real economic growth. We urge the Government to accept the recommendations.



Councillor Bob Dutton OBE
Chair, Mersey Dee Alliance



Councillor Pat Hackett
Vice-Chair, Mersey Dee Alliance

15 May 2013

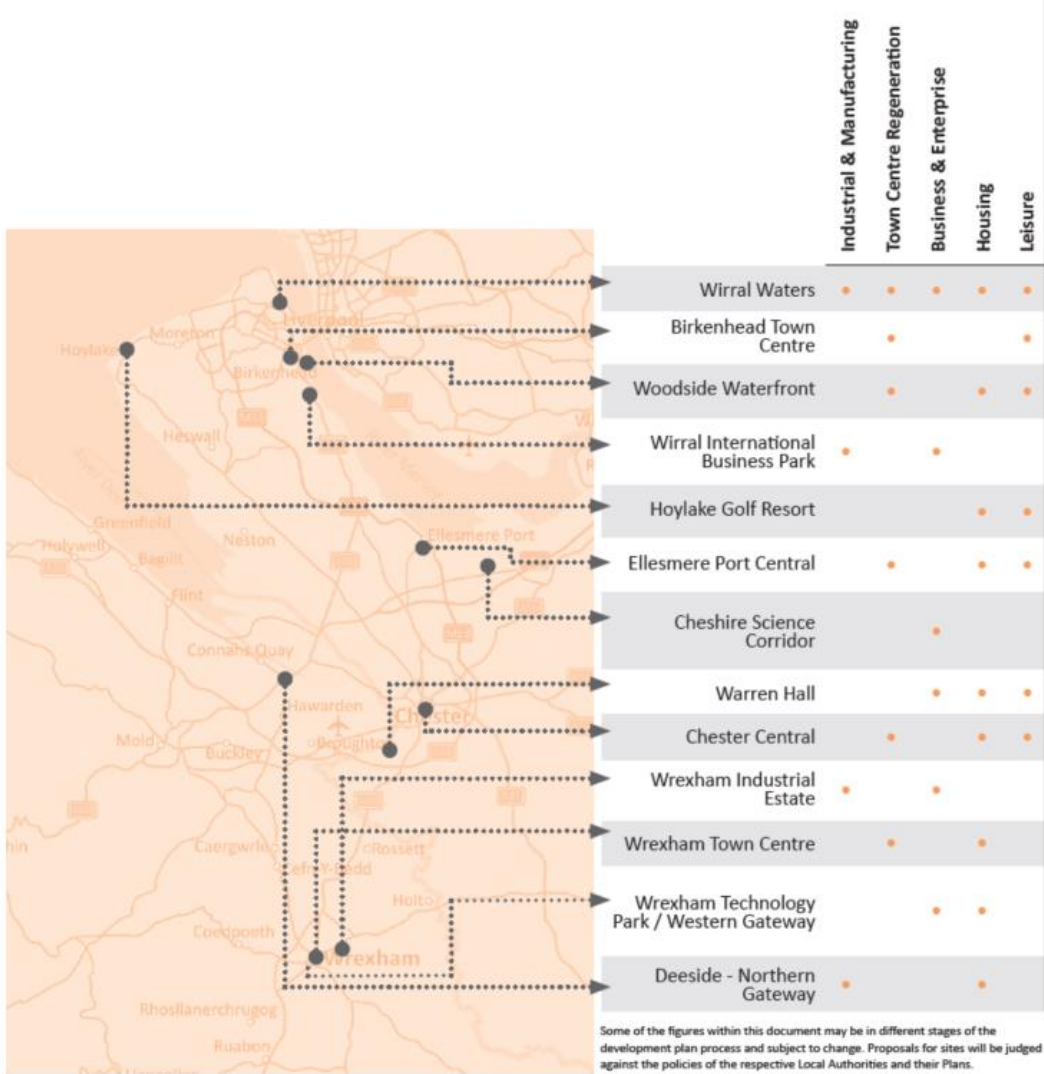
Source: MDA.

6.4.3 Mersey Dee prospectus

It might have been expected that Dr Haywood's report and recommendations and the subsequent public response by the MDA (see Figure 6-8) would have ended the Mersey Dee city-region case. After all, Dr Haywood had turned the proposition down in the light of a clear set of issues (WG, 2012) (see Figure 6-7).

However, the MDA published a prospectus in March 2017 entitled '*Mersey Dee: our unique city-region*' (MDA, 2017), setting out how the MDA proposed to unlock the economic potential of the area. To emphasise its uniqueness, it described the Mersey Dee as a polycentric city-region. The prospectus emphasised the relative scale of the economy, for example being more than that of Cardiff, Swansea and Newport combined. But it made no attempt to answer critical issues made in Dr Haywood's review, including any follow-through of the recommendation to provide the MDA with funding and powers to develop its strength and potential. Nevertheless, the prospectus did present a strong case for the Mersey Dee, particularly in identifying key development sites (see Figure 6-9) and their potential for the transformation of the area's economy.

Figure 6-9 MDA strategic development sites



Source: MDA, 2017: 9

6.5 Conclusions

This Chapter has examined the institutional governance of the Mersey Dee through the role and network relationships of the MDA. This has illustrated four institutional characteristics of the Mersey Dee that are especially important. First, that the Mersey Dee operates as a ‘soft’ non-statutory rather than a ‘hard’ statutory space, with the MDA founded as the cross-border partnership for dealing with specific issues. As mentioned in Section 1.5.2., the Mersey Dee is not even a place on the map. And yet, as pointed out by Haughton et al (2010), the MDA is ‘naturally constitutive’ with hard spaces. This is because its local authority members and other partners ‘could imagine possibilities for future place-making’ from

collaboration (Haughton and Allmendinger, 2008: 143; Haughton et al., 2010). Underpinning this, is recognition of the area's shared industrial and settlement history, functional connectivity and cross-border identity, as described in Chapter 5. This in turn, has shaped its polycentric distributed pattern of development, as the source of the Mersey Dee's imagined and material coherence underpinning its locality identity (Jones and Wood, 2013; Mann and Plows, 2016). This is acknowledged within Wales, and to a more limited extent in England. The MDA's presence was reinforced by the WSP (WAG, 2008) by recognising NE Wales as one of six fuzzy areas for planning purposes and the strategic importance of the cross-border economy. Although the '*fuzzy boundaries*' approach has disappeared from the draft NDFW, to be replaced by three regions of North Wales, Mid and SW Wales and SE Wales, legitimacy for cross-border cooperation has been reinforced. First, with Wrexham and Deeside recognised as national growth areas. Second, that the North Wales region should collaborate outwardly, including cross-border with CW&C and NW England (WG, 2019).

Second, members of the MDA contribute both relationally and territorially within and beyond the area. Partners gain benefit from the multi-scalar network relationships that derive from the MDA's strategic cross-border economic position bridging between North Wales and NW England. Within this multi-level context, the MDA operates flexibly across networks; nationally engaging the Welsh Economy Minister and the All Party Parliamentary Group for Mersey Dee North Wales (APPG)). Regionally, it works with the NWEAB, LCR and C&WLEP and NWBC on cross-border issues where there are shared interests, such as the Growth Track 360 campaign. Locally, it engages local authorities and universities. In location, it is both local and cross-border. In terms of biases, by agreement from its members, it operates only in selected fields that are viewed to add economic and development value through cooperation within the Mersey Dee and beyond. The partnership addresses what it has in common and is less equipped to address issues of relative controversy. Members of the MDA pay a subscription to join voluntarily. Entry and exit are relatively easy, with illustrations of Denbighshire leaving in 2015 and LCR joining in 2019. In these respects, there are similarities with a multi-level model of governance in settings with specific and limited policy aims (Hooghe and Marks, 2003; Bache et al., 2016).

Third, as a soft space, the MDA partnership faces challenges functioning from within institutional structures in England and Wales that are not always supportive to the locality

case for the Mersey Dee. In England, the territorial city-region (Combined Authority and mayor) is the only model on offer. LCR have had an elected Mayor since May 2017. CW&C, Cheshire East and Warrington have been encouraged to agree to the same model but resisted so far. Arguably, the North Wales local authorities have in the NWGD, signed up to an agglomeration-driven framework, *'focussed upon creating agglomeration growth in a region with only small and dispersed centres of population'* (Beel et al., 2020: 720). These factors may have encouraged the MDA to pursue a city-region case, even though evidence suggests that it is not the most appropriate model for the Mersey Dee. A future risk is that the dominance of a city-regional model might encourage the MDA's local and regional partners to focus territorially inwardly on economic development, with the NWEAB, LCR and C&WLEP strategies taking little account of overlapping cross-border interests. For example, the NWGD contains no cross-border projects within its delivery plan (Section 6.3.2) (Welsh Affairs Committee, 2019; NWEAB, 2019).

Fourth, the MDA functions with limited funding and staffing resources, has no formal powers or responsibilities and depends for its governance entirely on committed voluntary relationships amongst its local authority members and other local and regional partners. So far at least, efforts to strengthen its formal role, for example through the Haywood Review have not been successful. However, the MDA case also illustrates that key institutional strengths are informal as well as formal. Despite limited resources, the MDA has consistently been proactive in making a case for the Mersey Dee and in providing a multi-level focus for bridging relationships across North Wales into NW England. As a consequence, it has institutional support, locally, regionally in North Wales and North West England and from the WG as a cross-border economy that provides a legitimate, if soft, site of governance and an imagined place for economic intervention. As such its role is consistent with the Council of Europe (CoE) characterisation of a cross-border region of having shared features and inter-dependencies, for without which there is no purpose for cross-border cooperation (CoE, 1995; Perkmann, 2003).

Chapters 7, 8 and 9 turn to examine what was learnt from firms about why and how they are situated in the Mersey Dee economy. This is to investigate their location choice and the nature of their inter-firm and institutional relations, before linking these findings with those of Chapters 5 and 6 on place and institutions in the final Chapter. Whilst there have been two

earlier case studies involving NE Wales, (Haughton et al., 2010; Mann and Plows, 2016), neither sought to investigate the firm economy of the area and to discover whether the model for institutional governance of the Mersey Dee reflects the character of its firms.

Chapter 7 Investigating evolved and incoming firms from the Mersey Dee

7.1 Introduction: analysis of evolved, incoming and indigenous firms

Chapters 7, 8 and 9 apply a similar framework to that described in Chapter 4 to analyse and present findings from 46 firm interviews conducted in the Mersey Dee. The aim was to present an overview from individual stories shared by firms about their location in the Mersey Dee as a place and as an economy. Chapters 7 and 8 consider how the interviewed firms came to be in the Mersey Dee, how they evolved and what their associations were with other firms – as customers and suppliers and other non-trading relations – and with institutions. Chapter 9 proceeds to consider those factors – labour markets, transport connectivity, site infrastructure, energy costs and business services – that firms view as important to continue evaluating their location in the Mersey Dee.

The interviewed firms were divided into two groups. Group A firms, the subject of this Chapter, are, or have been for at least part of their company history, headquartered outside the Mersey Dee elsewhere in the UK or abroad. As a result, decisions about investments in the plant, factory or office in the Mersey Dee were taken outside of the area and were therefore viewed from the perspective of the holding company's UK or international HQ. Group A companies include all the interviewed MNEs, together with privately owned companies with HQ elsewhere in the UK. For reasons explained below, Group A companies are also divided into two sub-groups, distinguished by when the firm originally came to the area: pre-1980 (or '*evolved*') firms and post-1980 (or '*incoming*') firms. This distinction between pre-1980 and post-1980 reflects an important change in character of inward investment to the area. As described in Chapter 5, 1980 was a critical milestone in Mersey Dee industrial history. The Shotton Steel Works closed in 1980, marking the end of the traditional industries of steel, coal mining and rayon manufacture in NE Wales. It also coincided with intense effort by national and local governments to attract new inward investment, particularly to the Deeside and Wrexham industrial estates (see Section 5.3.4). By contrast, Group B firms, the subject of Chapter 8, were founded from a local investment decision, indigenous to the Mersey Dee. They are primarily, but not exclusively, today privately owned and so were likely to have consistently stronger local ties than Group A firms.

Once the history and geography of ownership of the firm, rather than just its present ownership, was considered, it was not always straightforward to differentiate between Group A and Group B firms. For example, WIR7 is a global company. But its presence on the Wirral, on a former greenfield site by the River Mersey, is significant to the company's history. Locally, staff may identify the firm as local, despite its global presence, and may point to its founder's values being central to company identity today. Four selection criteria, defined in Figure 7-1, were applied to distinguish between Group A and Group B companies. These considered: where the company was owned; whether the decision to site, found or start-up the firm's presence in the area was taken locally or externally; whether or not the firm had consistently been controlled from within the Mersey Dee; and the nature of ownership of the company.

Figure 7-1 Selection criteria between Group A and Group B companies

Group A – History of ownership external to the Mersey Dee	Group B – History of ownership internal to the Mersey Dee
1. Company headquartered outside the Mersey Dee, elsewhere in the UK or abroad.	1. Company headquartered within the Mersey Dee.
2. Firm likely to be founded by inward investment into the Mersey Dee, from elsewhere in the UK or abroad.	2. Firm founded through an investment internal to the Mersey Dee.
3. Firm has been part of a publicly owned UK or international company for at least part of its history.	3. Firm has consistently been controlled by owners found in the Mersey Dee.
4. Firms are primarily, but not exclusively, MNE companies.	4. Firms are primarily, but not exclusively privately owned.

Source: Author

Even so, as WIR7 illustrates, it was still likely that some companies would overlap Group A and Group B criteria. Firms were therefore sorted between Group A and Group B by meeting at least three of the four criteria. 39 of the 46 companies met three or all four of the criteria of either Group A or B. That still left six companies, whose position was less clear. Firms FLT1 and FLT8 met criteria 1 and 2 for Group A; however, both are privately owned. After careful consideration, it was decided to put these two firms, together with FLT3 and CHE3 (due to

their external ownership) and WIR6 (the most difficult case) in Group A. FLT9, a privately-owned company, was on balance placed in Group B.

The final breakdown of companies between Groups A and B is set out in Figure 7-2. This framework had advantages for a study centred on understanding firms and institutions in place. First, MNEs or UK companies with HQs elsewhere, were likely to be motivated differently to invest in the area than indigenous locally owned firms. This in turn would have had implications for the embeddedness of firms, as well as for the character of their relationships with other firms and institutions. Second, this grouping of firms was consistent with studies about firms in place discussed in Chapter 2: firms within Group A had characteristics consistent with variants of the industrial complex model, and the indigenous firms of Group B were most likely to illustrate characteristics of the social network or pure agglomeration models. Third, the practical outcome was to break down the firms into two evenish sized groups; 20 firms investing into the Mersey Dee and 26 more local companies.

Figure 7-2 Division of companies between Groups A (investing into) and B (investing within)

Local Authority area		Denbighshire	Flintshire	Wrexham	CW&C	Wirral
Division of companies between Groups A and B	Group A – investing <u>into</u>	None	FLT1, FLT2, FLT3, FLT4, FLT5, FLT7, FLT8.	WRE2, WRE4, WRE6, WRE9, WRE11.	CHE1, CHE2, CHE3, CHE5, CHE8, CHE10.	WIR6, WIR7.
	Group B – investing <u>within</u>	DEN1, DEN2, DEN3, DEN4, DEN5, DEN6, DEN7.	FLT6, FLT9.	WRE1, WRE3, WRE5, WRE7, WRE8, WRE10.	CHE4, CHE6, CHE7, CHE9, CHE11.	WIR1, WIR2, WIR3, WIR4, WIR5, WIR8.

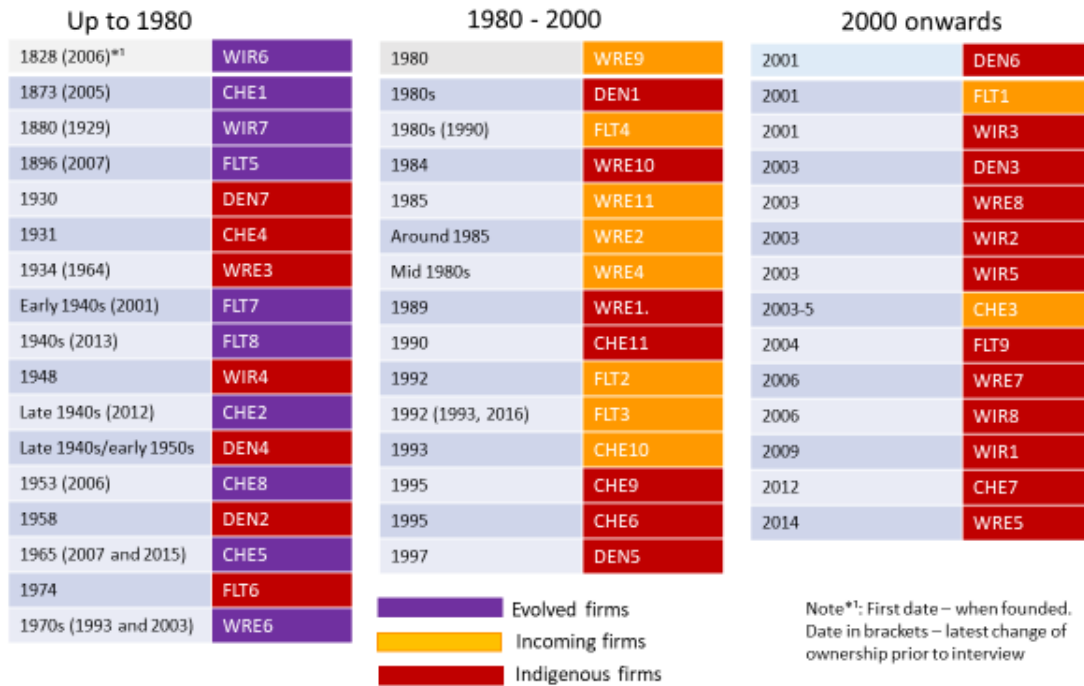
Source: Author

Fourth, it enabled a narrative that related firms to place, that connected with the industrial history of the area as described in Section 5.3. This considered the evolution of the firm,

recognising differences between those with earlier roots in the area and those coming later. A firm's start date is taken to be when it was founded or located in the area, irrespective of its ownership at that point of time, so long as there is evidence of continuity between the original firm and the company of today. Otherwise, the start date is from when a continuity of history is identified. Figure 7-3 lists all the firms by order of start date from earliest, in 1828, to most recent, in 2014. This Figure divides the firms under three headings: pre-1980, 1980-2000 and 2000 onwards, and shows whether they are evolved or incoming (Group A) or indigenous (Group B). Figure 7-4 shows the spatial location of the evolved, incoming and indigenous firms, which illustrates different geographical distribution of the firms across the area.

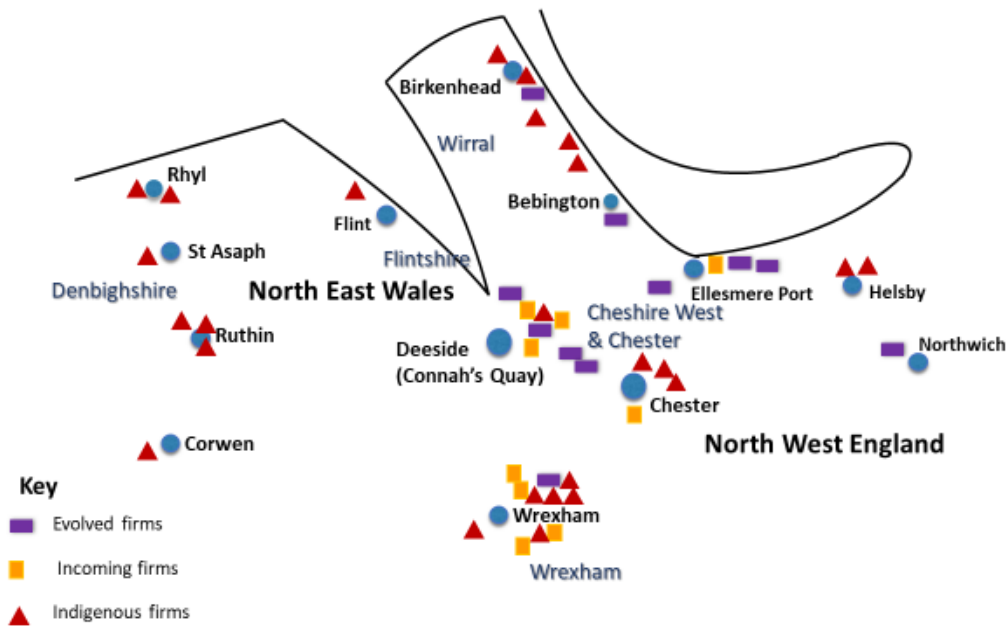
This Chapter is organised in six sections to consider the story from the perspective of the Group A or evolved and incoming firms that were owned for at least part of their histories outside of the Mersey Dee. It focuses on observed differences between evolved firms and incoming firms to contrast how each group of firms relate to place. This is by considering how they arrived there, their firm-to-firm and institutional relations and, in Chapter 9, how they view their location in the area today. Section 7.2 describes how interviewed firms came to invest in the Mersey Dee. It begins by contrasting the background of how evolved and incoming firms came to be in the area, reflecting discussion of the area's industrial history in Chapter 5. Section 7.3 sets the scene to how evolved and incoming firms conduct their supplier, customer and institutional relations by first considering how responsible local plants were for innovation and product development. Section 7.4 then contrasts how evolved and incoming firms conduct their vertical relationships with suppliers and customers. Section 7.5 examines how firms conduct horizontal other firm-to-firm and institutional relationships, again drawing out contrasts between evolved and incoming firms. Section 7.6 concludes with implications from the shared evidence for how evolved and incoming firms viewed their location in place.

Figure 7-3 Timeline for foundation of interviewed firms



Source: Author

Figure 7-4 Location of interviewed firms in the Mersey Dee



Source: Author

7.2 How and why evolved and incoming firms located in the Mersey Dee

7.2.1 A historical perspective

On both the Welsh and English sides of the border, the story behind how firms located into the Mersey Dee was influenced through milestones of industrial change of the area. Four of the 20 firms were founded in the 19th century (WRE6, CHE1, WIR7, FLT5), in an era of heavy industry. Yet, despite long histories, all four remain important in the local economy today. Six firms were founded between 1939 and 1965 (FLT7, FLT8, CHE3, CHE8, CHE5 and WRE6), associated with the industrial impact of the Second World War on the area and the emergence of the chemical industry in West Cheshire.

A further ten firms (WRE9, WRE11, WRE2, WRE4, FLT4, FLT2, FLT3, CHE10, FLT1, CHE3) entered the area from 1980 onwards to 2003. This was through a concerted drive for new inward investment, especially in NE Wales. All but one of these firms manufactures goods. The exception, CHE10, is a financial services firm positioned on the Chester Business Park. Figures 7-6 and 7-7 provide location maps of evolved and incoming firms. Discussion turns to how these firms came to be in the Mersey Dee.

7.2.2 Nineteenth-century industrial foundations

Four firms were founded in the 19th century: WIR6 (1828), CHE1 (1873), WIR7 (1880) and FLT5 (1896). All share fascinating histories of outstanding achievement, and for two of them (WIR6 and FLT5) crises and closures along their journey. Evidence pointed, as indicated in Figure 7-5, that their entrepreneurial owners took advantage of favourable geographical conditions to locate their business in the Mersey Dee. Three of the firms are today part of internationally owned companies (FLT5, CHE1 and WIR7) and the fourth (WIR6), having been publicly owned and nationalised in its history, is now privately run in NW England.

Figure 7-5 Geographical factors and founding entrepreneurs

Firm	Geographical factors	Founding entrepreneur(s)
FLT5	Availability of plenty of cheap land with river access to the sea for materials and goods, to enable expansion from original location in Stalybridge that had reached capacity.	John and Alfred Summer.
WIR6	Port facilities on the River Mersey.	William and John Laird.
CHE1	Access to salt strata 200 metres down, in North Cheshire, as a primary ingredient for making soda ash, along with sodium chloride.	John Brunner and Ludwig Mond.
WIR7	Available space on the banks of the River Mersey to build a new factory and a model village for employees.	Lord Lever.

Source: Author

Listening to interviewee observations, history for these early forming companies continues to influence company values, identity and community connections today. The founder of WIR7 (see Section 5.3.3) owned a soap manufacturing business in Warrington. In the 1880s, the company bought 56 acres of unused land south of Birkenhead on the River Mersey to expand the business. This became Port Sunlight, a factory and a model village built to house employees. A R&D laboratory was established on the site in 1899, which became a major manufacturing and innovation centre for the company. In 1929, the present company was formed from a merger of the Port Sunlight business and a Dutch company manufacturing margarine. Despite growing into a global company, founding principles remain central to the company’s ethos:

‘The mission of the company today is to make sustainable living commonplace. Lord Lever set up his soap-making business to make cleanliness commonplace. Therefore, the mission we are on today is almost a direct translation of the way it all started’ (WIR7).

And that heritage continues to guide the future:

'So, the paternalistic, caring, doing business well by doing good for the customers we serve and the environment that we live and work in, the communities that we serve, is still very much at the heart of what the business is today. So, the heritage is very important from that point of view; it is a compass, or a guiding path to the future as well' (WIR7).

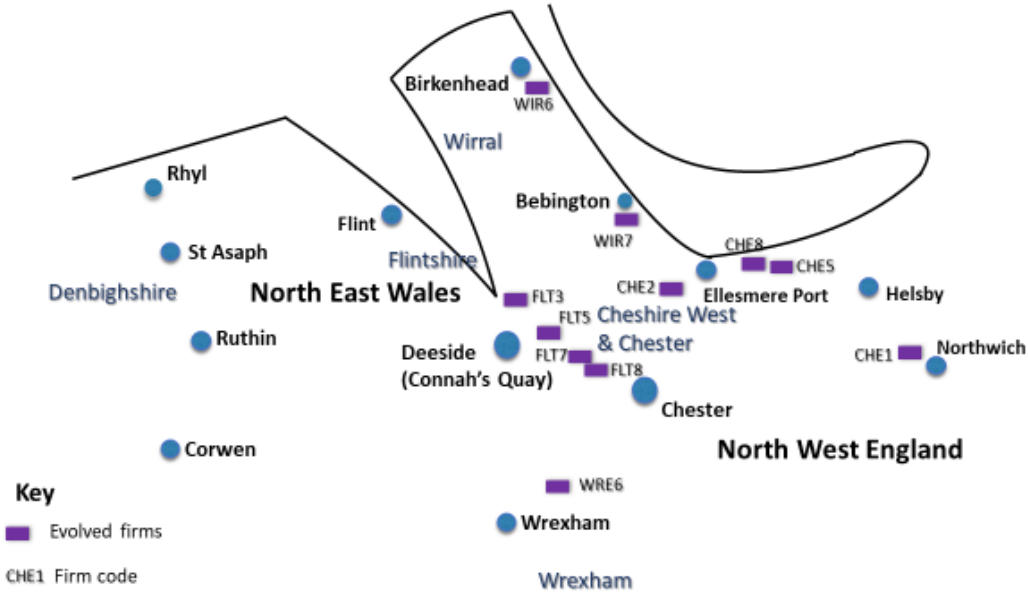
A second example, CHE1, is a chemical manufacturer. John Brunner and Ludwig Mond established the company in 1874 on a site in Northwich, Cheshire, giving access to a salt stratum 200 metres down, a primary ingredient alongside sodium chloride for making soda ash. The founders combined *'technical genius and business acumen'* to work an ammonia-soda process, when efforts by others either failed or were acquired by Brunner and Mond (Graces Guide to British industrial history, n.d.). Subsequently, the company became part of Imperial Chemicals Industry (ICI), for a time a giant of UK industrial history. Following the demise of ICI, the company went through other ownership changes and more recently became the European HQ of an Indian owned global company that remains proud of the business's long and rich history from 1874. The company's local connections were emphasised in the company interview:

'It was founded here. Every other street has got some linkage with Brunner, or Mond. We have got Brunner Library, we have Solway Road, although now the name of a rival company. There is a lot of historical and cultural significance being in Northwich for the old Brunner Mond company' (CHE1).

And so, the company is integral to the local community:

'Metaphorically, you can't swing a cat in Northwich without hitting somebody who knows somebody who has worked here. The town was built up around the plant, it's completely interlinked. This plant grew up from the late 19th Century and Northwich grew with it' (CHE1).

Figure 7-6 Location of interviewed evolved firms in the Mersey Dee



Source: Author

FLT5 is the remaining part of the Shotton Steel Works, after the closure of steel manufacture on the site in 1980. After a complex ownership history, including nationalisation and denationalisation, the site now forms part of ownership within the remaining UK steel industry by an Indian owned MNE. Given its long history, the site is integral to the experiences of its neighbouring community:

‘If you look at the past hundred years of history here, most people in this area will have had a family member who has worked here. You go onto the plant and find people whose their father and grandfather and great-grandfather might go back to 1896. That is not uncommon. We have a long history of being part of the area. If you go into Queensferry, it was really a town that did not exist until the steelworks came here and it was built around it’ (FLT5).

Being founded in 1828, WIR6 has the longest history of the interviewed companies and is amongst the most famous names in British shipbuilding history. The company’s first ship was an iron barge, applying techniques learnt from making boilers to shipbuilding. The company became prominent making iron ships and gaining major advances in propulsion. In 1903, the business merged with a Sheffield-based company making iron wheels and rails for Britain’s railways. The joint company went on to build more than 1,250 ships, including many famous

in UK marine history. In 1977, the company was nationalised, with the rest of the British shipbuilding industry, as British Shipbuilders. In 1986, it was returned to the private sector, contributing to the nuclear submarine building programme. At the programme end, the shipyard closure was announced. But part of the shipyard was taken on by another company, which itself entered receivership in April 2001. In 2005, the shipyard was bought as a privately-owned company which in 2007 bought the rights to the original company name. Today, the company has learnt from its past by diversifying from shipbuilding to become a *'marine and engineering provider, with heavy engineering infrastructure close to the sea'* (WIR6). And yet, as the interviewee pointed out, the history is central to his own experience:

'I was born, literally a stone's throw from [the company's] main gates.....My dad worked in the shipyard. My mum laundered the boilers suits for the men in the shipyard, she had a business under the railway bridge. My grandad worked in the shipyard. So, effectively, grandad went to the shipyard, my dad went to the shipyard, my two brothers went to the shipyard and so I basically followed a family trend. But I am not untypical of many from this community who have a strong history and bond with the shipyard, so that is where it all started' (WIR6).

7.2.3 The Second World War and birth of the chemical industry

As explained in Chapter 5, the Second World War left a major imprint on the industrial landscape of NE Wales and West Cheshire. FLT7 and FLT8 relate their heritage to the establishment of a 'shadow factory' at Broughton to manufacture bomber aircraft during the War. For FLT7, *'the business has evolved over the years and has always had a long-term strategic approach'* (FLT7), from manufacturing bombers, executive jets, commercial passenger aircraft to having exclusive responsibility for wing manufacture for their global company:

'We started off in 1939 as a shadow war factory, manufacturing Wellington bombers under the stewardship of Vickers Armstrong. Since then our portfolio has changed to satisfy differing needs' (FLT7).

When in 2014, FLT7 celebrated its 75th anniversary, the company specifically linked its present success with its earlier history:

'The success and growth of [the company], Broughton has seen, the expansion of the site, the development of new technology, and investment into the community and young people throughout Wales, throughout, maintaining a strong connection with its rich and cultural history' (Daily Post, 11 September 2014).

West Cheshire is an important centre for the chemical industry in the UK. As outlined above, the industry began locally with the founding of CHE1 in 1873 above the salt strata at Northwich and Middlewich. The industry spread to Ellesmere Port, with its strategic position by the Mersey Estuary entrance to the Manchester Ship Canal. Stanlow Oil Refinery was opened by Shell in 1924 and other related industries followed to the area. Company CHE8 was founded in 1953 by several oil companies to manufacture tetraethyl lead (TEL) for use in motor fuel and aviation. With ownership changes and with a strong focus on R&D, the plant has diversified away from TEL production (down from 95% to less than 10% of production) to other petroleum-based products including expanding into the personal care market.

CHE5 was constructed by Shell in 1965 as a self-contained fertiliser manufacturing plant. Today, it is one of only two remaining fertiliser plants in the UK, the other being in Teesside and both owned by the same company. Because of the sunk costs involved, without an unlikely shale gas revolution, *'nobody is ever going to build a new fertiliser facility here in the UK'* (CHE5). West Cheshire is also positioned within the NW England concentration of the nuclear industry in the UK. As a nuclear firm, CHE2 is sited on a former ordinance site from the Second World War. The site became the British site for enriching uranium when the British nuclear programme began in the late 1940s. Finally, WRE7 was one of only a few companies on the Wrexham Industrial Estate that could trace their history, including earlier ownership, in this case to Fisons, prior to 1980.

7.2.4 Post-1980 inward investment into the Mersey Dee

Given that post-1980 is more recent history, there was value in asking interviewees about what factors might have led these firms to invest in the Mersey Dee. Apart from the most recent incoming firm (CHE3), none of the interviewees were around when company inward investment decisions were taken and were therefore reliant on undocumented shared corporate memory, as for this Wrexham based company:

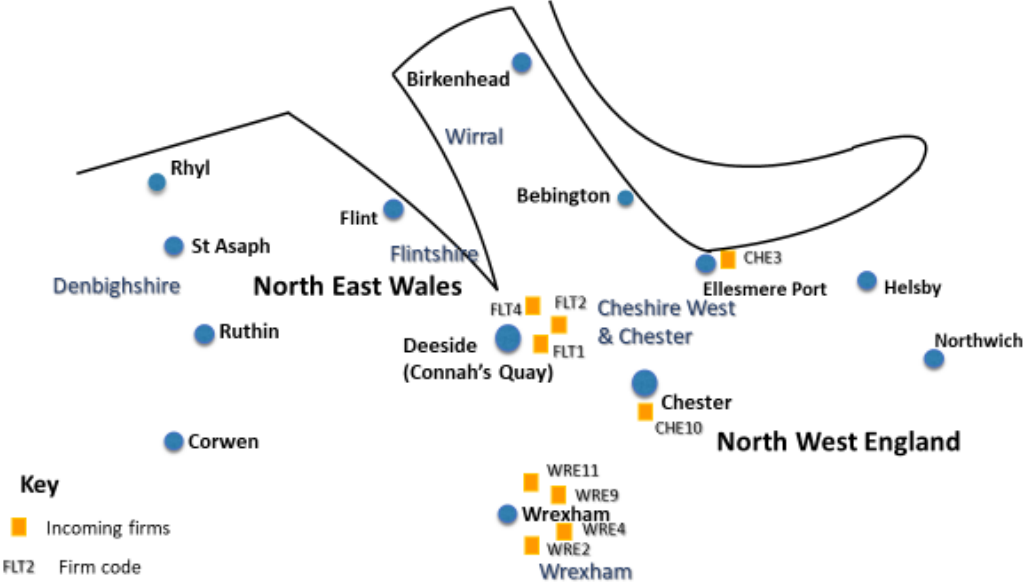
'Unfortunately, it's a bit of a Chinese whispers. We are not absolutely sure because there's been such a turnover within the company generally and we cannot find any documentation to say this is why Wrexham was chosen' (WRE4).

Nevertheless, valuable insights provide an overview of how incoming firms came to the area. These views, summarised in Figure 7-8, were consistent with a published statement by Toyota, (Section 5.3.4), giving reasons for selecting a UK and a Deeside location for factory investments. The key factors for choosing the Mersey Dee post-1980 were the availability of a skilled and flexible workforce due to the area's industrial history, connectivity to UK and European markets, suitable local infrastructure and strong institutional support. Interviewees provided further insights, one of which was the importance of financial grant incentives to most of the firms.

Company WRE9, manufacturing optical lenses, was the first of the interviewed incoming firms to invest in a plant on the Wrexham Industrial Estate. It was also the earliest Japanese company to come to NE Wales, a decision that is likely to have influenced two other of the Japanese-owned interviewed companies to choose the area: WRE2 and WRE11. Like Toyota, WRE9 was looking to open a new manufacturing facility to reinforce its market position in the UK. Up to that point, the company only had a stocktaking and distribution point in SE England. At first, the company leased a WDA building, on the Wrexham Industrial Estate, which they occupied for ten years until 1990. They took a purpose-built factory, subsequently vacated, next to their current factory on the estate. Whilst access to skills was a location factor, financial incentives were key:

'We have been here in Wrexham since 1980. The reason given why the company came was that the WDA was offering quite attractive grants for companies to invest into North Wales and the Wrexham area. That was one of the main reasons' (WRE4).

Figure 7-7 Location of interviewed incoming firms in the Mersey Dee



Source: Author

As a result, the plant was situated away from other firms in the same industry in the UK, although it is was conveniently positioned to reach their customer base. But in reply to the question of whether the same location would be chosen if the decision was taken today:

‘Honestly speaking, if the company were to do this investment again, it would question why you would want to be in North Wales. The correct answer is that this is quite a central location for our customer base. But having said that, a greater percentage of our customer base is probably located further south. Most of our competitors who are UK based tend to be more south. We are somewhat abnormal being here in North Wales’ (WRE4).

Similar views were given by another Japanese electronics company, WRE11, which also cited grants and strong institutional support from the WDA and local government as reasons for coming to the Wrexham Industrial Estate, as well as it being close to their then UK Head Office in Manchester, with good road connections into NW England.

‘If the company was looking for a new site, it is not clear whether they would come back here because obviously the location grants made available were very attractive if you are looking to site low cost manufacturing’ (WRE11).

Figure 7-8 Location factors for incoming firms

Firm location factors	Location factors for incoming firms
Labour market	<ul style="list-style-type: none"> • Access to skilled and flexible workforce with engineering background (FLT2). • Availability of labour force and competitive wage costs (WRE9). • Access to quality labour skills (CHE10).
Transport connectivity	<ul style="list-style-type: none"> • Local and motorway road connections to NW England and into Europe, via East Coast (FLT2, WRE2). • Access to local ports i.e. Liverpool, for emergency use (FLT2). • Access to Manchester Airport (FLT2). • Connectivity to other factory site in Northern Ireland and rest of UK (CHE3). • Good, rail connections to London (CHE10).
Infrastructure	<ul style="list-style-type: none"> • Site of right size on a well-prepared industrial estate, seven miles from Chester (FLT2). • Regeneration of Wrexham Industrial Estate (WRE4). • Flexible greenfield site on Chester Business Park (CHE10).
Access to UK or local customers	<ul style="list-style-type: none"> • Site close to principal customer (FLT1). • Factory to meet demand in UK cereals market (WRE4). • Factory to expand business on UK mainland (CHE3).
Place	<ul style="list-style-type: none"> • Close to Manchester sales office (WRE4). • Close to the company's UK then Head Office in Manchester (WRE11). • Chester is an attractive location that reflects the company's brand and not a premium cost location (CHE10).
Relocation financial aid	<ul style="list-style-type: none"> • Relocation financial aid (FLT2, WRE2, WRE4, WRE9, WRE11, CHE3).
Institutions	<ul style="list-style-type: none"> • Business support services to enable company and its people to integrate into local communities (FLT2). • Strong institutional support from local authorities and the WDA (FLT2, WRE11). • Good institutional support from the local authority and the NWDA (CHE3).

Source: Author

The factory started in 1985 producing video recorders and has since manufactured various products – CD players, electronic typewriters, photocopiers and DVD players and solar panels – to chase changing market opportunities. Whilst remaining part of the owning company, the plant no longer manufactures its branded products. Being cost competitive is critically important for survival and therefore:

'We probably find it more competitive to be here than the south of England in that sense. There is no doubt that when the original decision was made to come to North Wales that was probably one of the considerations. That would still apply today' (WRE11).

The other Japanese company interviewed, WRE2, was a world leading manufacturer of (now obsolete) typewriters when it opened a plant on the Wrexham Industrial Estate around 1985. It since adapted by becoming a 'recycling technology plant' to manufacture and recycle toner cartridges collected from around Europe. Apart from the advantage of being close to the company's then Manchester sales office and having good connectivity to European markets, the generous grants on offer were likely to have been an important attraction:

'We have been here in Wrexham since 1980. The reason given why the company came was that the WDA was offering quite attractive grants for companies to invest into North Wales and the Wrexham area. That was one of the main reasons' (WRE2).

However, the move was not envisaged to be long-term at the time:

'Looking back to 25 years on from 1985, one of the Japanese managers who used to work at Wrexham said that their plan was only to be based here for five years. 25 years on we are still here' (WRE2).

A USA-owned firm, manufacturing cereal products, opened on the Wrexham Industrial Estate (WRE4) in the mid-1980s. At that time, the UK accounted for 70% of the European cereals market, a share that fell to 50%. The company already had a manufacturing site at Trafford Park, Manchester and needed to expand production to meet a growing demand for breakfast cereals. Wrexham was likely to have been chosen because it was close to the Trafford factory, it offered good access to markets, there was a quality local supply of labour, the Industrial Estate had received new investment, and access to and from the Estate was being improved by the local authority. Nevertheless:

'At the time the company was particularly cash rich. They tended to build and own a manufacturing site and would have scoured the UK looking for a suitable location. It was likely that given that this area, as a former centre for coal mining and steel manufacturing in decline in the 1970s, was attractive because of the availability of financial incentives alongside expenditure on the

regeneration of the Wrexham Industrial Estate. It is likely that the company acted based on that!' (WRE4).

Two incoming firms were found on the English side of the national border, within the local authority area of CW&C. CHE3 is the most recent arrival, opening in 2003. This company was privately owned, founded in Northern Ireland in 1985 as a glass recycling and bottling factory. The firm was seeking to expand its business onto the UK mainland. At first, given that there had not been a new entrant to the UK market since 1932, the strategy was to buy a rival company. When this proved unsuccessful, the company reviewed three alternative locations for a new factory. Working with local authorities and the former NWDA, the company chose the Ellesmere Port site. Decision factors included the offer of grant aid through the UK government and NWDA and that the factory is conveniently situated for travel to Northern Ireland and the rest of the UK.

The other firm (CHE10) is the only service-based inward investing firm; a USA-owned credit card monoline business, found on Chester Business Park on the edge of Chester. Chester was attractive to the company because of local access to good quality labour skills, the availability of a greenfield site on the Business Park and good, although not stunning, transport connections. In addition, Chester was not an expensive location, compared say with London. In this respect, there were similarities with why RBS and Lloyds had set up similar functions in cities like Swansea, Cardiff and Dunfermline. Chester was also attractive as a place, which is considered further below in the discussion about institutions.

7.2.5 Differences in location factors between evolved and incoming firms

This Section has considered how evolved and incoming firms came to locate a plant, factory or office in the area, revealing marked differences between the two groups. For evolved firms, geography played an important role in location choice. As shared by FLT5 and WIR7, the area offered space combined with sea access to enable the company to expand. West Cheshire had a significant salt stratum, which when combined with access to the Mersey Estuary entrance to the Manchester Ship Canal, facilitated the beginning and subsequent development of the chemical industry in the area. WIR6 developed out of the port facilities on the River Mersey in Birkenhead. As discussed in more detail in Chapter 5, the Second World War was critical to the foundation of the aerospace industry in the Mersey Dee (FLT7,

FLT8) and the subsequent establishment of the Wrexham Industrial Estate and location of the nuclear industry locally (CHE2). Consequently, today's owners of evolved firms have in common that their industrial sites have been through, to varying degrees, complex histories of development.

The story shared by incoming firms is different. These companies were systematically attracted to inwardly invest in the area by national and local institutions in response to structural changes in the UK economy from the late 1970s to mid-1980s. Location decisions to locate in NE Wales and West Cheshire were based on a combination of competitive cost factors, as summarised earlier in Figure 7.9 and financial grant incentives (FLT3, WRE3, WRE4, WRE10, WRE11, CHE3). Several of the companies queried whether if the same decisions were taken today, the location outcome would be the same. Yet, although these companies appeared to be less embedded than the evolved companies, all interviewed incoming firms stayed. In all but two firms (FLT4, CHE3), ownership remained unchanged from the original investment.

7.3 Relationships of evolved and incoming firms

7.3.1 Introduction

Drawing on Chapters 2 and 3, the remainder of the Chapter considers how evolved and incoming firms have conducted their relations with other firms – as suppliers, customers and other firm-to-firm relations – and with institutions. This reflects on whether there are different patterns of relations within and between evolved and incoming firms.

Section 2.4.3 suggests that industrial complex firms predominantly conduct their firm-to-firm relations within the framework of the vertical hierarchy of the corporate firm to which they belong. Given that evolved and incoming firms are likely to demonstrate industrial complex characteristics, consideration was given to two issues that indicate how far the company's HQ devolved responsibility to the local plant or factory: first, by reflecting on how products produced locally have developed since the plant, factory or office was set up in the area; and, second, by assessing what responsibilities were devolved centrally to the local plant, factory or office beyond production or service delivery (including any devolved roles for product and process innovation). Once again, the analysis illustrated marked differences between evolved

and incoming firms. Attention turns to firms' vertical, or supplier and customer relations, and then to examine the horizontal, or other firm-to-firm and institutional relations.

7.3.2 Product development and innovation by evolved firms

As Figure 7-9 shows, nearly all the evolved firms have changed what they produce. This is not surprising given their longer history in the area combined with ownership changes. Nevertheless, there are important variations even within the evolved firms. Some firms report pronounced product and technological change, such as FLT7, from the Wellington Bombers of the 1940s to the composite materials in aircraft wings of today. CHE8 adapted by diversifying away from TEL towards new fuel additives, personal care and household products. FLT5 recognised that its longer-term survival depended on innovations in steel coatings. For chemical industry firms, where there was less scope to innovate with new products, emphasis was placed on improving processes (CHE1, CHE5).

Figure 7-9 Product development for evolved firms

Firm	Original products	Products today	Evidence of product innovation
FLT5	Steelmaking	Galvanising and coating of steel	Innovations in steel coatings, being further explored through collaborative industry, WG and academic supported research centre on site.
FLT7	Wellington Bombers	Passenger aircraft wings	Wing design and use of composite materials in wing manufacture.
FLT8	Same site history as FLT7. Hawker (or BAe) 125	Service Hawker and Beechcraft aeroplanes	Design modifications e.g. navigation innovations, conversion from commercial to military aircraft configuration.
WRE6	Pharmaceuticals	Pharmaceuticals, including injectable products	Product innovation at HQ in India, process innovation e.g. in working practices, in Wrexham.

Firm	Original products	Products today	Evidence of product innovation
CHE1	Production of soda ash (sodium carbonate)	Products include sodium carbonate, salt and sodium bicarbonate	About finding new product applications, process innovation and energy efficiency.
CHE2	After being an ordinance site in World War 2, became site for enriching uranium	Nuclear decommissioning	Primarily process innovation.
CHE5	Fertiliser (ammonium nitrate)	Fertiliser (ammonium nitrate)	Not a product innovating industry, using the Haber Bosch process to make ammonia, primary raw material in fertiliser. Innovation for CHE5 is about re-engineering processes to use the Haber Bosch process more effectively. ¹¹
CHE8	Manufacture tetraethyl lead	Specialist car fuel additives, personal care and household products.	Diversified TEL production (90% to 10%) by growing new fuel additive, personal care and household products.
WIR6	Shipbuilding	Marine and engineering services provider, with 'heavy' engineering infrastructure close to the sea.	The business was diversified by opening new products and markets opportunities from shipbuilding, repair and conversion to renewable energy.
WIR7	Soap manufacture	Product range of over 400 products focussed on 'health and wellbeing'.	Is one of the company's largest centres for R&D creating new and improved products for global markets.

Source: Author

¹¹ The Haber Bosch process is for the manufacture of ammonia from nitrogen and hydrogen and is the main industrial process to produce ammonia today. It is named after the German chemists Fritz Haber and Carl Bosch who developed early in the twentieth century.

Figure 7-10 also shows whether these firms are devolved wider responsibilities by their parent firm beyond production, whether their products are unique within the company and the scope for local plant or factory product and process innovation. The following observations are made relating to these two Figures. All but two of the pre-1980 firms (FLT7, FLT8) have wider responsibilities beyond production or service delivery. Indeed, CHE1, CHE5, CHE8 and WIR6 host UK or European HQ functions, FLT5 has a research centre on its site and WIR7 is a major research centre in this global company.

Figure 7-10 Site responsibilities and innovation for evolved firms

Firm	Local role beyond manufacture or service?	Produces products unique to company?	Local role in product innovation?	Local role in process innovation?	Local role in innovation
FLT5	Research centre on site	YES	YES	YES	Supports research centre on site. Firm-to-firm (with supplier FLT3) collaboration on new product development.
FLT7	NO	YES	Limited	YES	Close interaction with firm's UK R&D site at Bristol on implementation of new products.
FLT8	NO	YES	NO	YES	Process innovation to improve local productivity.
WRE6	Local product reinvestment	YES	Limited	YES	Innovation in working practices and pharmaceutical recipes. Primary product innovation central in India.
CHE1	Europe HQ	YES	Limited	YES	Limited opportunities for product innovation in chemical products. Innovation in processes and energy efficiency.
CHE2	Sole UK responsibilities	YES	Limited	YES	Joint products and collaboration within nuclear industry.
CHE5	UK HQ functions	YES	Limited	YES	Limited opportunities to innovate in fertiliser product. Process innovation to improve use of energy.
CHE8	Europe HQ	YES	YES	YES	Collaboration with UK universities in research.
WIR6	HQ functions	YES	YES	YES	Programme of product diversification.
WIR7	R&D	YES	YES	YES	Collaboration with Liverpool University as well as important R&D centre for company.

Source: Author

Key: Manufacturing companies; Services or technical services.

All but one of these firms makes products or provides services unique to the company. For example, FLT7 is the only factory that manufactures commercial aircraft wings within this aerospace global company. The exception is CHE5, which overlaps with another company plant in Teesside in fertiliser production. There are only two firms where the original and today's product are little changed: CHE1, producing chemical products, and CHE5, manufacturing fertiliser. In both cases, due to the nature of the products themselves, there is limited scope for product innovation. Four of the firms had not only seen product evolution but undertook significant local responsibility for continuing that innovation (FLT5, CHE8, WIR6, WIR7). For example, FLT5, in collaborating with its primary paint supplier (FLT3), hosts an industry, WG and academic supported research centre on its site to progress advances in the application of coating technologies. As a company it recognises the needs to collaborate to bring about more fundamental product change:

'One of the reasons why we are quite successful is that we have innovated over time. We are considered the market leader in the UK, and probably so in Northern Europe. That comes on the back of having a better and more innovative product. Inevitably, people copy and so we must keep reinventing the product' (FLT5).

Four of the evolved firms exercised significant local responsibilities for product innovation (FLT5, CHE8, WIR6, WIR7). As will be shown in Section 7.5, evolved firms with such devolved responsibilities might collaborate horizontally, for example with universities. This is in addition to doing so vertically within the parent company, or as in the case of FLT5, with a significant supplier (FLT3). Three companies (FLT7, FLT8, WRE6) exercise limited local responsibility to contribute to product innovation, which is primarily carried out elsewhere in the company. Where scope for product innovation is limited due to the character of products produced (as for CHE2 and CHE5), emphasis is instead placed on process innovation, to improve productivity and reduce costs.

7.3.3 Product development and innovation in incoming firms

Figures 7-11 and 7-12 provide information on product development and local firm responsibilities for incoming firms. In contrast to evolved firms, Figure 7-11 shows that for incoming firms today's products are more likely to be similar to when the factory or office was opened. This accords with the comparatively more limited responsibilities delegated by

the parent company to the local plant, and it also coincided with the absence of uniqueness of product and setting up cost competition with other factories in the same company in other global locations.

Figure 7-11 Product development for incoming firms

Firm	Original products	Products today	Evidence of product innovation
FLT1	Aircraft wing stringers	Aircraft wing stringers	No information.
FLT2	Petrol/diesel car engines	Hybrid car engines	Innovation in hybrid engines.
FLT4	Can ends	Can ends	Same product.
WRE2	Typewriters	Environmental recycling plant	Change of site purpose.
WRE4	Breakfast cereals	Breakfast cereals	Breakfast cereals, with product changes.
WRE9	Ophthalmic optical lenses	Ophthalmic optical lenses	Enhancement in specification to enable customisation to patient needs.
WRE11	Video recorders and other similar electrical products	Microwave ovens and other similar electrical products	Looked to diversify into solar panels, but not cost effective due to government policy changes.
CHE3	Glass recycling and manufacture	Glass recycling and manufacture	Advanced approach towards supply chain integration since factory opened.
CHE10	Monoline credit cards	Monoline credit cards	Changes in market, marketing and branding.

Source: Author

Unlike evolved firms, only two firms (CHE3, CHE10) exercised wider responsibilities beyond production or service delivery. CHE3 was formerly a privately-owned firm, taken over by a Spanish publicly owned company, but continues to exercise HQ functions with considerable

freedom of operation. CHE10 is the only financial services firm amongst this set of companies and provides the company's sole UK office providing monoline credit cards for the UK market.

Unlike the above illustrations for evolved firms, responsibility for product development in incoming firms is invariably retained by the parent company rather than the local Mersey Dee plant. Products manufactured at incoming plants are therefore more likely than for evolved factories to be replicated by other company plants in other global locations (FLT2, FLT4, WRE2, WRE4, WRE9). For example, the one factory that has completely changed in purpose (WRE2), from manufacturing typewriters to becoming an environmental recycling plant, does not employ advanced technologies, but replicates functions at other company factories in China and Slovenia. This goes to show that product evolution in incoming firms is limited. Furthermore, where it does occur, it is usually external to the local plant, but internal to the company. For example, FLT2 manufactures advanced hybrid automotive engines, but the product and the technologies involved are designed centrally within the company. As a consequence, local plants will be challenged by HQ to improve plant productivity as part of inter-company plant competition for production. CHE3 and CHE10 were the exceptions regarding local responsibility, given that they exercise HQ functions locally.

Figure 7-12 Site responsibilities and innovation for incoming firms

Firm	Local role beyond manufacture or service?	Produces products unique to company?	Local role in product innovation?	Local role in process innovation?	Local role in innovation
FLT1	NO	NO	NO	Limited	Innovation is central responsibility. Local site is distribution centre for principal customer (FLT7).
FLT2	NO	NO	NO	YES	Innovation is conducted centrally not locally. Local lean manufacturing centre provides training to other firms.
FLT3	NO	YES	YES	YES	Supports research centre on FLT5 site. Firm-to-firm (with customer FLT5) collaboration on new product development.
FLT4	NO	NO	NO	YES	Product innovation conducted centrally and not locally. Focus on process efficiency.
WRE2	NO	NO	NO	YES	Product innovation conducted centrally not locally. Focus on process efficiency.
WRE4	Europe supply depot	NO	NO	YES	Product innovation conducted centrally not locally. Focus on process efficiency.
WRE9	NO	NO	NO	YES	Product innovation conducted centrally not locally. Focus on process efficiency.
WRE11	NO	NO	NO	YES	Product innovation conducted centrally not locally. Focus on process efficiency.
CHE3	UK HQ	YES	YES	YES	Local responsibility for product and process innovation.
CHE10	UK HQ, marketing, sales, IT etc.	YES	Limited	YES	Product offers limited scope for product innovation. Focus on process innovation.

Source: Author

Key: Manufacturing companies; Services or technical services.

As shown in Figure 7-12, the only incoming firm that had changed significantly in its production role is WRE2. Its original product, typewriters, were 'state of the art', when the company came to Wrexham, but technological change in the form of the personal computer made the product obsolete. The company responded by altering the factory's purpose to become an environmental recycling centre for printing inks. Another firm (WRE11) has constantly responded to market demand by adapting its production between different types of electrical products. Although owned and known by its parent company's name, it no longer produces company branded products.

Products of incoming firms might be more mature than new, although there are illustrations of product innovation, as mentioned above in the case of FLT2. Technological change has changed other products, such as the customisation of optical lenses to individual prescriptions. Apart from advances in car engines and ophthalmic optical lenses, technologies employed by incoming firms are unlikely to be described as advanced.

7.4 Suppliers and customer vertical firm relationships

7.4.1 Introduction

This section considers the companies' supplier and customer relationships. Figure 7-14 maps supplier and customer relations of the evolved firms and Figure 7-15 for the incoming firms. Only WIR7 is excluded from this analysis, because of shortage of interview time to cover this topic. Despite relying on a single interview source for each firm, sufficient information was provided to illustrate each company's pattern of local (i.e. within the Mersey Dee), UK, Europe and global supplier and customer relations. However, for some firms, local may overlap with North Wales and NW England and global may coincide with European trade relations.

Sufficient information was shared to distinguish between trade in services, raw materials and completed products (including parts). The Figures also show within company supply or customer movements, where trading movements are controlled centrally. Differentiation is made between manufacturing and service or technical

services firms, recognising that the former are more likely to have developed supply chains than the latter. For example, incoming CHE10, as a financial services firm, identified no supply chain. Figures 7-13 and 7-14 also differentiate between primary – or important – and secondary – or minor – sources for supplies. As the following discussion shows, there are important differences between the evolved and incoming firms in their customer and supplier relationships.

7.4.2 Supplier relationships

Overall, patterns of supplier relationships for evolved firms are more complex than for incoming companies. Evolved firms were more likely than incoming firms to use local to UK suppliers, with FLT5, FLT7, CHE1, CHE2 and WIR7 sourcing locally. FLT7 has the most developed local and UK-based supply network. Whilst the company states on its website that it works through its formal procurement processes with more than 12,000 suppliers worldwide, it has a network of suppliers locally, in Wales and the UK. The firm places over £100 million worth of orders annually with Welsh firms and they have at least three tier one UK suppliers. Of all these firms, FLT7 also operates closest to the hub-and-spoke model as described in Chapter 2 for its supply relationships. Firm FLT1 opened its Deeside branch solely to be close by to supply the FLT7 factory. CHE2 co-operates within the nuclear industry in NW England and North Wales, recognising that:

‘The NW [England] does have a large nuclear workforce and is a hub for nuclear activities....So being here, we are in close proximity to a lot of potential suppliers, particularly engineering companies in the nuclear market’ (CHE2).

As identified earlier, FLT5 has a close inter-dependent relationship with a local paint supplier (FLT3), jointly sharing in product development and innovation. This includes being part of a research and test centre located on the FLT5 site that has industry, government and academia partners. This *‘tests and demonstrates new applications of their products’* (FLT5). As a result, *‘it is a supply chain relationship, not a supply customer one. It is much closer than that’* (FLT5). Not only are they dependent on each other, they have a clear commercial rationale to cooperate on innovation in coatings.

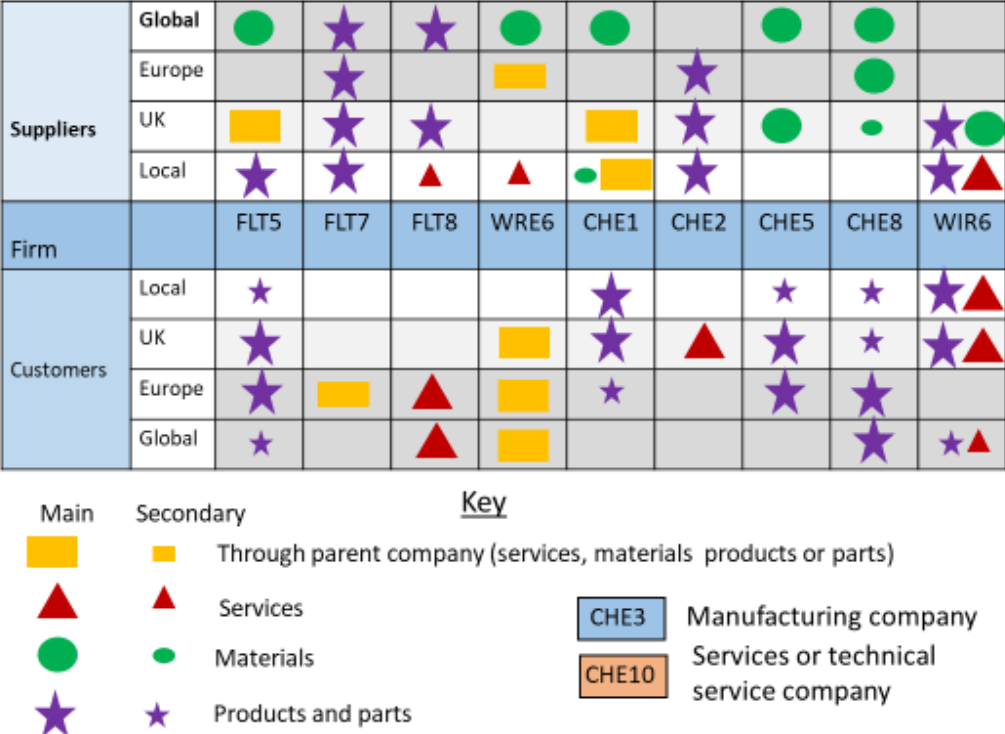
WIR6 has historically had a local supply chain, particularly for services and commodities (including from indigenous firm WIR3).

By comparison, none of the incoming firms has significant local supplier relationships, with just FLT1, WRE4 and WRE11 reporting using local services. Only two incoming firms receive significant supplies from within the UK; WRE2 receives empty toner drums and print cartridges for recycling and WRE4, wheat through centrally negotiated commodity agreements. Another company reported the movement of its supply chain away from the UK to Central Europe:

'Since the 1989 decision by the company to open the factory here in Deeside, there have been huge changes in the supply chain. Even before the financial crash, the eastward shift in supplies was clear, particularly in tier one, but also tier two suppliers, who had multinational capacity and were upping sticks and closing UK plants. Off they would go to Poland, Hungary and the Czech Republic and even further East and the Far East' (FLT2).

Today, with the company looking centrally at its supply base European wide, the factory has *'very few suppliers in Wales'* and *'probably a dozen in the whole of the UK'*, a critical issue *'if we are going to improve our cost competitiveness, because at the moment we are at a distinct disadvantage'* (FLT2). In the early days of the plant, before the company invested in plants in mainland Europe, the proportion of local suppliers was much higher.

Figure 7-13 Supplier and customer relationships for evolved firms



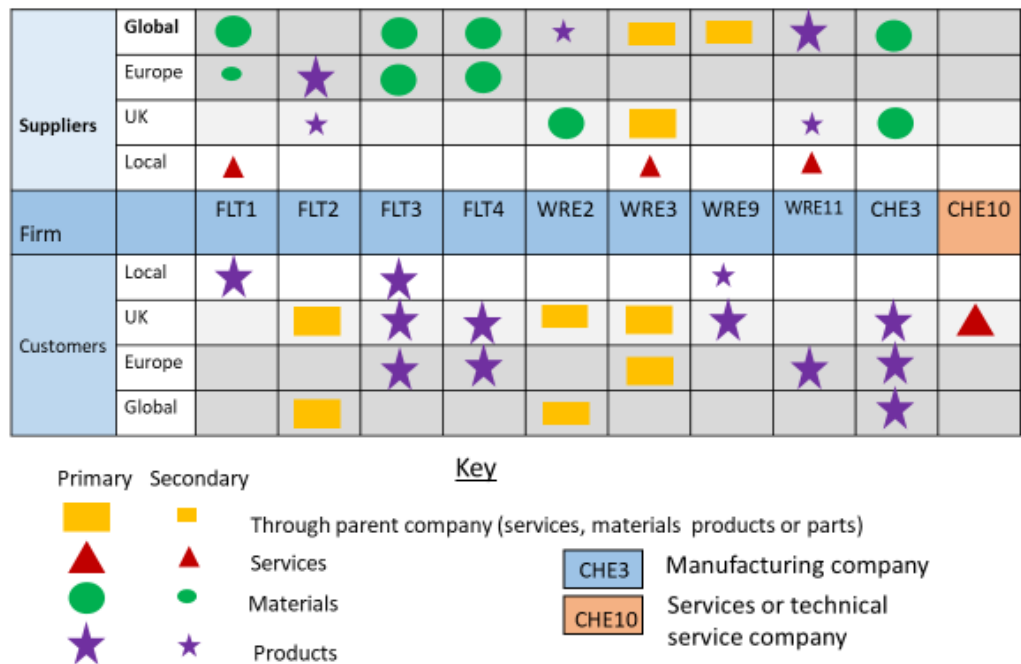
Source: Author

Whilst four evolved firms (FLT7, WRE6, CHE3 and CHE8) and three incoming companies (FLT2, FLT3, FLT4) source supplies from Europe, overall, global sources were more important than European points of supply for both sets of firms. Evolved firms globally source raw materials (FLT5, WRE6, CHE1, CHE5, CHE8) and two companies in the aerospace industry buy products and parts (FLT7, FLT8). Incoming companies also buy raw materials globally (FLT1, FLT3, FLT4, WRE4, CHE3). Only two of the incoming firms source products or parts globally: WRE9 is supplied unfinished or standard ophthalmic lenses from its own company factories in Asia; WRE11 globally purchases components for domestic electrical products.

As suggested above, there is a pattern amongst both evolved and incoming firms for central sourcing of supplies. Of the evolved firms, FLT5 is supplied steel from the company’s plant in South Wales, which arrives after a seven-hour journey on their own rail line. CHE1 has both local sources of raw materials in Cheshire and access to a large quarry in the Peak District, connected to Northwich by rail. Amongst the post-

1980 firms, two companies source centrally. The purchase of cereals for manufacture of breakfast cereals is organised through WRE4's regional (European) HQ in Ireland. As indicated above, unfinished and standard ophthalmic lenses are provided through WRE9's own Asian factories.

Figure 7-14 Supplier and customer relationships for incoming firms



Source: Author

7.4.3 Customer relationships

Differences in complexity of supplier relationships between evolved and incoming firms are not replicated in customer relationships. Two of the evolved and three of the incoming firms trade through their parent companies. Of the evolved firms, FLT7 solely manufactures aeroplane wings for a global aerospace company. Completed wings are flown for aircraft assembly to Hamburg, Germany and to Toulouse, France (or for one plane type, transported by barge). For incoming FLT2, engines manufactured at the Deeside plant are transported for final car assembly to company plants in the UK, South Africa, Turkey, Brazil and Japan. Unlike FLT7, the Deeside FLT2 plant is not the only site manufacturing hybrid engines within the company. For the

second evolved firm (WRE6), sales are processed through another subsidiary company of the parent firm based in Switzerland. For incoming firms WRE2 and WRE4, sales distribution is organised centrally, through the company's European HQ.

There were examples of local customer relationships across both sets of firms. For evolved CHE1 and CHE8, local trading relationships arise from the historical concentration of the chemical industry in Cheshire. Evolved WIR7 trades with ferry operators and port users, many of which function from Merseyside and NW England. Incoming plant FLT1 is positioned on the Deeside Industrial Estate solely to supply manufactured parts to and provide close liaison with FLT7. Similarly, as outlined above, incoming FLT3 is a primary customer of evolved FLT5, with close mutually supportive relationships, and incoming FLT3 has its key local customer on the Deeside Industrial Estate (FLT5), with whom it has an inter-dependent relationship.

There is a mix of UK, European and global trading relationships amongst both sets of firms. Of the evolved firms, only CHE2 and WIR7 primarily trade in the UK. Seven out of the nine firms analysed trade in Europe and five trade internationally, beyond Europe. As already shown, FLT7 manufactures aircraft wings for assembly at company factories in Europe. FLT5 trades in the UK, Europe and, on a more limited basis, internationally. As with its suppliers, it consistently runs close customer relationships involving trust:

'We collaborate a lot with our customers. That is important to them as well. From here we supply a small number of big customers. When we supply a customer, they would typically buy 70% or so of their coated steel from us. We think of it as a partnership' (FLT5).

Although FLT8 trades globally, customers bring planes to the Broughton site for servicing or adaptation. CHE5 primarily supplies farmers in the UK but has also exported into Europe. CHE8 primarily exports to Europe, with Germany being a large market, and internationally. Such relationships will include collaborative customer relations, including joint research programmes for product development.

For the incoming firms, two serve UK markets only. WRE9, delivers to independent opticians across the UK. CHE10 supports its network of credit card customers within the UK. Only five of the ten firms serve markets in Europe and three more trade internationally. As shown above, FLT2 supplies engines that go into car assembly at the company's UK and international plants in Turkey, South Africa and Japan. FLT3 and FLT4 have stable customer relationships in European countries. WRE11 and CHE3 are likely to have both stable and transactional customer relationships in Europe, and in the latter case more globally.

7.4.4 Comparing supplier and customer relations of evolved and incoming firms

This section has mapped and compared supplier and customer relationships of evolved and incoming firms. From this analysis, the following key observations may be made. First, the vertical relationships of evolved firms are overall more complex than those of the incoming firms. This is particularly so in the case of their supplier relationships. They are more likely to use local suppliers and have a wider mix of UK, European and global suppliers. Whilst this differentiation is not so strong for customer relationships, nevertheless, amongst these companies, evolved firms are slightly more likely to have a mix of UK, European and global trading relationships. Incoming firms are slightly more inclined to focus their trade towards the UK.

Second, most of these firms form part of MNEs; only FLT1, FLT8, CHE3 and WIR7 were privately owned at the time of interview and CHE2 forms part of a company owned by national governments. Within the MNEs there are more examples of within-company trading linkages in the incoming firms than the evolved firms. This fits with wider patterns of difference between the two sets of firms. These include, as pointed out previously, that evolved firms are more likely to produce products unique within the company (e.g. FLT5, FLT7, CHE2, CHE8, WIR6, WIR7).

Third, whilst the interviews did not seek to differentiate between transactional and stable supplier and customer relations as described in Chapter 2, there was enough information to find the emergence of vertical collaborative (or embedded) relationships, involving longer-term contractual relationships that revolve around sharing tacit knowledge, by cooperation or joint problem solving. The firms most

closely associated with such behaviours are evolved firms. Of these, FLT5, works closely on innovation in steel coatings with its primary supplier found nearby, post-1980 FLT3. As will be seen in Section 7.5, these patterns are further illustrated in horizontal non-trading firm-to-firm and institutional relations.

Fourth, despite considerable discussion both locally and nationally about the importance of supply chains and clusters, there was little evidence found for strong local supply relations beyond FLT7, in the aerospace industry, CHE2, in the nuclear industry and FLT5, with a local coating supplier (FLT3). Indeed, as the interviews progressed an overview emerged of trading relationships within all the interviewed firms. As discussed earlier, FLT7 and possibly CHE2, comes closest to the hub-and-spoke model described in Chapter 2, at least within their supplier relationships. MNE incoming firms, such as FLT2, WRE2, WRE3, WRE9 and WRE11, more closely reflected the satellite model of Chapter 2, with limited to no significant supplier and customer relations in the local economy.

7.5 Other firm-to-firm and institutional relations

7.5.1 Introduction

This section considers firms' horizontal non-trading firm-to-firm and institutional linkages. Figures 7-15, for evolved firms and 7-16, for incoming firms map on the left side feedback where firms collaborate formally and informally with 'competing' and 'collaborator' firms. On the right side they summarise feedback on institutional relations. This includes community, business or professional associations, university collaboration and engagement with local and national government. As for supplier and customer relationships, information presented is reliant on a single interview source from each firm. Whilst the results give an overview of firms' horizontal relations, they cannot be relied upon to present a comprehensive map of all such relations conducted by each firm. The following discussion considers similarities and differences between evolved and incoming firms. Where proper, distinctions are made with reference to the three different levels of horizontal relations as set out in Section 2.2; limited, associative and trusting, with a particular focus on evidence for collaborative trusting relations.

7.5.2 Horizontal firm-to-firm collaboration

Figures 7-15 and 7-16 show that there was no evidence from interviews of non-trading collaboration between either the evolved or incoming firms with competing or collaborator firms. There were just two examples of informal collaboration. Incoming FLT2 gives training, particularly in Wales, through its Lean Manufacturing Centre seminars, which raise funds that are donated to organisations in the local community through the company's charitable trust:

'We are famous for being good at manufacturing. We have set up a small team of people who will go out and pass on our knowledge, in partnership with the Welsh Government' (FLT2).

This opportunity is provided, not just to manufacturing plants, but also to other companies, for example in the food industry, local schools, medical and other public sector bodies:

'Of course, we are into manufacturing processes, but we can adapt the basic principles into virtually anywhere in commerce and the public sector' (FLT2).

The other example was how incoming and privately owned FLT8 *'tends to form relationships'* of an informal nature with other companies in the same industry with whom they may appropriately at different times both compete and collaborate.

7.5.3 Relations with governance and economic institutions

As illustrated in Figures 7-16 and 7-17, there are more examples of engagement with institutions. The interviews found five settings for such relations: community and schools investments; local partnerships and consultation; participation and membership of business associations and networks; university and FE collaboration; and relations with national and local government, including sub-national institutions such as LEPs. This Section considers what firms investing into the Mersey Dee shared under each of these setting.

Community and schools' investment

Firms were asked whether and, if so, how they engage with their local communities. Responses described three types of engagement: social causes; schools and community or partnership engagement. Six out of nine evolved firms¹² and six out of ten incoming firms supported local charities or causes. Approaches depended not on being in either firm group, but on whether the company has a corporate responsibility strategy (CSR).

For firms with a CSR, giving was more targeted. FLT2 has a global CSR, that sets overall priorities, but devolves operational responsibility regionally (in Europe) and then locally (Burnston and Deeside in the UK). A UK charitable trust has been set up to focus on causes within three priorities: road safety; social exclusion/deprivation; and health. As a food manufacturer, WRE4 reinforces its company ethos through donations to support local food banks, giving breakfast at a local homeless charity and supporting breakfast clubs. FLT7 operates an employee-led charity challenge scheme. But with its locations at Bristol and Broughton, it supports national rather than local causes. Except for CHE10, other evolved firms (WRE6, CHE1, CHE2, CHE5, CHE8) and incoming firms (FLT4, WRE9, WRE4, CHE10) that support community causes, do so on an ad-hoc basis.

CHE10, a financial services firm found solely in the UK on Chester Business Park, is a particular case, in that its community sponsorship is closely connected to place – in its identification with Chester. As a result: *'I can't say enough about the importance of the community investment strategy'*, in that, *'we sponsor all these things and so our name is everywhere in Chester'* (CHE10), given that:

'A lot of people who have our plastic [credit cards] may have no notion that we are here in Chester, but I think that a lot of people do. If you have been a customer for a while, you will get your statements, you will see our website, the contact us bit, that Chester is there. For the people who are in Chester, who are the local community, there is twenty years

¹² Due to time limitations, this issue was not discussed in the interview with firm WIR7.

of track record of community projects, volunteering and sponsoring things' (CHE10).

Six of the evolved and five of the incoming firms engage with local schools, primarily to promote STEM. Activities include sponsoring schools and their projects (FLT2), building relations with a local school(s) (FLT3, CHE1) and receiving school visits (FLT4, WRE4, WRE9, CHE5). As one incoming firm explained:

'We have school placements every year. It's done properly. They come with their teacher. They are given activities by area in the factory and at the end of the week they are given the technology to present back what they have learnt and what they feel we could do better and how it is important for their future career development. They all want to be engineers and so we do it regularly' (WRE4).

One evolved firm, FLT7, employs a full-time schools' liaison officer to build relationships and raise awareness of what the company does and the career opportunities it offers through the recruitment of some 100 apprentices a year.

Figure 7-15 How evolved firms work with other firms and institutions

Firm to firm collaboration		Firm	Institutions			
Formal collaboration	Informal collaboration		Estate/Community (CSR)	Business/professional Associations	University and FE collaboration	National and local government
★		FLT5			FE	A
★		FLT7	▲ ▲	■ ■ ■	FE	A
	★	FLT8			FE	R
		WRE6	▲	■		
		CHE1	▲ ▲	■ ■		
		CHE2	▲ ▲	■ ■ ■	FE	
		CHE5	▲ ▲	■	FE	
		CHE8	▲ ▲		FE	
		WIR6	▲ ▲	■	FE	
		WIR7		■	FE	

Source: Author

Key

Business and professional associations

-  West Cheshire & North Wales Chamber of Commerce & Industry
-  Manchester Chamber of Commerce & Industry
-  Wirral Chamber of Commerce & Industry
-  Institute of Directors
-  Confederation of British Industry
-  Engineering Employers Federation
-  Industry Professional Associations
-  Cheshire & Warrington LEP
-  Federation of Small Businesses
-  Cheshire Business Leaders
-  North West Leadership Team
-  Liverpool City Region LEP

Community investment



-  Community investment and charities
-  Local schools engagement
-  Deeside Enterprise Board
-  Wrexham Industrial Estate Forum and/or HR Forum

University and Further Education engagement

-  Skills development
-  Board/Advisory Member
-  Knowledge development partnerships
-  Work links
-  Research/Chair/PhD sponsorship

FE FE Skills development and/or apprenticeships

Firm to firm collaboration

-  Collaboration with competitor/collaborative firms
-  Collaboration with customer/supply chain firms

Welsh government 'anchor' and 'regionally important' firms

- A** Anchor firms
- R** Regionally important firms

Figure 7-16 How incoming firms collaborate with other firms and institutions

Firm to firm collaboration		Firm	Institutions			
Trust-based relationships	Informal collaboration		Estate/Community (CSR)	Business/professional Associations	University and FE collaboration	National and local government
		FLT1		■		
	★	FLT2	▲ ▲ ●	■	⬠ FE	A
★		FLT3	▲	■	⬠	
		FLT4	▲ ▲	■	FE	
		WRE2	▲ ▲ ●			
		WRE4	▲ ▲ ●		FE	R
		WRE9	▲	■ ■	⬠ FE	
		WRE11	▲ ●	■		A
		CHE3		■ ■	FE	
		CHE10	▲	■		

Source: Author

Local partnerships and consultation

A minority of companies engage with other firms on industrial estate partnerships in Deeside and Wrexham (FLT2, FLT3, FLT5, WRE2, WRE4, WRE9, WRE11), for information sharing and consultation with the local authority. All but one, FLT5, are incoming firms. FLT2 and FLT5 have representation on the Deeside Enterprise Zone Board, which gives advice to the WG on the delivery of the Enterprise Zone.

Four of the evolved companies (FLT5, CHE1, CHE2, CHE5) and none of the incoming firms talked about the significance of local community relations to the successful operation of their business. Both CHE2 and CHE5 recognise that because of the nature of their business – nuclear processing and fertiliser manufacture – it was essential to gain the trust of local communities:

'I think we feel that we get our license to run for what we do from the community around us. It's for us to give them trust and confidence that we are a responsible operator and to allow us to get on and do it' (CHE5).

As a nuclear processing site, CHE2 pays close attention to its relationship with the surrounding community and values its support for activities carried out at the site. On the other hand, CHE1 felt that this involvement with the community could be stronger:

'We know that when things come out, for example planning applications, and where you actively need the community on board, it is more important that you have longevity of connections with the community' (CHE1).

A similar point was made by FLT5. For many years in its history, the firm was the dominant local employer. Following the closure of the Shotton Steel Works in 1980, there was a big dent in the reputation of what was left of the company. For 30 years they were forced to let people go rather than take new people on, with no significant new recruitment since 1990. With an ageing workforce, the company is conscious of

its lost connections with the local community and how important it is in rebuilding their workforce for the future:

'We have got a huge task to try to project ourselves to the local community, and particularly the educational establishment, to say that we are here and that we can offer a very interesting and well-paid career and that over the next ten years we will have to take on quite a number of people. But it is difficult to start from scratch.' (FLT5).

Business associations and networks

Companies were asked about membership of business associations. Unsurprisingly, as primarily large companies, none of the evolved or incoming companies were members of the Chamber of Commerce.¹³ Three of the pre-1980 (FLT7, CHE1, WIR7) and none of the post-1980 firms were members of the CBI. FLT7 is represented on the CBI Council for Wales. Membership of professional associations, including the Engineering Employers Federation is more common within both groups of firms (FLT1, FLT2, FLT3, FLT7, WRE9, CHE2, CHE5).

However, feedback is likely to understate business network activities in practice, as indicated further in Chapter 8 for indigenous companies. Cheshire Business Leaders is a membership organisation and an informal grouping, in this case, for some of the largest companies in Cheshire. It seeks to strengthen business development in the area by acting as a sounding board for promoting Cheshire and Warrington and supporting local projects (INS1) (Cheshire Business Leaders, n.d.). Regionally, the NW Business Leadership Team seeks to champion a vision for the NW's long-term future. This brings together leaders of national and international companies with substantial business interests in the region. Three of the interviewed companies – incoming CHE3 and evolved CHE4 and WIR – are represented at CEO level (NW Business Leadership Team, n.d.). Based in North Wales, the NWBC is the private sector representative body on the NWEAB for both Welsh and English organisations, as well as more local county level networks. Its members include the FSB, two Chambers of Commerce, North

¹³ The West Cheshire & North Wales Chamber of Commerce and Industry includes members from all of the Mersey Dee apart from the Wirral, which are represented by the Wirral Chamber of Commerce.

Wales Tourism, North Wales Exporters Club, Wrexham Business Professionals (WBP), IoD, Gwynedd Business Network, MakeUK, Creative North Wales as well as Bangor and Wrexham Glyndŵr universities and Grwp Landrillo and Coleg Cambria FE colleges.

Collaboration with universities and FE

Companies engage with universities and FE in different ways. An underlying indicator of the nature and depth of engagement lies in different patterns both within and between evolved and incoming firms in their entry level recruitment of graduates and apprenticeships for 16-18 plus year olds. As Figure 7-17 shows, six of the evolved firms recruit graduates, whilst none of the incoming firms do. By comparison six of the evolved and five of the incoming firms recruit school leaver apprentices, with three of the evolved firms recruiting both graduates and school leavers. Just one evolved firm compared with five incoming firms had no graduate or school leaver entry scheme, although two of these incoming firms have had apprenticeship schemes previously but were not recruiting at the time of interview.

The primary focus for firms' collaboration with FE is for apprenticeship and other training. The FE provider in NE Wales is Coleg Cambria, which received universal approval from local companies, with comments such as '*we use Coleg Cambria; they are very good*' (FLT8) being typical. Coleg Cambria was formed through a merger of the former Deeside College and Yale College, Wrexham. At least evolved FLT7, FLT8 and incoming FLT4, WRE2 collaborated with Coleg Cambria on apprenticeship and other training. FLT7 has the largest apprenticeship programme in the area, with around 100 apprentices annually for their Broughton and Filton, Bristol sites, which they also open to their local supply chain network. An important local collaboration is between Coleg Cambria, Wrexham Glyndŵr University and the WG with firm FLT7 in operating an industrial training centre on the Hawarden Industrial Park in Broughton, to develop FLT7's employees and apprentices in composite manufacturing skills. Firms on the English side of the border used TTE (Technical Training College) at Ellesmere Port (e.g. CHE2), Mid-Cheshire College (e.g. CHE1) and the Maritime Engineering College at Birkenhead (e.g. WIR6).

Excluding advisory board appointments to universities (FLT2, WIR6) and considering that incoming FLT3's supplier/customer relationship is with evolved FLT5, otherwise all firm-to-university collaborations amongst firms considered in this Chapter occurs amongst evolved firms (see Figure 7-18). Of further interest is that these (FLT5 with FLT3, FLT7, CHE8, WIR7) involve trust-based institutional relations.

The mutually supportive customer/supplier relationship between FLT5 and FLT3 was discussed earlier in 7.4.2. Not only are they dependent on each other, as customer and supplier, they have a clear commercial rationale to cooperate to innovate in steel coatings. FLT5 recognises that its success has come through innovation. It has around 70% of market share in the UK and is likely the market leader in Europe. But there is constant pressure to achieve more than incremental change to prevent the product from reaching the end of its life cycle. As a result, both firms support the Sustainable Building Envelope Centre (SBEC), a research centre found on the site of FLT5 that has industry and academic partners,¹⁴ together with the WG. Here the focus is on accelerating the development of low and zero carbon solutions for the built environment, using steel in combination with other materials. The aim is to create a construction process which would enable the façade of buildings – roofs and walls – to be transformed from a passive energy containment role to active generation, storage and management of energy, in which innovation in coatings is part of the process:

'The key thing that we are trying to do is to develop a modern technology rather than an old technology, transforming a steel mill into producing modern products. Steel is seen as an ugly duckling, pollution-producing product. But when you plug it in it turns into a beautiful product. It produces free energy' (INS8).

As outlined above, FLT7 works in close partnership with Wrexham Glyndŵr University, Coleg Cambria and the WG to run the composite training and development centre at Broughton. The centre offers training from and beyond craft apprenticeship level, through HNC/HND to foundation, honours, masters and doctorate degrees. The

¹⁴ The Local Carbon Research Institute, comprising staff from Aberystwyth, Bangor, Cardiff, Glyndŵr and Swansea Universities, supported by the Welsh Government.

university also leads research at the centre targeted at developing faster manufacturing and processing techniques for composite materials (INS13). CHE8 does a lot of work with UK universities, with 20 to 30 project collaborations around the UK.

Figure 7-17 Graduate and school leaver recruitment

Categories	Recruit graduates	Recruit apprentices (aged 16-18+)	No specific school leaver/graduate recruitment** ²
Evolved Pre-1980	<u>NE Wales</u> * ¹ FLT7, WRE6	<u>NE Wales</u> FLT5, FLT7, FLT8	<u>NE Wales</u> None <u>NW England</u> CHE1
	<u>NW England</u> * CHE2, CHE5, CHE8, WIE7	<u>NW England</u> CHE2, CHE5, WIR6	
Incoming - Post-1980	<u>NE Wales</u> None	<u>NE Wales</u> FLT2, FLT4, WRE4, WRE9	<u>NE Wales</u> FLT1, FLT3, WRE2, WRE11
	<u>NW England</u> None	<u>NW England</u> CHE3	<u>NW England</u> CHE10
Notes * ¹ - NE Wales – Denbighshire, Flintshire and Wrexham; NW England – CW&C and Wirral. * ² -Firms WRE11 and CHE1 have recruited apprentices but had no recruitment plans at time of interview.			

Source: Author

Being an important R&D centre for this MNE company, WIR7 values the importance of horizontal partnerships for building a creative context for innovation:

‘In recent years, we have spent a lot of time building partnerships with Liverpool University, Daresbury and the University of Manchester, and in doing so extending the capabilities that the firm has by taking R&D beyond the walls of the laboratory’ (WIR7).

As an important part of this commitment, the company has jointly invested, through the UK Research Partnership Investment Fund, with the University of Liverpool in the Materials Innovation Factory. The company saw the opportunity to share costs with the university and leverage government money, to build a shared facility that neither partner might be able to develop by itself. The new centre takes inspiration from Liverpool’s pioneering industrial past and creates a modern context for interaction to

generate new ideas using advanced equipment at the cutting edge of chemistry research. This includes computer aided design and robotics, to further the discovery of new materials to save energy and natural resources to improve health or transform a variety of manufacturing processes:

'It's a free thought chemistry facility that takes chemistry from technicians sitting on benches shaking things in flasks to robotic equipment and informatics to produce ten or fifteen times the amount of data – and therefore intellectual property – than the old style of research' (WIR7).

Figure 7-18 Examples of university collaboration

Group of firms	Firm	Form of collaboration	University(s) and other partners
'Evolved' – pre-1980	FLT5	Joint initiative to research new technologies	Low Carbon Research Institute (from Aberystwyth, Bangor, Cardiff, Wrexham Glyndŵr and Swansea Universities, supported by the WG).
	FLT7	Advanced Composite Training and Development Centre	Wrexham Glyndŵr, Coleg Cambria and WG.
	CHE8	Joint research projects	Not specified.
	WIR6	Advisor to Board	Liverpool.
	WIR7	Joint investment in Materials Innovation Factory	Liverpool.
'Incoming' – post-1980	FLT2	University Board	Wrexham Glyndŵr.
	FLT3	Joint initiative to research new technologies	See FLT5 above.

Source: Author

National and local governments

As explored in Chapter 5, the sub-national institutional environment is different between England and Wales. As a smaller country, there is the possibility for firms having a direct strategic relationship with the WG, for example, if chosen as having

‘anchor’ or ‘regionally important’ status. The WG website defined an anchor company as: ‘a company which is a global or international organisation and has a Welsh HQ or a significant corporate presence in Wales’. A regional important company as ‘a company which is of significance to the region of Wales in which they are located’. This significance is reflected in, for example, ‘number of employees, commitment to skilled workforce development of the supply chain and investment in the Welsh site’. Figure 7-19 lists the interviewed evolved and incoming firms that were chosen by the WG as either anchor or regionally important companies.

Figure 7-19 Welsh anchor and regionally important companies

Category	Group of firms	Firms
Anchor companies	Evolved – pre-1980	FLT5, FLT7
	Incoming – post-1980	WRE11
Regionally important	Evolved – pre-1980	FLT8
	Incoming – post-1980	FLT2, WRE4

Source: Author based on WG

Two evolved (FLT5, FLT7) and one incoming (WRE11) firms in NE Wales have anchor company status. FLT5, when combined with other company plants in South Wales, including its principal plant in Port Talbot, is the biggest private sector employer in Wales. This concentration of employment in Wales creates a sense both of ownership and of being closer to the WG than to the UK government. The company has received financial help from the WG, including £4 million announced in March 2018 to support training projects. As an anchor company, even locally in Deeside, ‘we have someone in the WG who we can pick up the phone and talk with straight away’ (FLT5). Relationships with WG Assembly Members (AMs) were closer than those with MPs; they are perceived to be more engaged, interested and local. Despite the close relationship with the WG, the interviewee acknowledged about anchor company status that:

'All that says is we are of such a size that makes us a bit more important in Wales. Sometimes being a big company means that there is less that the government can do than for some of the smaller companies who might need help with their business support' (FLT5).

Also, as an anchor company, FLT7 values its relationship with the WG, which opens doors to the company, including opportunities to meet with WG Ministers. FLT7 has received grant support from the WG including most recently in September 2018 from the £50 million EU Transition Fund to help companies prepare for Brexit. The company also enjoys good relations with the UK government. However, the point was made that colleagues in France and Germany may not enjoy the close relationships that are experienced in Wales:

'We are in Wales, where we are a relatively big fish in a small pond. Because of that we have a good relationship with the Welsh Government. That has been fostered and harnessed over the years. We really do value that relationship and we do not take it for granted' (FLT7).

The other anchor company, incoming WRE11, offered a slightly different perspective. The company had been through a challenging trading environment, having to give up a solar panel manufacturing project due to changes in UK energy subsidy rules and pro-tidal and wind power policies in Wales. As a Japanese-owned company their HQ was confused about who to speak to regarding influencing policy; the UK or WG and being more comfortable working through the UK government. Whilst valuing the direct communications through the anchor scheme, limitations for other companies were acknowledged:

'In the old days you had the WDA that everyone knows, and it was very clear that it was a contact. If you are an anchor firm, you have a principal contact. For slightly smaller firms that are not in that category, there are lots of services out there, but they are like a fog to a company and it's not how they work. Most companies that I talk to like to know a name. They like to know a face, someone they can pick up the phone to and say 'hi, can I talk to you' and get through that way' (WRE11).

Three companies, evolved FLT8 and incoming FLT2, WRE4 were recognised by the WG as regionally important companies. All three valued the opportunity to have a direct point of contact with the WG, with FLT2 emphasising that: *'the access and commitment on both sides to do well for the business and do well for Wales is reciprocal'* (FLT2) since:

'There is a relationship manager.... We have direct access up to Ministerial level should we need it. That is a very good example of the smallness of how Wales works' (FLT2).

And WRE4 made a similar point that:

'The fact now is that we have got the engagement of the Welsh Government and the support of that is phenomenal and I think that is great that I am able to tap into a network of people who can help me make a difference for this site' (WRE4).

However, turning to the remaining evolved (WRE6) and incoming (FLT1, FLT3, FLT4, WRE2, WRE9) companies in NE Wales without either anchor or regionally important company status, feedback on relationships with the WG was sparse. FLT3 expressed concern that North Wales did not have much of a say because of the distance from Cardiff and WRE9 mentioned occasional visits to the factory. This is not surprising since the strong message coming through was how important the ability to communicate directly and in person was to these companies. It was only the anchor and regionally important companies that had this facility. Other services provided by the WG, such as by Business Wales, received no mention either from the evolved and incoming companies covered in this Chapter or indeed by indigenous companies considered in Chapter 8. Companies were found simply not to value remotely delivered services or contacts.

The perspective of firms on the English side of the national border was different. Company relations with the UK government were arm's length, with no equivalent to the anchor company scheme in Wales. Both evolved and incoming firms had much less to say about how they saw the UK government. Where there were issues, they were more about policy than relations. For example, CHE1, CHE2, CHE5 and CHE8

raised concerns about perceived weaknesses in UK energy policy: *'our obsession has been with energy recently and anything else has gone by the wayside in all honesty'* (CHE1).

All but two companies had had little to no contact with their LEP. The two exceptions were CHE1, whose Managing Director had been on the C&WLEP Board, and the interviewee for WIR7, who had led on innovation policy for the LCR LEP. For CHE1, LEP experience had been helpful to the company in two ways: first, to navigate through government departments in making the case for a successful Regional Growth Fund application for a combined heat and power project, and second, in building local as well as national relations:

'Certainly, the fact that we knew people on the LEP means that when you go and see the Chief Executive of either Cheshire West & Chester or Cheshire East local authorities you tend to be able to get an audience with them' (CHE1).

The interviewee for WIR7 provided interesting reflections contrasting decision making in business compared with leading a LEP workstream on innovation. As a LEP panel chair, authority and processes to take decisions were not clear, *'other than trying to influence and saying that it is the right thing to do'* (WIR7):

'Does anybody in the LEP have any authority to do anything? I am certainly a bit unsure about that. I know that the LEP is a central place to assemble, assimilate, draw up and lead the direction of plans that are there, it looks to be very strong there' (WIR7).

Evolved and incoming firms on both sides of the national border provided feedback on their relations with local authorities. The overall message can be summed up as one interviewee said, in this case with Flintshire Council: *'we have an exceptionally good relationship with local government'* (FLT2). Feedback related to three areas of local government activity. First, was land use planning. Here favourable feedback was given by FLT7 – about Flintshire Council's efficient handling of the company's planning application for a major new factory for new aircraft wing manufacture, which *'demonstrated the close relationship we have here in Flintshire'* (FLT7) – and by CHE1

who expressed appreciation of the sensitivity shown by CW&C local authority in their handling of complex issues surrounding the company's land holding for inclusion in the local spatial plan. Second, was about technical or operational permits (FLT3). Third, was in the provision of business support services. Here the quality of communication and engagement with officers involved in business liaison roles was favourably commented on by both evolved and incoming firms (e.g. FLT7, FLT8, CHE1, CHE2, CHE3, CHE5, CHE8, CHE10, WIR6).

7.5.4 Evolved and incoming firms' horizontal relations

This section has reviewed how evolved and incoming firms engage in horizontal relationships with other firms and institutions. As might be anticipated from Section 2.4.3, there is little evidence of firms from either group engaging in horizontal non-trading relations with other firms. The only two examples identified were of an informal nature, with FLT2 sharing more widely its expertise in lean manufacturing and FLT8 sharing problem solving through informal relationships.

A majority of both evolved and incoming firms engage with their local communities. This is primarily through supporting local charities and by engaging with schools, mainly in STEM activities. The propensity for such engagement was similar across all firms. Whether the firm had a CSR was a strong driver to targeted support of local causes than being either an evolved or incoming firm. Strong support for schools reflected a motivation to promote STEM in education. This in turn reflected the availability of qualified engineers in the labour market (Section 9.2).

Only a minority of firms engaged in industrial estate partnerships and these were primarily incoming firms. Engagement with communities surrounding the local plant was more evident amongst evolved firms. These firms were usually in industries, such as chemical or nuclear industries, where there was clear self-interest in keeping communities on board, for example with planning applications. One firm, FLT5, acknowledged a cost of losing its historical close community ties and how important it was to rebuild these foundations. Membership of local business institutions, such as the Chamber of Commerce, was absent by both evolved and incoming firms.

Companies from both groups were more likely to engage nationally, for example through the CBI, Engineering Employers Federation and other professional associations and networks.

Differences between evolved and incoming firms were more marked in relation to engagement with universities and FE. Incoming firms were more likely to recruit 16-18-year olds into apprenticeship schemes and less likely to recruit entry level graduates. Similarly, they were much less likely to engage in trust based collaborative relationships with universities. In comparison, evolved companies were more likely to recruit both entry level graduates and 16-18-year olds to apprenticeship schemes. Evolved firms were more likely to engage with universities. Whilst some of these relations consisted of Board appointments, there were illustrations of trust based collaborative projects. The strongest of these were by FLT7, in the Advanced Composite Training and Development Centre, FLT5 and FLT3 in the SBEC centre and WIR7 collaboration with Liverpool University in the Materials Innovation Factory.

Relations with national and local governments can be differentiated not by evolved and incoming firms, but by two other factors. First, whether the firms are located in Wales, where firm relations with the national government are stronger than in England. Second, whether in the case of Welsh firms, they have a recognised status from the WG that provides direct access to government officials and support.

7.6 Conclusions

This Chapter found that whilst nearly all companies investing into the Mersey Dee illustrated industrial complex characteristics (Gordon and McCann, 2000; Iammarino and McCann, 2013), there were important contrasts between companies investing into the Mersey Dee prior to 1980 (evolved firms) and post 1980 (incoming firms). Such differences impact upon firms' relational engagement in the local economy. They are associated with the parent company delegation of local plant responsibilities, the nature of the plant's vertical relationships in the local and regional economy and the character of the firm's local institutional relationships.

First, shared industrial complex features between evolved and incoming firms were that they were primarily large companies (with 17 of 20 being sites for MNE companies). They were usually local, rather than urban, being predominantly situated on industrial sites, although with a minority of older evolved firms in urban locations. Their customer and supplier relations were stable, usually conducted within the framework of the firm complex to which they belonged. No examples of trust-based horizontal firm-to-firm collaborative relations were identified among either evolved or incoming firms. Many of the firms reflected industrial complex spatial characteristics of being closed to access by competing firms, with site reinvestment costs being a significant barrier to entry. This was particularly so for evolved firms, with their long history of site re-investment. Competitive cost and distance transaction costs were important to the siting of evolved and incoming firms to the Mersey Dee.

Second, the extent to which evolved and incoming firms were devolved responsibilities by their parent firm beyond production (e.g. being given scope for product innovation), impacted on how relationally they were involved in the local economy. This was illustrated in the depth of their firm-to-firm supplier relationships, the level of skills recruitment and their institutional relationships. Thus, evolved firms, with greater devolved responsibilities, were more likely to form local to regional networks of suppliers (e.g. in aerospace, nuclear and energy sectors), recruit at graduate as well as school-leaver level and engage in deeper institutional relationships. By comparison, incoming firms with more restricted local responsibilities, were more likely to have none too few local to regional suppliers, recruit only a school-leave level and have none to limited local institutional relationships.

Third, as a consequence, differences between evolved and incoming firms in their institutional relations reflected contrasting approaches to maintaining local factory competitiveness. Incoming firms emphasised their local identity, for example in their local workforce, site history or community engagement. Whilst this has limited consequences for the local embeddedness of the firm, it formed a part of local plant strategy to enhance competitiveness within the industrial complex, with labour

productivity being the crucial element. By contrast, evolved companies seek to retain their competitive differentiation within the company complex, by establishing strategies to build on their delegated responsibilities for product innovation. As a result, evolved firms more commonly engage in trust-like behaviours. This was evident through trust-based relations with universities, to collaborate on product innovation. Such conduct was more common than the associated literature might suggest (Iammarino and McCann, 2013). Thus, the picture of firm to institutional relations is more diverse and complex than an emphasis on anchoring and competition for investment might suggest (see Figure 3-2).

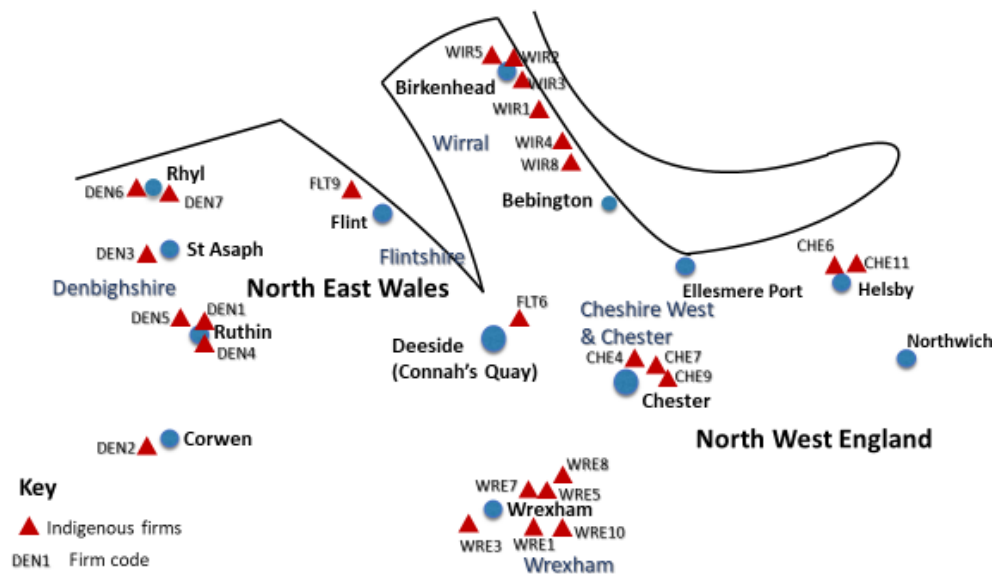
Fifth, therefore these findings confirm academic observations that the spatial patterns of employment and the integration of firms' relationships in the local and regional economy, reflect how production is organised spatially within the industrial complex. As discussed in Section 2.4.3, Markusen (1996) distinguishes between the satellite, with its shallow local firm relationships, and the hub-and-spoke, with its more integrated engagement within the local and regional economy. Massey (1995) identifies differences in the spatial division of labour between company plants depending on how control over processes of production is devolved in different locations by the company complex. In addition, Yeung (2020) has recognised that company plants will vary in how central or peripheral they will be within MNE global production networks (GPNs), depending upon international decisions to retain or enhance site investment and the individual site's value within the complex. This study has contributed to these academic observations by illustrating how, within the Mersey Dee spatial context, such differences are reflected in the history of investment by MNE firms in the area. Thus, evolved firms, with their longer histories of reinvestment and production reinvention are relatively less peripheral within firms' production networks and incoming firms more likely to be so. Nevertheless, this is with the caveat that nearly all of the industrial complex firms had plant status and very few had HQ roles. Thus Phelps et al. (2003) caution about the locally embedded MNE still applies. As a result, rather than interpret these firms territorially, it is important to understand their position locally within their global to local firm and institutional relational networks (Bailey, et al., 2016; Coe et al., 2004; Coe et al., 2014; Coe and Yeung, 2019).

Chapter 8 Investigating indigenous firms from the Mersey Dee

8.1 Introduction

This Chapter turns to consider the equivalent story of evolved and incoming firms from the perspective of 26 indigenous firms. These firms have a history of local ties and ownership within the Mersey Dee. Apart from one that is a charity (CHE4), and one that was subsequently bought by an international company but retained local operational independence (WRE7), they are all privately owned firms. The spatial distribution of indigenous firms across the area is mapped in Figure 8-1, which shows that they are found around the employment centres listed in Figure 8-2. Using the framework and questions as described in Section 4.4.5, firms were interviewed with the aim of investigating the Mersey Dee cross-border economy through their insights about their location in 'place'.

Figure 8-1 Indigenous firms interviewed in the Mersey Dee



Source: Author

The chosen approach for this Chapter and Chapter 9 is, where appropriate, to organise the analysis of indigenous firms by local authority areas. Whilst this may appear to be following administrative geography, in practice as shown above in Figure 8-1 and below in Figure 8-2, the firms are grouped around employment centres within local

authority areas. Given the local orientation of most of these firms, this aligns with the functional representation of the Mersey Dee as a locality, as described in Chapter 5.

Figure 8-2 Location of indigenous firms with local employment centres

Local authorities	Employment centres	Local firms
Denbighshire	Rhyl	DEN6, DEN7
	St Asaph	DEN3
	Ruthin	DEN1, DEN4, DEN5
Flintshire	Deeside	FLT6
	Holywell	FLT9
Wrexham	Wrexham	WRE1, WRE3, WRE5, WRE7, WRE8, WRE10
West Cheshire & Chester	Chester	CHE4, CHE7, CHE9
	Helsby	CHE6, CHER11
Wirral	Birkenhead	WIR1, WIR2, WIR3, WIR5
	Bebington	WIR4, WIR8

Source: Author

This Chapter is organised in five sections to focus on observed differences in indigenous firms. The intention is to consider how indigenous companies relate to place i.e. how they arrived there, their firm-to-firm and institutional relations and, in Chapter 9, how they see their location today. Section 8.2 describes how interviewed indigenous firms came to start-up in the different employment centres. Section 8.3 discusses the vertical relationships that firms have with their suppliers and customers and Section 8.4 their horizontal firm-to-firm and institutional relationships. Section 8.5 concludes with implications for these firms' location in place.

8.2 How indigenous firms were founded within the Mersey Dee

Figure 8-3 provides a summary of the foundations of each company, addressing how they started together with their founders' local connections to their location. This Figure identifies three routes into formation: new start-up companies; companies that developed through diversification by their owners into new, but usually related trading activities; companies founded by the take-over and development of an existing live or defunct company.

Fourteen of the 25 firms were new start-ups. What they all share, except CHE4, is that their founders were employed in related activities within the same industry before starting-up their company. The route to founding the firm may have been redundancy (DEN1), or more commonly, the founder, either independently or with colleagues, leaving a job to set up a new company (DEN3, WRE1, WRE5, WIR1, WIR3, WIR5), using skills and experience gained in earlier employment. In another case, an environmental consultancy, that now works nationally and internationally (CHE11), began in Helsby with a post-doctoral assignment from a major oil company to undertake an environmental assessment in NW England. CHE4 is slightly different in that its initiator had a childhood ambition of starting a zoo which he was able to put in practice in 1931 after buying a property, a surrounding site and a group of animals. It is now the most visited and physically largest zoo in the UK.

Five of the firms were started by their founders diversifying from other, but related, activities. Four are in Denbighshire and three have early connections with farming. DEN2 was begun by a local farmer in 1958, who saw a niche in the market to manufacture machinery for the agricultural industry. The business started at the side of the founder's house and has since grown to become the leading producer of trailers in the UK. The founder of DEN6 started by diversifying the family-run farm in North Wales into an education and leisure park. He then spent ten years looking at consumer behaviour, working abroad in Japan and the USA, and in 2001 he founded DEN6 in Rhyl to produce a luxury range of cheeses, centred on a long-term marketing strategy, that sells across the UK and in many countries around the world. DEN7 was founded in 1929 to carry out shop fittings in the then thriving seaside town of Rhyl. As the

company developed, it did shop fittings in winter and built small houses and units in summer, until gradually, the firm moved into the housing market more generally. WIR4 started out of its founder's interest in motorcycle racing. The firm started in 1948 in the garden shed of his father's house in Burton, Cheshire. The company is now found in Bromborough, Wirral, after 40 years in Neston, Cheshire and delivers precision engineering services.

The formation of the other six firms involved the take-over and development of an existing live or defunct company. WRE3 was founded in 1964, by the present Managing Director's grandfather and father buying a small existing bakery in Coedpoeth near Wrexham. Both had worked for a national bakery firm in Liverpool and decided to buy their own bakery. They focussed on '*good honest, affordable bread that refused to compromise on quality*' (WRE3). With the application of craft bakery skills, the business has grown from a back-street bakery employing just seven people to an award-winning and one of the fastest growing businesses in Wales. The firm adopts the pre-acquisition history of the bakery by another family from its founding in 1934 until its purchase in 1964 as part of its story. The origins for FLT6 go back to a company on the Wirral that no longer exists. This company entered into a joint venture with a US company which was not successful. The present owner took part of the company to form a new company in 1974, which is based on the Deeside Industrial Estate.

Overall, whilst each company has a different and distinctive story, what is common to them all is the significance of their local connections to their location. Many still have family ties today. For two firms there are also physical ties through a piece of immovable equipment (CHE6) and a history of concrete manufacture (DEN5). And for others, embedded investment over the history of the firm makes moving a difficult choice (DEN2, CHE4). Still others have placed the physical qualities of their location at the centre of their company identity and branding (DEN6, WRE3).

Figure 8-3 Foundations of indigenous firms

Firm	Start-up, take-over or diversify	How firm started	Founder/owner's local connections
DEN1	New start-up	Following redundancy in the same industry, three colleagues combined to start-up new firm.	Interviewee moved to Ruthin over 30 years ago, working locally before forming firm in 1980s with colleagues.
DEN2	Diversify	Company started-up by a farmer who saw a niche in the market for manufactured products for the agricultural industry.	Founder lived in Corwen in North Wales, beginning building products at side of family house in 1958.
DEN3	New start-up	With experience in same industry, colleagues formed new company to be taken over and closed by new owner. Second start-up from 2003 is successful today.	Owners live local to St Asaph, where Pilkington founded an optical company, leading to today's local concentration of optical firms.
DEN4	Diversify	Founded by two brothers, who as farmers recognised a niche in the market in supplying civil engineering services to other local farmers.	Company started in Ruthin by present MD's father and uncle, who were local farmers, in late 1940s/early 1950s.
DEN5	Take-over	Founder bought site with history of concrete manufacturing. After expiry of restrictive covenants, the range of concrete products has been diversified.	When young, the owner worked on same site, when run by a large company. Living locally, he bought the site in 1997.
DEN6	Diversify	Founder diversified family farm into a leisure/ education park. Later interests in consumer behaviour applied to form company producing premium cheese.	Family lived on family dairy farm in North Wales. After working abroad returned to start-up company in Rhyl.
DEN7	Diversify	Company originally founded doing shop fittings in Rhyl. Gradually diversified into the house building market more generally.	Company founded in 1929 in Rhyl by interviewee's great-grandfather. As company expanded, bought property in surrounding area.
FLT6	Take-over	Founded by taking over part of a company that no longer trades that was based in the Wirral and had got into difficulties. New company set-up in Deeside.	Owner lives in North Wales.
FLT9	Take-over	Firm set-up in 2004 took over premises and preferred supplier contracts for major UK retailer from another firm placed into liquidation.	MD moved to Flintshire around 1987 to help run company as preferred supplier to UK retailer. Left before company went into liquidation to join FLT9.

Firm	Start-up, take-over or diversify	How firm started	Founder/owner's local connections
WRE1	New start-up	Colleagues left another firm in same industry to set-up firm.	In 1989 three colleagues living locally, left another Wrexham company to form new company.
WRE3	Take-over	Founded from taking over a local small bakery. With craft bakery skills and with clarity of purpose has become one of the fastest growing businesses in Wales.	Firm founded by MD's father and grandfather in 1964, on site of former bakery, in Coedpoeth, near Wrexham.
WRE5	New start-up	Founder had experience in same industry before starting firm,	Firm originally founded in Oswestry in 1981. The second site was opened nearby in Wrexham in 1981.
WRE7	New start-up	Colleagues found business opportunity in marketplace, with premises at Wrexham found as a suitable low-cost location.	Sister of two company founders (Canadian and from Cambridge) lived locally in Cheshire.
WRE8	New start-up	Owner recognised business opportunity after working in same industry.	Owner lives locally.
WRE10	New start-up	Founder had experience in the same industry before starting firm.	Owner lives locally and turned down opportunity to move with a former employer to SE England.
CHE4	New start-up	Zoo born out of vision founder had since childhood.	Owner bought property and site and group of animals to open site in 1931, which has expanded over time.
CHE6	New start-up	Founder recognised innovation opportunity after working in industry. Helsby became HQ because of unique fixed equipment on site.	Company started in 1974 in Stockport and moved to Helsby in 2005. In 2010, company reopened Stockport premises to focus on R&D.
CHE7	New start-up	Two founders started business having worked in the same industry.	Founders brought up and live locally. One worked in New Zealand for ten years and then returned.
CHE9	Take over	Founder gained experience in same industry before taking over firm, from retiring earlier owner, and developing it with colleague.	Founder lives locally and worked in area before forming firm.

Firm	Start-up, take-over or diversify	How firm started	Founder/owner's local connections
CHE11	New start-up	Set-up by founder in Helsby on completion of Doctoral studies initially to undertake an environmental assessment for major oil firm in NW England.	Founder lives locally, with HQ being in Helsby, despite working across the UK and internationally.
WIR1	New start-up	Founding co-owner's set-up firm after experience in same industry.	Founders had family ties locally prior to setting up the company.
WIR2	New start-up	Founding owner set-up firm after experience in same industry.	Founder lived locally.
WIR3	New start-up	Founding co-owner's set-up firm after experience in same industry.	Founders had lived and worked locally in the shipping industry.
WIR4	Diversify	Founder diversified from interest in motor bikes and racing to form engineering firm.	Founder lived locally.
WIR5	New start-up	Founder set-up firm after experience in the same industry.	Founder lived locally.
WIR8	Take-over	Founder re-founded company after experience in same industry.	Founder lived locally.

Source: Author

8.3 How indigenous firms relate to customers, suppliers and innovation

8.3.1 Introduction

As in Chapter 7, attention turns to the theme of Chapters 2 and 3 about investigating firms and the local economy by exploring firms' relationships with other firms and institutions. This and the following section address this for indigenous firms, through their relations with other firms – as suppliers and customers and other firm-to-firm relations – and with institutions, both locally within the Mersey Dee and beyond. As with evolved and incoming firms, it was possible to replicate mapping of local, UK, European and global supply and customer relations from interviews of indigenous firms. These are shown in Figures 8-4 to 8-6.

The starting point for indigenous firms is different from the evolved and incoming firms in Chapter 7. For indigenous firms, product development and innovation are more likely to be outcomes of their trading and non-trading relationships with other firms. First, because these firms are usually smaller, independent and standalone, compared to the predominantly MNE sites of Chapter 7. Second, due to the nature of the firms, their supply chains are limited in scope, if not in geography. For example, even though DEN3 purchases from local, UK and global sources, it has only half-a-dozen key suppliers. A similar point was made that *'there are a relatively small set of suppliers to the company'* (FLT6). Third, whilst there are illustrations of innovative behaviour amongst the interviewed companies, for example, with CHE6 winning the Queen's Award for Innovation, not all these firms can be described as innovative. Where innovation takes place it usually involves, to varying degree, interdependence between the local firms and their suppliers, customers, non-trading firm relationships and sometimes institutions.

8.3.2 Supplier relationships

Across the firms, there are few locality differences. Sectoral differences are more important. First, as would be expected, service and technical services firms tend to be both more limited and more localised to UK-based supplier relationships. Although, of these firms, there are two exceptions. CHE4 is a regional zoo. Whilst most of its supplies come locally or within the UK, it must source more specialist equipment from abroad. WIR1 is in creative design and has developed production links in China.

Second, of the 14 manufacturing firms, eight source supplies outside the UK in Europe or beyond. Of these eight, seven (DEN2, DEN3, DEN6, FLT6, WRE5, CHE6, CHE9), also trade with customers outside the UK, showing an international orientation in both their supplier and customer relationships. The remaining firm (FLT9) sources goods and fabric internationally but manufactures solely for UK major retailers. The remaining manufacturing firms both source more locally and also serve customers within the UK (WRE1), or with limited sales to Europe (DEN5, WIR3, WIR4, WIR8).

Third, there is a preference within these firms to source supplies locally wherever possible (FLT6, FLT9, CHE9, WRE1, WRE3, CHE9, WIR1, WIR4). This may be because of longstanding relationships. For example, *'whenever we can we use a local supplier'* and *'have longstanding relationships with all our suppliers'* (FLT9). Another fast-growing firm, in the bakery business, stresses the importance of keeping a local trusted network of suppliers:

'We have nurtured and managed the supply chain coming into us over a long period of time. So, we will only use Welsh beef, Welsh lamb, Welsh dairy products and it works very well' (WRE3).

For another firm, it is about being local:

'We try to keep our supply footprint as small as possible. Of course, if there is a local company that can supply us with parts at similar prices, it keeps the carbon footprint down. We try and support local companies as much as we can' (CHE9).

8.3.3 Customer relations

Attention turns to the customer relations of indigenous firms. Central to this discussion is how often product innovation by indigenous firms is an outcome of how they work with their customers. Of the 25 firms, 16 export, including a mix of manufacturing and services firms. Exporting firms were more open about the approach that they took towards innovation, compared with those primarily trading in the UK. The exceptions were WRE1 and FLT9, the latter having an international focus through participating internationally in product trade shows and supplier networks. Firms' customer relations were important in indicating how they innovated in three ways.

First, firms that tend towards transaction-based customer relations (Section 2.2) were likely to innovate from within the firm. However, this does not mean that they do not co-operate with other firms in other ways, as outlined in Section 8.4.2 below, as in the case of DEN2 and DEN5. DEN2 competes globally with the best companies in its market of vehicle trailers manufacture. For a long time, they have invested in undertaking all their testing and R&D in-house, with their own in-house test site. They are also prepared to pay market rates to employ world-class engineers. At the same time, the company has a professional buying department, purchasing from all over the world for the right quality and price. DEN5 is independently designing its own high-quality ranges of concrete paving. New products are being given Welsh names, reflecting the Welsh identity of the firm, although as outlined below they have adopted what they see as a 'German' model of sharing with other like-minded similar sized 'competing' firms in the industry. WIR1, found in Birkenhead, has also been creative in developing its product range using internal resources. At the same time, its customer relations tend to be primarily transactional.

Second, firms whose customer relations resemble stable to collaborative (Section 2.2), may approach innovation through responding to their customers. For example:

'Most of our innovation comes about from a customer coming to us with a problem and we do feel we have a level of skill in responding' (WRE1).

And:

'We discussed with [a customer] what this part did, and we ended up re-designing the part that they had brought to us and made it better, so that there were not so many wrong elements. So, we now get orders for the parts we redesigned' (WRE1).

Underpinning this is inside knowledge of the industry they serve:

'Any design work that we do within the canning industry will come from our knowledge of the industry and from visits to canning companies and seeing what they do' (WRE1).

Similarly, new development by CHE9:

'...is normally driven by a client because they have a problem, or a situation which needs fulfilling. Then what would happen is that we would sit around together.....and that's how we come up with a new design' (CHE9).

Third, for three firms (FLT3, FLT9, WRE3), customer collaboration is more formalised around stable long-term relations. FLT3's close relationship, involving innovation with FLT5 was described in Chapter 7. For FLT9 and WRE3 innovation is driven through trust-based relationships with their major retail customers. WRE3, one of the fastest growing businesses in Wales, approaches innovation through its close customer relationships: *'we need to understand what is important to the customer'*. The company has particularly close relations with its two principal customers, which serve export markets: a major UK retailer and a Swiss food company. Underlying its approach:

'We love our customers. We have worked hard to nurture them and keep coming up with new ideas' (WRE3).

The company proactively thinks about where the customer is 'struggling' and identifies what they can do to help them and provide a high-quality product and service. They meet with their UK customer every three weeks and are constantly talking with them about new ideas. For them, it is not so much about new product development, but more about improved processes for export goods, such as:

'How do you despatch products better, how can you reduce transport costs, get more products on a tray and how can we give them extra shelf life?' (WRE3).

Since:

'You are not going to reinvent a loaf of white bread, but let us use innovation to improve flavour, taste and shelf life. Let us use innovation to reduce the amount of chemicals in food products by natural processes or methods' (WRE3).

And where:

'If you look at where we are hitting big time with growth now, we are using our past to nurture our future, so we are looking at recipes from one hundred years ago, such as sour dough' (WRE3).

This proactive approach, key to their customer relationships, led to them being awarded the 'best-medium sized supplier' by their UK customer in 2013:

'Yes, we will speak to their export team and say, 'what would you like'. Because they are trying to give a British (bakery) offering in Delhi, or wherever, and we are saying to them 'what can we do for you'. Moreover, they love that' (WRE3).

FLT9 takes a similar approach towards collaborating with its customers, a fact demonstrated by their position as sole supplier for one UK retailer. The factory supplying this retailer was opened in 1987 by a then major UK furniture manufacturer as their sole supplier of soft furnishings. However, in 2004, the manufacturer went into receivership. The interviewee for FLT9 had worked for and then previously left that factory to form a new company, FLT9, at a nearby location. On closure, the UK retailer enabled FLT9 to take over the factory by presenting them to the liquidator as their new preferred sole supplier. This close relationship continues today, and accounts for 40% of FLT9's upholstery output. A key to their success is that FLT9 has developed its own strong design capability, working closely with the customer:

'The company (FLT9) has invested heavily in our design and development department. We have approximately 30 people working on the design and development of new products. They work closely with the buying team and buyers of all our customers' (FLT9).

On a seasonable basis, they produce story and fabric boards for the customer and discuss with them which designs should proceed. They also work closely with the customer on environmental performance. The UK retailer has set ambitious goals of becoming 'the world's most sustainable major retailer', as set out on the company's website, and expects its suppliers to adopt environmentally sustainable processes in manufacturing. As a result, FLT9 has made electricity cost savings of £70,000 alone, with a payback time for the investment of three and a half years. This way, there is a significant trust between FLT9 and their customer, who has an interest to remain loyal to its supplier.

Figure 8-4 Supplier and customer relationships for indigenous firms, Denbighshire

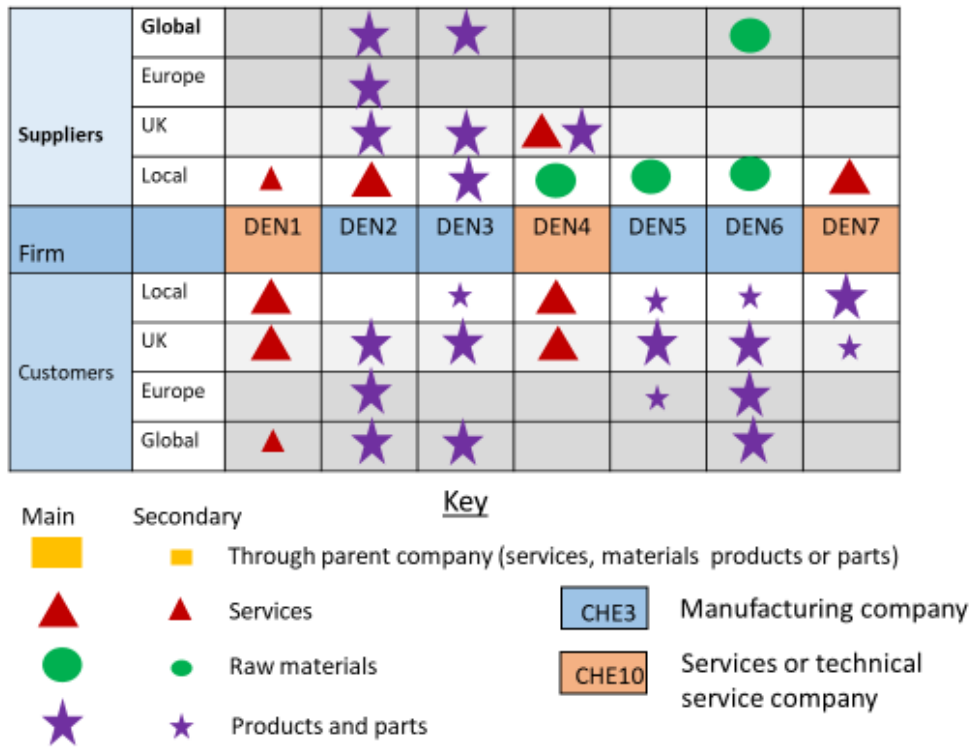


Figure 8-5 Supplier and customer relationships indigenous firms, Flintshire and Wrexham

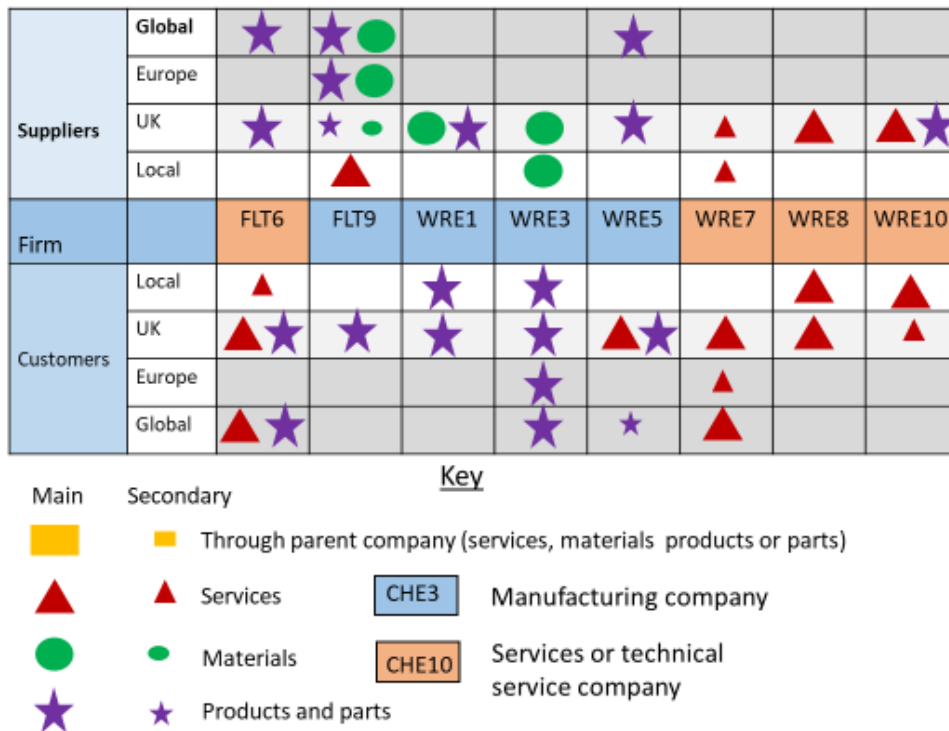


Figure 8-6 Supplier and customer relationships indigenous firms, CW&C

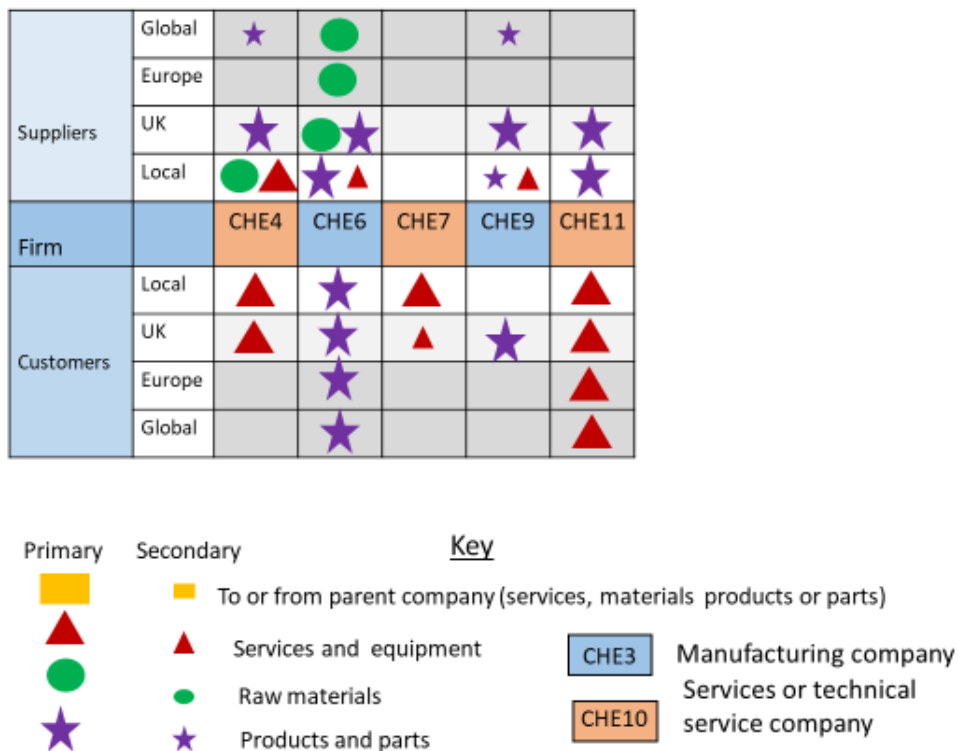


Figure 8-7 Supplier and customer relationships indigenous firms, Wirral

Suppliers	Global	★					
	Europe	▲		★			
	UK	▲				▲	★
	Local	▲	▲	●▲	●	▲	★
Firm		WIR1	WIR2	WIR3	WIR4	WIR5	WIR8
Customers	Local	▲	▲	★	★	▲	▲
	UK	▲	▲	★	★	▲	▲
	Europe	▲		★	★		▲
	Global						

Primary	Secondary	<u>Key</u>	
		To or from parent company (services, materials products or parts)	
		CHE3	Manufacturing company
			Services or technical
		CHE10	service company
			Products and parts

Source: Author

8.4 Horizontal firm-to-firm and intuitional relationships

8.4.1 Introduction

This section considers firms' 'horizontal' firm-to-firm and institutional relationships. The left side of figures 8-7 to 8-9 show which indigenous firms collaborate formally and informally with 'competing' and 'collaborator' firms. The right side summarises feedback on institutional relations. As for evolved and incoming firms, this includes community, business or professional associations, university collaboration and engagement with national and local government. As for supplier and customer relationships, information presented was reliant on a single interview source from each firm. Whilst the results gave an overview of firms' horizontal relations, as in Chapter 7, they cannot be relied upon to present a comprehensive mapping of all such relations conducted by each firm. The following discussion considers themes arising from the more local companies. Where proper, distinctions are made with

reference to the three different levels of horizontal relations described in Chapter 3; limited, associative and trusting.

8.4.2 Horizontal firm-to-firm collaboration

Figures 8-8 to 8-10 indicate that there was limited evidence of non-trading collaboration across indigenous firms. There were just two examples of informal collaboration. Whilst, as mentioned above, DEN2 primarily innovates in-house, they take their products to MIRA, a UK-based centre for advanced engineering testing and validation of automotive products. This is to stimulate 20 years' wear and tear of the product. The testing was videoed which gave a framework to overcome any weak links in the product.

Again, as an example of a firm that innovates internally, DEN5, in manufacturing concrete products, nevertheless recognises that as a small company, its future growth in an industry with larger companies, is increasingly dependent on producing high-quality well-designed products. As part of their approach towards improvement, they adopted what they saw as a 'German' approach of talking and sharing with other like-minded and similar sized smaller firms in the industry in other parts of the UK – Scotland, NE, NW and SE England. This was even though these firms might be in competition. They exchange information and solve production challenges, and where proper, conduct site visits. However, there is the understanding between the firms not to discuss commercially sensitive information. They believe as smaller firms, that if by informal collaboration the industry prospers, then they are also more likely to be individually successful.

Only one firm reported sharing formal horizontal firm-to-firm relationships, as part of their proactive approach towards innovation. Company CHE6 has a business model of developing a niche market through continuously innovating. The firm was founded and has grown with the goal of developing and distributing products associated with the heat tracing industry. (Heat tracing is a system to keep or raise the temperature of pipes and vessels to enable the efficient and safe processing of liquids and gases being stored or transported. It has many applications, for example in oil refineries, pharmaceutical production, power generation, food processing and in transportation.) In 2014, the company was awarded the Queen's

Award for Enterprise and Innovation. It saw innovation as its 'watchword', from investing around 15% of its turnover into R&D.

The company's head office and manufacturing facility is situated at Helsby, West Cheshire, on a site with more than a century of history of cable making by the former MNE BICC. The firm moved there in 2004, from Stockport in Greater Manchester, to gain ownership of the irradiation beam that was essential to the business. However, in 2010, as the company expanded it moved its R&D activities back to Stockport. R&D is generated internally, by their R&D team experimenting with different materials. Part of the company's approach to innovation is that it works collaboratively, horizontally with other firms and with academic institutions. CHE6 has undertaken R&D work on a collaborative basis with USA firms, for example on the development of long and sub-sea pipelines and has undertaken at least two grant-funded projects on nuclear and transportation themes supported by Innovate UK. In each case, the projects were undertaken with university (Manchester and Birmingham) and commercial partners.

8.4.3 Relations with institutions

As with evolved and incoming firms and as illustrated in Figures 8-8 to 8-10, there were more examples of firms' engagement with institutions than of horizontal firm-to-firm cooperation. As in Chapter 7, interviews identified five settings for such relations: community and schools investments; local partnerships and consultation; participation and membership of business associations and networks; university collaboration; and relations with national and local government, including sub-national institutions such as LEPs. This section considers what firms investing from within the Mersey Dee shared under each of these headings.

Figure 8-8 How indigenous firms cooperate with other firms and institutions, Denbighshire

Firm to firm collaboration		Firm	Institutions			
Formal collaboration	Informal collaboration		Estate/Community (CSR)	Business/professional Associations	University and FE collaboration	National and local government
		DEN1		 		
		DEN2			FE	R
		DEN3				
		DEN4			FE	R
		DEN5				
		DEN6			  	
		DEN7				

Source: Author

Key

Business and professional associations

-  West Cheshire & North Wales Chamber of Commerce & Industry
-  Manchester Chamber of Commerce & Industry
-  Wirral Chamber of Commerce & Industry
-  Institute of Directors
-  Confederation of British Industry
-  Engineering Employers Federation
-  Industry Professional Associations
-  Cheshire & Warrington LEP
-  Federation of Small Businesses
-  Cheshire Business Leaders
-  North West :Leadership Team
-  Liverpool City Region LEP




Community investment

-  Community investment and charities
-  Local schools engagement
-  Deeside Enterprise Board
-  Wrexham Industrial Estate Forum and/or HR Forum

University engagement

-  Skills development
-  Board/Advisory Member
-  Knowledge development partnerships
-  Work links
-  Research/Chair/PhD sponsorship

Firm to firm collaboration

-  Informal collaboration with competitor/collaborative firms
-  Formal collaboration with competitor/collaborative firms
-  Formal collaboration with customer/supply chain firms

Welsh government 'anchor' and 'regionally important' firms



-  Anchor firms
-  Regionally important firms

Figure 8-9 How indigenous firms collaborate with other firms and institutions, Flintshire and Wrexham

Firm to firm collaboration		Firm	Institutions			
Formal collaboration	Informal collaboration		Estate/Community (CSR)	Business/Professional Associations	University and FE collaboration	National and local government
		FLT6		 	 FE	
		FLT9				
		WRE1				
		WRE3	 		 FE	
		WRE5				
		WRE7	 		FE	
		WRE8			 FE	
		WRE10				

Source: Author

Figure 8-10 How indigenous firms collaborate with other firms, CW&C and Wirral

Firm to firm collaboration		Firm	Institutions			
Formal collaboration	Informal collaboration		Estate/Community (CSR)	Business/ professional Associations	University collaboration	National and local government
Check		CHE4	 	  		
		CHE6		  		
		CHE7				
Check		CHE9		  		
		CHE11	 	 		
		WIR1				
		WIR2		 		
		WIR3				
		WIR4				
		WIR5				
		WIR8				

Source: Author

Community and school investment

Firms were asked whether and, if so how, they got involved in their local communities. As in Chapter 7, responses described three types of engagement: social causes, schools and community or partnership engagement. Thirteen of the 25 indigenous firms supported local charities or causes, with an even distribution across the local authority areas. Most prioritised giving to local causes. Motivations usually linked the firm's connectivity into the local community with a business rationale. For example, WRE3 saw itself as being '*well-integrated into the local community*', and rather than support worthwhile national and international causes, it:

'...would prefer to help the local hospice, or the local football team or the local girl guides, because it is relevant to our business and to this area and it reinforces our local brand. Even down to harvest festivals, we supply all the harvest sheaves for all the local churches and it is a way of getting our skills out into the community' (WRE3).

Another firm explained: '*It's partly for altruistic reasons, partly for publicity*' (WRE10).

There was a strong sense of being part of a community; '*we are very much part of Helsby*' (CHE11), in supporting a range of local causes from the local music festival to helping to fund a community policeman. And, in recognising that their workforce was local, WRE7 had collaborated with Business in the Community to facilitate contributions on Wrexham's Caia Park housing estate, where quite a few of their employees lived:

'Does the local community have any meaning? It does now. I guess that the fact we have been here for approaching ten years, we have built very good links with the local community. If you look at our staff, 90% live within a five to ten-mile radius of this building. The vast majority live in the Wrexham environment, so forging links with the local community is very much part of our employer value proposition' (WRE7).

Engagement with schools was less common amongst indigenous firms. Out of the 25, only two firms in NE Wales (WRE1, WRE3) and three in CWS&C (CHE4, CHE6, CHE11) did so. Also, the motivation for engagement was different from evolved and incoming firms, with STEM not appearing to have played a role. The interviewee for WRE1 was a school governor at a

local school in Wrexham and has been active in Wrexham education for over ten years. The interviewee for CHE4 was similarly a local school governor. For WRE3, supporting local schools was part of their being *'integrated in the community'* (WRE3). The other two firms were found at Helsby. As outlined above, firm CHE6 came to Helsby because of a specific piece of equipment. But the local skills set was also an important factor. The firm recruited close to 40 people from the local Helsby area, the majority of whom were ex-BICC staff working on the shop floor, with cable-making skills. These skills were hard to find due to the small number of cable manufacturers in the UK. However, by the time of interview, many of these workers were aged over 65 – like other many other companies in the Mersey Dee (see Chapter 9), CHE6 has an ageing workforce. The firm took it as their responsibility, both for their benefit and to the wider area, to ensure such skills are passed on. As a result:

'We started an apprenticeship scheme and one of the reasons for that was to try to replicate the skills being lost. That is going extremely well. We have an extremely good partnership with Helsby High School' (CHE6).

Helsby High School is a large school with some 1,200 pupils, but Helsby itself has few local employers. The company found that by collaborating with the school it had been able to recruit exceptionally high calibre students onto their apprenticeship scheme. This is where the opportunities offered by the firm combined with local place characteristics:

'Helsby is a funny kind of town really in that it seems that people don't like to leave. It's a little bit isolated, even within the region and so there are several apprentices who are very capable of going to university, but really wanted to stay local to the area and therefore have been a really good source of employees' (CHE6).

CHE11 viewed their engagement with local schools as part of *being 'very proud to be in Helsby and part of contributing to the community'*. They had *'very close links to [local school] offering work experience to their senior pupils'* (CHE11), since many of their staff are local, having been to local schools themselves. The firm is keen to continue to recruit locally.

Local partnerships and networks

Only two firms (WRE7, WRE8) had representation on an industrial estate partnership, in this case on the Wrexham Industrial Estate.

Business associations and networks

Companies were asked about being members of business associations and networks. Indigenous companies were more likely to be members of local business associations than evolved and incoming firms. Sixteen of the 25 companies held membership of at least one business association or network. Six companies were members of the West Cheshire & North Wales CC&I (DEN3, DEN6, FLT6, WRE1, CHE4, CHE9), with the interviewee of DEN3 being previously Chair. Two companies, one from Flintshire (WRE8) and one from West Cheshire (CHE6), had chosen to be members of the Manchester CC&I. WRE8 was also members of the Liverpool CC&I since both Manchester and Liverpool have a construction section focussed around their specific interests. CHE6 had its innovation facility in Stockport. Two of the Wirral firms (WIR5, WIR8) were members of the Wirral CC&I. CHE9 and CHE11 included members of the IoD, but as in Chapter 7, this was likely to understate membership amongst these firms, since it was held individually rather than corporately. Three firms (DEN1, CHE9, WIR5) were members of the FSB. Five companies, three large and two medium (DEN4, DEN7, CHE4, CHE6, CHE11), were members of the CBI.

Seven were members of two or more business associations and these firms tended to be the most active participants. For example, CHE4 took a strategic approach through its participation in different organisations with its strong branding association with Chester:

'We sit on several different boards. So, I am a director of Marketing Chester. I am also a director of CH1, the Business Improvement District Company for Chester. We are also linked to other companies such as Chester Renaissance, Cheshire Business Leaders and the Chamber of Commerce' (CHE4).

CHE6, the firm with the strongest horizontal firm-to-firm relationships, had proactively engaged with business associations and local government. The interviewee described how he had represented SMEs on the CW&C Skills Commission, presenting a paper with 17 points

and recommendations. He had engaged with the then Department of Business, Innovation and Skills (BIS) and was supporting local business groups from the Chamber of Commerce and the CBI.

From wider observation, the experiences of the interviewed indigenous firms underestimate the extent that, particularly smaller indigenous firms engage with business networks in the Mersey Dee. Just CHE9 reported attending the MDA Innovation Network events, although they had been hosted by organisations represented by institutional interviewees (INS8). The MDA Innovation Network was launched in 2010 to:

'Bring together knowledge-based companies and those who support the growth of such businesses as advisors, investors, industry and university experts, government agencies etc. to encourage sustainable economic growth' (MDA, 2019).

Bi-monthly business breakfast events alternate between England and Wales. The aim is to help businesses to improve their performance by *'encouraging businesses to talk to each other, develop new links and contacts and make SME's aware of relevant regional and national initiatives and opportunities'* (ibid). They are regularly attended at each event by over 150 businesses who have provided consistently positive feedback about their value to network and develop good business leads and contacts. On 30 October 2019, the MDA Innovation Network celebrated its 50th cross border business breakfast, with over 7,000 delegates having attended events in 30 different venues in NW England and NE Wales.

Whilst none of the interviewees were formally members, mention should be made of two other business networks in Wales. The WBP was launched formerly in 2009 by accountants and solicitors from the Wrexham area, after several years of informal development in response to the changing political environment created by devolution to Wales. It has since expanded to cover all business sectors with 433 members from 202 organisations. Under dynamic leadership, it promotes *'regional prosperity and the enterprise and expertise that exists within the region'*. In doing so, it is about business taking responsibility to reach out to government institutions in influencing the economy. Its regular high profile and well publicised network events give a regular setting for WG ministers to give presentations and

make policy announcements (WBP, n.d.). The Deeside Business Forum (DBF) also hosts well attended business events on the Deeside Industrial Estate.

In NW England, there are also strong business networks. In addition to those mentioned in Chapter 7, these include Cheshire Professionals and Cheshire Business Leaders (CHE4). Cheshire Professionals is a membership organisation for law firms, accountancy firms, property agents and banks helping to promote the professionals' community within Cheshire.

Collaboration with universities and FE

As for the evolved and incoming firms, indigenous companies engaged with universities and FE institutions in different ways. In addition, as before, an underlying indicator to type of engagement with universities and FE lies in their entry level recruitment of graduates and school leaver apprenticeships. This was even though early entry recruitment was likely to be less formalised in indigenous companies than for evolved and incoming firms. As Figure 8-12 shows, eleven of the 25 indigenous firms recruit graduates. Eight indigenous firms recruit school leavers into apprentices and ten companies have no specific graduate or apprenticeship entry into the firm.

As for evolved and incoming firms, the primary focus for indigenous firm collaboration with FE is for apprenticeship and other skills training. However, apart from a minority of indigenous firms, the nature of these links was likely to be less formalised than for evolved or incoming firms. First, as primarily SME firms, any apprenticeship intake is likely to be small. For example, FLT6 might take on only one apprentice a year. Second, there might be a blurring between apprenticeships and employment. Firms (e.g. DEN2) might seek to employ apprentices for training after they have completed the first two years' college-based learning. Third, there is an emphasis on in-house training, either by post-college training, or because there is no appropriate local apprenticeship scheme available to meet employers' needs, such as in upholstery for FLT9. Two faster growing and innovative firms (WRE3, CHE6) did have strong apprenticeship programmes, which are discussed further in Chapter 9. Despite the above limitations, the principal FE links identified by indigenous firms were with Coleg Cambria in NE Wales and Mid-Cheshire College in NW England.

Twelve of the 25 indigenous firms described links with universities, compared with eight of the 20 evolved and incoming firms, as summarised in Figure 8-11. For three firms (DEN1, WRE8, WRE10) university links are about employment and staff training. Two interviewees (WIR1, WIR5) had been selected to participate in the Goldman Sachs 10,000 Small Businesses UK Programme to ‘provide high-quality, practical education and support to leaders of high growth small businesses and social enterprises’ (Goldman Sachs, 2019). One firm interviewee (DEN6) was a Board Member at Chester University and CHE11 sponsored a Professorial Chair at Chester University on environmental sustainability, reflecting the environmental consultancy focus of the company.

Six companies reported trust-based relationships with universities (see Figure 8-12). DEN3 has its manufacturing facility in Wrexham Glyndŵr University’s Optic Technology Centre at St Asaph, Denbighshire. The centre was formed as part of a WG initiative, with European funding, to give incubation facilities for high-growth potential and hi-tech companies. Ten were originally opened across Wales, although six of the ten have since closed. The Optic Centre specialises in precision optical components and systems, building on the skills legacy of Pilkington’s Optronics business formed in St Asaph in 1966, inherited today by Qioptiq Limited, so that ‘the skills base here originally came out of the Pilkington Glass operation’ and has left an additional legacy that ‘there is a lot of networking that goes on and strong personal contact’ (INS6). In addition to manufacture, DEN3 used the design consultancy provided at the Centre, run by an earlier head of optics at Qioptiq and described as the ‘best optical designer on the planet’ (DEN3).

Figure 8-11 Graduate and apprentice recruitment

Categories	Recruit graduates	Recruit apprentices (aged 16-18+)	No specific school leaver/ graduate recruitment * ²
Evolved - Pre-1980	<u>NE Wales</u> * ¹ FLT7, WRE6	<u>NE Wales</u> FLT5, FLT7, FLT8	<u>NE Wales</u> None
	<u>NW England</u> * ¹ CHE2, CHE5, CHE8, WIR7	<u>NW England</u> CHE2, CHE5, WIR6	<u>NW England</u> CHE1 <u>NE Wales</u> None
Incoming - Post-1980	<u>NE Wales</u> None	<u>NE Wales</u> FLT2, FLT4, WRE4, WRE9	<u>NE Wales</u> FLT1, FLT3, WRE2, WRE11
	<u>NW England</u>		<u>NW England</u>

	None	<u>NW England</u> CHE3	CHE10 <u>NE Wales</u> None
Indigenous	<u>NE Wales</u> DEN1, DEN3, DEN4, FLT6, WRE3, WRE7, WRE8, WRE10 <u>NW England</u> CHE4, CHE6, * ³ CHE11	<u>NE Wales</u> DEN2, DEN4, DEN7, FLT6, WRE3 <u>NW England</u> CHE6, WIR3, WIR4	<u>NE Wales</u> DEN5, DEN6, FLT9, WRE1, WRE5 <u>NW England</u> CHE7, CHE9, WIR1, WIR8
Notes			
* ¹ - NE Wales – Denbighshire, Flintshire and Wrexham; NW England – CW&C and Wirral.			
* ² - Firms WR11 and CHE1 have recruited apprentices but had no recruitment plans at time of interview.			
* ³ - Graduates recruited to companies R&D facility at Trafford, Greater Manchester.			

Source: Author

In implementing the company’s long-term marketing plan, the owner of DEN6 was commissioning research at several universities, with a long-term perspective on future nutrition and consumer requirements considering lifestyle and environmental conditions. The intention was also to fund a PhD studentship on future nutrition needs: *‘we look at the fundamentals – the building blocks of life and we innovate from that’* (DEN6).

Four companies (FLT6, WRE3, CHE6, CHE9) had been engaged in Knowledge Transfer Partnerships, (KTP) which received UK (or Welsh) government funding support. These involved collaborating with a university and in some cases another firm, with a focus on innovation. FLT6 had worked with universities on design of fibre optic products. WRE3 had collaborated with Manchester Metropolitan University on improving food quality systems, gluten-free manufacture and developing products in a sustainable manner: *‘we work with academia to look at our problems and see how we can find a solution’* (WRE3). WRE8 worked with Wrexham Glyndŵr University on a shorter KTP through graduate employment:

‘We pick on an element of the business and the university then employs a graduate. We share the costs of that employment to research into that aspect of our business and come up with recommendations and a plan’ (WRE8).

Figure 8-12 Examples of university collaboration

Group of firms	Firm	Form of collaboration	University(s) and other partners
'Evolved' – pre-1980	FLT5	Joint initiative to research new technologies	Low Carbon Research Institute (from Aberystwyth, Bangor, Cardiff, Glyndŵr and Swansea Universities, supported by the WG)
	FLT7	Advanced Composite Training and Development Centre	Glyndŵr Wrexham, Coleg Cambria and WG
	CHE8	Joint research projects	Not specified
	WIR6	Advisor to Board	Liverpool
	WIR7	Joint investment in Materials Innovation Factory	Liverpool
'Incoming' – post-1980	FLT2	University Board	Glyndŵr Wrexham
	FLT3	Joint initiative to research new technologies	See FLT5 above
Indigenous	DEN1	Employment links	Aberystwyth, Cardiff, Liverpool
	DEN3	Manufacturing facilities and design consultancy	Glyndŵr (Optic Centre)
	DEN6	Board Member Funding PhD and commissioning research	Chester A London university, Chester, Bangor and Glyndŵr Wrexham
	FLT6	Knowledge Transfer Partnership	Liverpool
	WRE3	Knowledge Transfer Partnership	Manchester Metropolitan
	WRE8	Knowledge Transfer Partnership	Glyndŵr
	WRE10	Staff training/day release	Glyndŵr, Chester
	CHE6	Knowledge Transfer Partnership	Birmingham, Manchester
	CHE9	Knowledge Transfer Partnership	Liverpool John Moores
	CHE11	Sponsor Chair in the Environment	Chester
	WIR1	Goldman Sachs 10,000 small business programme	Manchester
	WIR5	Goldman Sachs 10,000 small business programme	Manchester

Source: Author

CHE9 collaborated with Liverpool John Moores University on three-way KTP projects, involving the firm, university and customer. As mentioned above, CHE6 had centred all its operations at Helsby, but later moved its R&D to Stockport, and this was partially because of difficulties in retaining R&D staff:

'When R&D was at Helsby, we bought a couple of people to there, but they left. Recruiting was not an issue but keeping them was because they lived in Manchester and the commute was difficult' (CHE6).

As a result, they run their KTPs from Stockport with a relationship with Manchester University, with commercial partners as well as outlined earlier.

'We have two grant-funded projects running at the moment. One is on the nuclear side and the other is automotive. A good thing is that they tend to be with different partners. There is normally an academic partner – and there tends to be a commercial partner as well' (CHE6).

National and local government

Chapters 1 and 5 summarised differences in the sub-national institutional environment between England and Wales. These differences together with the relative smallness of Wales as a country compared with England, had marked consequences for how indigenous companies related to national government on both sides of the national border. Interviewed indigenous NE Wales companies had much more to share about how they relate to the WG than indigenous companies did on the English side of the border about relations with the UK government.

Indigenous companies in NE Wales gave both supportive and critical feedback about devolution in Wales. Favourable observations centred on a strong sense of Welsh identity and fraternity amongst firms (DEN2, DEN7, WRE3, WRE5, WRE8). But what was most important was direct personal relations between the company into the WG. As shown in Figure 8.13, two of the companies (DEN2, DEN4) were recognised by the WG as regionally important companies, providing them with a direct contact to talk to about business issues. DEN2 particularly valued this service together with close relationships with Ministers and regular visits by WG AMs. Whilst Westminster MPs also visited, it was on a more occasional

basis. The company felt that they were closer to the Welsh than UK government: *'if there was a serious issue, we would go to the Welsh Government before going to the UK government'* (DEN2). Direct contact was valued by other companies, with an emphasis that *'it is relationships [with the Welsh Government] which are key'* (WRE3) and:

'We have a lot of time for the Welsh Government. They do try to help, particularly on the ground. People knock on the door and ask if we need any help' (DEN5).

The quality of personal relationships was central to the success of a graduate recruitment scheme for SMEs called GO Wales that used to be run by the WG. Four indigenous firms (DEN1, DEN3, WRE3, WRE8) and one incoming company (WRE4) praised their experience of the scheme in aiding them to find suitable graduates and the personalised tailored way in which it was run: *'the lady who looks after this scheme is absolutely brilliant'* (DEN3). Sadly, the scheme became a casualty of reorganisation of business support services in Wales. It was not clear as to whether there had been a proper evaluation of the effectiveness of the scheme. It also appears that universities have found it difficult to identify and support sufficient numbers of prospective graduates who are likely to struggle with finding suitable employment and suitable placements in spite of government subsidies (INS12).

Critical feedback on devolution in Wales varied from company to company. There were companies with no critical feedback (DEN2, DEN5, WRE5, WRE7, WRE10). The most common complaint came from companies who felt an absence of direct contact with the WG. For example, FLT6 expressed that *'there was no point of contact'* (FLT6) and that the quality of engagement was poorer since the abolition of the WDA in 2006; the WDA had an account manager who knew their business. Similarly, FLT9 pointed out that access to support was fragmented, for example in terms of advice about types of grant available to businesses and from which sources. Drawing on their own experience and that of colleagues running smaller businesses, who lack time to investigate difference sources, *'there is a need for clarity about what the structure is, not just for financial help, but for any kind of help'* (FLT9). This view was reinforced in a belief that there were too many business agencies in Wales, so that: *'there are too many agencies, there are too many different projects and grant systems; nothing is joined-up'* (WRE3).

Further, an observation was made that there was more that could be achieved by working with indigenous companies in Wales:

‘They (the Welsh Government) look at inward investment as a major plus, but they are missing a huge trick with family businesses in Wales because we are going to be here for the long term, not for ten years whilst the grants are available, or the labour pool is cheap or so on. We have seen that with Japanese companies. They should focus on good sustainable businesses that are profitable’ (WRE3).

Figure 8-13 Welsh anchor and regionally important companies

Category	Group of firms	Firms
Anchor companies	Evolved – pre-1980	FLT5, FLT7,
	Incoming – post-1980	WRE11
	Indigenous	None
Regionally important	Evolved – pre-1980	FLT8
	Incoming – post-1980	FLT2, WRE4
	Indigenous	DEN2, DEN4

Source: Author based on Welsh Government

Other frustrations were raised. One was that although devolution was meant to lead to ‘a smaller government which is more flexible and dynamic’ (DEN7), the outcome was often a lack of dynamic decision making (DEN4, DEN6, DEN7). This was reflected, for example, in a failure to reorganise local government in North Wales into fewer larger authorities, such as existed in England (DEN6). Other issues raised were a perceived lack of economic focus on rural policy (DEN4), perceptions of poor health and education policy outcomes in Wales compared with England and concerns about different building regulations in Wales compared with England. The WG might also be perceived as Cardiff-centric (DEN4), although there was also admiration at how Cardiff has changed:

‘There are a lot of people from around here who go to Cardiff. For that part of Wales, the Welsh Government has done a great job. It has made Cardiff into a

major city. Years ago, nobody around here would have thought of going to Cardiff. Now many of our friends are living there' (DEN4).

And a sense that NE Wales was different:

'I am proud to be Welsh.... Yet, you will find a lot of people, especially in NE Wales that don't align themselves with South Wales and I think that there is an invisible barrier between NE and NW Wales in terms of culture and language' (WRE8).

There was less feedback about firms' relations with local government in Wales. Whilst there was no feedback in Denbighshire, comments from firms in Flintshire and Wrexham were consistently favourable. Underlying these once again was the importance of personal contact (FLT9, WRE3, WRE8, WRE10) as illustrated by this typical feedback:

'There is a fantastic lady on the [Wrexham] industrial estate, a coordinator [for Wrexham Council] and every time we have got a problem, she sorts it. She knows everything, and she has been very, very good' (WRE3).

By contrast with NE Wales, only one of the indigenous companies interviewed on the English side of the national border had any direct contact with the UK government. That exception was CHE6, which through receiving the Queen's Award for Innovation had received invitations to attend meetings in Downing Street and speak at the then BIS events. Two companies had interest in specific sub-national policy issues: CHE4, as a zoo in environmental issues and CHE11, as an environmental consultancy, on the National Planning Policy Framework.

There was more feedback about the local government level. As an important visitor attraction, CHE4 reported excellent relations with CW&C Council with six-monthly formal meetings with the Leader and Chief Executive and more frequent informal meetings with officers. CHE6, with its innovation centre in Stockport and HQ in Helsby, reported having '*a lot of exposure, both to local politicians and to the local media within Cheshire West*', whilst '*we have no exposure in Stockport, where the innovation takes place*'. Whilst, '*I find it strange, that everything is so localised, it just happens to be where you are based*', the managing director is keen to '*promote us a Helsby company now*' (CHE6). The Managing Director had personally represented SME companies on the CW&C Skills Commission, having presented

testimony and policy recommendations. CHE9 had received help from funding opportunities. CHE11 valued the possibility to liaise with an account manager at the local authority.

On the Wirral, all the interviewed indigenous companies spoke favourably about their direct contacts through Invest Wirral, the then local business agency supported by Wirral Council (WIR1, WIR3, WIR4, WIR5, WIR8), through which all of whom had received grant funding support, for example towards moving premises. None of the CW&C companies had any contact with the Cheshire & Warrington LEP. Only one Wirral company (WIR1) had received an approach from the LCR LEP.

8.5 Conclusions

This Chapter found that for indigenous firms, the Mersey Dee comes closer to demonstrating characteristics of a trust-based, rather than a pure agglomeration firm economy as illustrated by Figures 3-2 and 3-3 in their firm-to-firm and institutional relations.

First, all the indigenous companies share in stronger 'place' ties than evolved and incoming firms. Territorially, all the firms are locally rooted. They were founded within the Mersey Dee – as a new start-up, related diversification, or take-over – by owners with place connections. Often, these ties were very local, for example with personal commitments by their owners to Ruthin, or Wrexham or Wirral. Part of this might be family connections, reinforced in some cases by historical association by the firm to a particular location. For two companies, it was due to immovable equipment. For others, it was because of their dependence on the availability of specialist skills in a local labour market. Examples included the legacy of optical expertise from Pilkington's at St Asaph and heat tracing skills from BICC at Helsby. For others, their company branding was associated with their location. As a result, these firms were largely immobile with their close ties to 'place'.

Second, indigenous firms also have relational ties with other firms. Three firms most clearly illustrate social network characteristics: one, competence-based and two trust-based. Trust-based firms demonstrate close customer relations, through which they collaborate to innovate. They also seek loyal, and where possible, local suppliers. Both firms pursue specialist knowledge through their industry and recognise that technological change is an

incremental rather than a step-change process. By comparison, the stand-out competence-based firm works with heat-tracing technologies. Its innovation involves close horizontal relationships with other firms and universities on a diverse range of product applications. Beyond these three, indigenous firms normally illustrated relations that were suggestive of the social network type, although less demonstrably trust-based than the above examples. In particular, it was common for indigenous firms to approach innovation as a collaborative activity to undertake in response to their customers' needs and challenges. It was also shown in their preferences to source locally, particularly through long-standing local relationships. Urban Wirral firms and those associated with Chester provided the only exceptions to these patterns of conduct, from having usually just atomistic relations with their suppliers and customers, a feature of the pure agglomeration model (Gordon and McCann, 2000). However, even so, they retained a common loyalty to being in 'place', with their strong personal identification with the Wirral or Chester.

Third, findings have implications for institutional relations, as summarised in Figures 3-1 and 3-2. There was a focus on participation in business networks in Wrexham, Deeside and Chester that provided a function in generating and sharing stories about how the local economy was situated in the wider economy in England and Wales. There was identification of being part of a local community that might be underpinned by support for local institutions, such as schools. Indigenous firms were engaged in collaborative relationships with universities, for example through participation in knowledge exchange partnerships. But this may go beyond this, for example in sponsoring a University Chair and post-graduate research and Board membership. There was also a clearly repeated theme that these firms preferred knowledgeable personal engagement with local and central government. They were consistently critical of contracted out or digitally delivered business services. Nevertheless, these firms are seeking a particular approach towards institutional thickness. They are prepared to take responsibility for their firm-to-firm and institutional relationships. They are very dismissive of what they consider the wrong kind, or poorly informed, top-down public sector interventions. They are prepared, if encouraged to do so in their own way, to contribute to a bottom-up process of building place characteristics of place-representation, enabling innovation and enabling supportive interaction in the local economy (Amin and Thrift, 1994).

Chapter 9 How firms view their location in the Mersey Dee

9.1 Introduction

This Chapter builds on insights shared in Chapters 7 and 8 about how firms came to be in the Mersey Dee and their relationships with firms and institutions, to focus on factors that impact on their continued location. This included considering what firms said that they wanted from public policy, together with feedback from companies on interview results in Flintshire and Wrexham (see Section 4.5). The Chapter is presented in eight sections. Sections 9.2 to 9.6 are organised thematically on policy issues that impact firm location: labour markets; transport connectivity; site infrastructure; energy and business services. Perspectives are compared across evolved, incoming and indigenous firms, with the latter group's views illustrated spatially within local authority areas, as in Chapter 8. Finally, Section 9.7 concludes with implications for the location of firms in the Mersey Dee.

9.2 Labour market

As reflected in Chapters 5 to 8, the Mersey Dee labour market was central to how firms characterised their location in the area, with evolved, incoming and indigenous firms holding both common and diverse views about employment (see Figure 9-1). Four common themes were shared across firms and locations. First, consistent to earlier history (see Section 7.2), the Mersey Dee continues to provide a industrially skilled and flexible workforce, particularly in operational roles. Second, Mersey Dee firms consistently reported having a loyal and committed workforce that lives close to their place of work. As one evolved company reflected:

'But our people, 95% of whom are from local communities, Birkenhead and Liverpool, with many of them being sons and daughters of former workers in the business. I think that legacy, that history is really important. It's what has kept me in the business' (WIR6).

Third, with long service, manufacturing firms have ageing workforces, with an expectation that between 20-40% of their workforce might retire over the following five to ten years (FLT4, FLT5, WRE4, CHE2, CHE3, CHE5, CHE9, WIR7). As a result:

'We are at a point now where the people we recruited in 1990, in the last big recruitment, are getting quite old. They are in their mid-50s. In five years', time they will all be looking to retire. In the next ten years we will lose 40% of our blue-collar workforce if they retire at 60' (FLT5).

Fourth, an important caveat to positive views of the local labour market was that it was difficult to recruit locally to fill senior and specialist engineering vacancies: *'as time passes, it is more and more difficult to find people who have skills'* (WRE9). A similar issue exists within the competitive labour market of the UK nuclear industry (CHE2). But this is seen as a national rather than a local issue:

'Engineers, genuinely good engineers, is always a challenge. I just don't think enough people study engineering. Engineering does not have the same standing in the UK that it does in Germany' (CHE5).

National solutions were needed, to raise the quality and quantity of technical education to be equal to an academic university pathway for young people (FLT4, FLT5, WRE1, WRE4). Unfavourable comparisons were made with the quality of technical education in France and Germany. As a result:

'There is not the recognition that by going through a FE college you can get just as much out of life as having a university degree. A lot of people here in senior management started as apprentices. There is no limit to where you can end up. For good apprentices, we will put them through university anyway' (FLT5).

A significant difference between evolved and incoming firms was how salary costs were perceived to impact on their firm's local competitiveness, despite both groups of firms paying well. Most evolved firms did not consider salary costs to be their primary competitive cost factor; energy costs and potentially, transport transaction costs, were more likely to be significant. Evolved firms pay well (CHE1, CHE2, CHE5, WIR7), including affording to recruit the very best in the market (CHE5, CHE8, FLT7): *'we are one of the best payers in the area, within the local region, for blue collar manufacturing'* (FLT7). Rather than focus on wage costs, evolved firms emphasised investment in workforce skills. Six of the nine evolved firms recruit graduates as well as school leavers (see Figure 7-18), with FLT7 then taking on around 100 apprentices a year and undergraduate internships. CHE8 and WIR7 stressed that it was the

intellectual capability and drive of their people that makes all the difference: *'we have an intellectual capital tied up with around 400 people with PhDs'* (WIR7).

Incoming firms differed in their views about the importance of salary costs to their local competitiveness. By contrast to evolved firms (see Section 7.3), incoming firms frequently compete internationally with other company plants to manufacturer comparable products. They recognise that they pay well (FLT2, FLT4, WRE4, WRE9, WRE11). For example, FLT2, in the automotive industry, uses industry comparators such as JCB in Wrexham and Airbus in Deeside, as well other automobile firms, to evaluate pay levels. This is since: *'we are prepared to pay to attract and retain good quality'* (FLT2). Whilst aiding local recruitment, it reinforces a cost disadvantage with competing plants. For example, FLT2 company wage rates in France may be around 85% of those in Deeside and for Central Europe it is about 40%.

Another MNE plant (WRE4) reported salary levels as much as double their nearest competitor. These were set when the company was competing for staff with other global companies on the Wrexham Industrial Estate, (e.g. Tetra Packs, BICC, Courtauld's and Metal Box) all of whom have since departed. New staff pay levels were reduced to better match local pay rates. Yet, these still remain relatively high, reflecting company policy to pay *'competitive rates'*. As a result, Wrexham factory wage costs remain high compared to other company plants in Poland and Catalonia, Spain (WRE4).

The consequence of high wage costs is to put pressure on MNE firms to deliver high labour productivity (see Section 7.3), which is critical to their continuing survival in the area. This might be by upskilling staff and applying new technology effectively in production (WRE2). As a result:

'We are the best performing plant and better than [central European competitor plant]. The quality we are producing here is up there in terms of world class' (FLT2).

Like evolved firms, incoming firms value workforce skills. But as discussed in Section 7.5, they have a different approach to entry recruitment. None of nine incoming firms recruited entry level graduates. Indeed, school leaver apprentice recruitment focused more on *'company ready'* indicators, than on formal qualifications (FLT2, WRE4).

Unlike for evolved and incoming companies, localised labour market conditions matter to indigenous firms. For operational staff, Denbighshire firms perceived this rural county as a low wage economy in comparison with urban centres in NW England. For skilled staff, the position was different. There is not a local labour pool of graduates and higher qualified staff to access. The exception is localised optics expertise centred on St Asaph's Business Park, that draws the legacy of Pilkington's presence (succeeded by Qioptiq) and Welsh Assembly and WDA investment in the Wrexham Glyndŵr Innovation and Optic Centre. One Denbighshire firm (DEN2), competes internationally with the best firms in its industry, by paying competitive salaries to attract and retain skilled engineers at its rural location. Another firm considered that it paid slightly below 'city' rates of pay to attract good graduate staff (DEN1). Overall, Denbighshire firms saw themselves as having to work hard at recruitment to compete with more urban locations to the east, such as Chester:

'The costs of running the business is a marginal factor. The biggest challenge is getting the right people with the right skill sets and ambition' (DEN6).

Once staff settle into employment, retention rates are high: *'As long as you can get them here, they like the area and stay'* (DEN1). For operational staff, most live and were brought up locally, resulting in a low turnover of staff. These firms are situated in a scenic location, offering a high quality of life. Denbighshire is a relatively low-cost housing area, particularly close to the coast (e.g. Rhyl and Prestatyn), with higher prices inland, in the Vale of Clwyd.

Flintshire and Wrexham were also viewed as low cost employment locations for operational staff, particularly in comparison with neighbouring urban centres in NW England (WRE7, WRE10). Like Denbighshire, there is a consistent pattern of staff at all levels living within five to ten miles, to the workplace. Firms stressed workforce loyalty and low staff turnover (FLT6, FLT7, WRE1, WRE3, WRE8). Some firms may also depend on immigrant workers from Central and Eastern Europe settling into the area, made attractive by its good links to Liverpool and Manchester Airports (WRE3, FLT9). There were concerns that this source of labour may dry-up in the future. Flintshire and Wrexham indigenous firms were more concerned than Denbighshire firms about competition with MNEs for staff. This was driven by two factors. First, that, as highlighted earlier, MNEs pay well above the local wage rates of indigenous firms, impacting competition for labour. Second, indigenous firms may perceive that MNEs

are less demanding over the breadth of skills and flexibility that they expect than the smaller companies:

'The challenge is finding people who have got a mixture of skills, rather than just skilled labour, because we can find skilled labour. They just haven't got the breadth of experience that we need' (WRE1).

However, for a company in the data management industry, able to access labour further afield, the options become different:

'If you spread the radius [for recruitment] out to Chester, Liverpool, West Manchester and Stoke-on-Trent, you start to form a very experienced services and specialised pool as well' (WRE7).

One firm (WRE3) responded to its skills challenge by investing £3 million in its own training academy to develop *'its own future generation of bakers'*, working closely with the FE college, Coleg Cambria. In common with incoming firms, many of the local firms recruit school leavers, sometimes onto apprenticeship schemes (WRE3). However, they are more prone than the incoming MNEs to take on graduates, with some firms having graduate placements (FLT6, FLT9, WRE3, WRE7) (see Section 8.4). Flintshire and Wrexham companies recognised that attracting, keeping and developing the workforce as a key success factor.

The distribution of indigenous firms interviewed in CW&C was distinguished by a mix of contrasting locations, offering different labour market settings. Within Chester, CHE4 is a major (zoological) visitor attraction that is a popular choice for employment. It was not therefore surprising that CHE4 reported that it was easily able to recruit suitable employees, most of whom came from the local area. Exceptions were specialist staff, who may be recruited nationally. The two firms situated in rural locations outside of Chester pointed out that it was challenging to employ staff without access to a car, because of poor public transport access (CHE7, CHE9). There was also a theme consistent with elsewhere that staff, particularly those in operational roles, live locally (CHE4, CHE6, CHE9).

As an IT recruitment firm, CHE7 advocated the relative strength of Chester in this regional labour market, given its concentration of financial services firms on Chester Business Park. However, it was weak compared with Manchester:

'Chester for its size, outperforms a city the size of Liverpool in terms of IT jobs and vacancies, secondary to Warrington and Manchester' (CHE7).

Evidence from the two firms located in Helsby (CHE6, CHE11) is interesting for two reasons. First, for revealing the localness of the town's labour market, with young people preferring to stay and become apprentices rather than moving away to university:

'Helsby is a funny kind of town really, in that it seems that people don't like to leave. It's a little bit isolated even within the region. There are a number of apprentices that we've picked up, who are very capable of going to university, but really would like to stay very local to the area and that's therefore a really good source of employees' (CHE6).

This localness is also reflected in its long history of association of cable manufacture by BICC and its legacy of being the site of one of only two irradiation beams working in the UK:

'BICC employed over half of the residents of Helsby at one time and that is a big part of the heritage of the area. We are proud to carry on that and are very committed in doing so. I think that it matters a lot to our employees as well because, as I say, Helsby seems to be the sort of place where generations still live. So, we already have a family where we have a grandfather, father and son – three generations of the same family here – so in terms of its importance to the local community, I think it is pretty high' (CHE6).

Second, in offering a comparison between Helsby and Manchester, given that both firms also have sites in Greater Manchester. As mentioned earlier (Chapter 7), CHE6 was located in Stockport from 1987, but moved to Helsby to take over the former BICC site in 2005, primarily to gain ownership of the irradiation beam, critical to the treatment of cables in the firm's business of 'heat tracing'. Many of its operational staff are former BICC employees, resulting with the challenge of an ageing workforce. The Stockport premises was reopened in 2010 to operate as their innovation and technology centre for the company's R&D. As a result, the company can compare recruitment experience for both sites. Company CHE11 started up as an environmental consultancy in Helsby in 1980 but has grown to operate nationally and internationally. One of its satellite offices is located in Manchester.

Both companies shared that their qualified younger staff, in the case of CHE11 with master's degrees or above, and employees living in Greater Manchester, preferred to work from

Manchester. For CHE6, it reinforced the wisdom of locating its R&D activities in Stockport. For CHE11, there it led to a division between headquarter type functions and the older average age of the workforce located in Helsby compared with a younger office in Manchester. A strong theme from Wirral firms was about the 'localness' of the labour market. All five indigenous companies reported that their employees come primarily from the Wirral (WIR1, WIR3, WIR4, WIR5, WIR8). Owners for four of the firms (WIR3, WIR4, WIR5, WIR8) have lived on the Wirral all their lives. For WIR1, the three owning directors were drawn to the Wirral through family (e.g. marriage) or university connections and have committed to stay, even though this may pose competitive challenges to growing the company. Four of five of the firms reported low staff turnover. All the firms were confident that they could attract staff with appropriate skills, but with reservations that there was stiff competition from MNE companies located in the area, because of their propensity to pay higher wages:

'The problem for smaller companies is that you have got Jaguar, Vauxhall, Airbus and Cammell Laird taking the crème de la crème. But there are still good people to be found' (WIR8).

Figure 9-1 Comparing labour market location factors

Group of firms	Advantages	Challenges
Evolved	<ul style="list-style-type: none"> Salaries are not the primary competitive cost factor (FLT7, CHE1, CHE2, CHE5) Depth of skills and experience in local workforce (FLT7, WRE6, CH1, CHE8, WIR7) 	<ul style="list-style-type: none"> Even with a large pool of nuclear industry workers in the NW, there is a relative shortage of staff in the UK compared with Germany and Netherlands (CHE2) Low turnover of staff is leading to an ageing of the workforce (FLT5, CHE2, CHE3, CHE5, WIR7)
Incoming	<ul style="list-style-type: none"> Availability of local manufacturing and technical skills for operational roles (FLT2, FLT4, WRE4, WRE9, WRE11. CHE3) Loyal staff and low staff turnover (FLT2, WRE4, WRE11) 	<ul style="list-style-type: none"> Salaries high compared with company's European and international plants as well as local firms (FLT2, FLT4, WRE4, WRE9) Struggle to fill senior/engineering roles locally and attract young people into engineering (FLT3, WRE4, WRE9)
Indigenous	<p><u>Denbighshire</u></p> <ul style="list-style-type: none"> Professional staff pay levels below 'city rates' e.g. Liverpool, Manchester (DEN1, DEN3, DEN4) Low pay rates for operational staff (DEN4, DEN7) Low staff turnover (DEN1, DEN2, DEN5) Staff live locally (DEN1, DEN2, DEN3, DEN4, DEN5, DEN6, DEN7) Good universities in vicinity e.g. Glyndŵr. Bangor, Chester, Liverpool, Manchester (DEN3, DEN6) Local optics skill sets around St Asaph Business Park (DEN3) <p><u>Flintshire and Wrexham</u></p> <ul style="list-style-type: none"> Pay levels below 'city rates' (NW or SE) (WRE3, WRE10) Low staff turnover (FLT9, WRE1, WRE3, WRE5, WRE7) Staff live locally (FLT6, FLT9, WRE1, WRE3, WRE5, WRE7, WRE10) Local availability of skilled labour (WRE5, WRE7) 	<p><u>Denbighshire</u></p> <ul style="list-style-type: none"> Shortage of skilled/specialist and experienced staff (DEN1, DEN3, DEN5, DEN6) Competition with city locations for graduate recruitment (DEN1) Pay premium wage rates to attract specialist staff to rural location (DEN2) Rhyl is in decline with regeneration and labour market problems (DEN3, DEN6, DEN7) <p><u>Flintshire and Wrexham</u></p> <ul style="list-style-type: none"> Pool of available workforce getting smaller (FLT9) Challenging to find people with the right skills (FLT6, WRE8) Competition for skilled staff from MNE companies paying higher wages (FLT6, WRE1)

Group of firms	Advantages	Challenges
	<p><u>CW&C</u></p> <ul style="list-style-type: none"> • Pool of suitable employees to recruit (CHE4) • Staff live locally (CHE4, CHE6, CHE9) • Helsby a lower wage location than Manchester (CHE6) <p><u>Wirral</u></p> <ul style="list-style-type: none"> • Staff live locally on the Wirral (WIR1, WIR3, WIR5, WIR8) • Very low turnover of staff (WIR3, WIR4, WIR5, WIR8) • Strong positive ethos towards work (WIR8) 	<p><u>CW&C</u></p> <ul style="list-style-type: none"> • Ageing workforce (CHE9) • Shortage of skilled workers in rural areas outside Chester (CHE9) • A challenge to attract people to work at the Helsby office (CHE11) <p><u>Wirral</u></p> <ul style="list-style-type: none"> • Competition for staff from MNE companies paying higher wage rates (WIR8) • Challenging to find people with appropriate technical skills and experience (WIR4)

Source : Author

9.3 Transport connectivity

Chapter 6 showed how the MDA and its regional partners have sought improvements to transport, and in particular, to rail connectivity. This is through the Growth Track 360 campaign to connect North Wales into the Northern Powerhouse within an hour's journey time by rail. Firms from all three groups – evolved, incoming and indigenous – backed this campaign. Yet, when asked for specific transport schemes that firms would like to see, few companies named transport investment priorities. When they did, they were likely to identify local rather than regional projects. The exception was urban-based firms, who considered improving east-west rail links through to Manchester a priority.

Only a minority of interviewed firms expressed strong views on the need for transport investment. One factor may be that overall, firms consider that the Mersey Dee to be well connected to the rest of the UK, to Europe and internationally, with good road, port and airport links. This is consistent with the perspective of incoming firms, who saw the area's transport connectivity as a factor in choosing to invest in the Mersey Dee (Section 7.2): *'The transportation system was one of the major reasons why the company decided to establish itself here'* (FLT4). Another reason could be that although connectivity is a crucial issue, it is not just about investment in projects. Taking evolved, incoming or indigenous firms as a whole, three sets of issues were identified as important. First, concerns about transportation issues often related to the consequences of transaction costs rather than connectivity investment. Second, more remote firms in Denbighshire had a different perspective to those situated closer to urban NW England. Third, urban firms have different transport priorities to rural firms. The rest of this Section addresses these three issues.

Transportation transaction cost issues were raised by evolved, incoming and indigenous companies. That is, they reflect the different choices confronted by the firm to minimise time, bulk and distance costs. For evolved and incoming firms opportunity cost factors were involved from comparing costs at the Mersey Dee plant with its international competitors within the industrial complex. For indigenous firms, it was more about the local firms competitive position in the marketplace. Evolved CHE8 demonstrated their dilemma from being part of a MNE complex that manufactures a similar product to their equivalent plant

in Germany. If raw materials come from Central Europe, they cost more to transport to the UK than to the German plant, because of the longer distance involved. These cost differences are amplified if the final product market is Germany. So, even if the two plants are equal in labour productivity, the German plant has an advantage because of its comparatively lower transport costs. This is important, even though freight costs might be small compared with raw material costs. Crucially, this is because it is a cost that can be controlled. Further, since distances from Central Europe to Germany are less than to the UK, the lead time for delivery is likely to be shorter. Customers would want short lead times so that they do not have to hold onto stock, reinforcing the cost advantage to Germany. As a result:

'There is a range of products that we are in competition with a site in Germany. The problem is that more and more of the raw materials are coming from Central Europe. Then you have to ship raw materials from Europe to Ellesmere Port and then send the products back to Europe. It doesn't make sense, does it?' (CHE8).

Incoming firm FLT2, manufacturing automobile engines, provided a related example. Their transportation and production dilemma arose from shifts in the supply chain away from the UK to Central Europe. For this firm:

'Since the 1989 decision by the company to open the factory here in Deeside, there have been huge changes in the supply chain. Even before the financial crash, the eastward shift in supplies was clear, particularly tier one, but also tier two suppliers, who had multinational capacity and were upping sticks and closing UK plants. Off they would go to Poland, Hungary and the Czech Republic and even further east and the Far East' (FLT2).

As a result, parts are supplied from Central Europe only to be shipped back to another plant in Central Europe in a completed engine, adding significantly to production costs. Competing company plants in Central and Eastern Europe therefore have the cost advantage from being within more closely integrated supply chains. With few suppliers from Wales and only around a dozen in the UK, the company was wholeheartedly in support of initiatives to re-establish UK-based suppliers.

A third illustration from an incoming firm, in this case worked to the advantage of the Wrexham plant (WRE9). Around five years before the interview, local Wrexham production

of ophthalmic optical lenses was under threat, as HQ in Japan looked to move production offshore to Thailand, with its lower cost base. As a result, the Wrexham factory was in decline, with falling production and redundancies. However, advances in technology allowed the firm to:

'...do things we could never do before. That means that we provide products that can be individualised to the patient's needs. So, for example, you could have a lens that does not just meet your prescription, but also meets your lifestyle requirements, for example, in terms of how much you drive or how much time you spend in front of a computer or whatever' (WRE9).

Turnaround of a product order through Thailand took about six days, while locally it took only three, with the possibility of a 48-hour fast-track service. Alongside technological change allowing individual customisation of lenses, customer expectations of speedy turnaround of orders was increasing:

'Whilst opticians and their patients were happy to wait a week for spectacles, there is now an expectation for a faster service. This is reinforcing the case for a local manufacturing footprint' (WRE9).

As a result, dialogue with HQ changed to being about bringing back customised production to Wrexham. This was reinforced by company experience that locations with a manufacturing presence gain a larger share of the market. Where the firm retained only a distribution service, its market share was smaller.

The fourth example was an indigenous firm. FLT9, manufacturing upholstery, showed how increasing transport costs had combined with growing consumer expectation of choice to improve the economic base of their business. A predecessor firm with 40% of the UK upholstery market failed because it had not recognised the threat of imports before it was too late. As a then recently formed company, FLT9 was able to take over contracts from the failed company, becoming the sole upholstery manufacturer to a major UK retailer. What really helped was a shift towards increasing costs for transportation of bulky goods: *'It costs £90 now to get a sofa from China to the UK. £90 is a lot of money to recover' (FLT9).* It also took five weeks to get from China to the UK. And, that even then there would be limited product options:

'If you are buying from abroad, you have to say, I will have one container of blue, one container of red and one container of black and hope that you can sell them' (FLT9).

Working with their retail customer to manufacturer sofas in Flintshire, they are able to offer 28,000 different combinations of fabric and shape of sofa, responding to a diversity in customers' wishes. These cost advantages even apply to a basic IKEA sofa, with savings compared with manufacture in Poland. The company felt that these increased bulk transportation costs were critically important to the success of the business.

Denbighshire's remote position made transport connectivity more likely to be an important location issue than for firms in other interview locations. Parts of the county, including the Vale of Clwyd (DEN1, DEN4, DEN5) and Corwen (DEN2) are some distance from the main road network connecting North Wales to NW England (A55, M54 and M56). DEN5 illustrated how their costs of transporting concrete products from rural Ruthin to Holyhead on Anglesey can be more expensive than for a company based further away in SE England: their own rented lorry would be empty on one leg of the journey, whilst the lorry employed by an English company would have an opportunity to reload by going just slightly out of its way, say to Liverpool Docks. Paucity of public transport services might also be an issue in a rural context. DEN3 gave the example of public transport dependent staff travelling from nearby Rhyl onto the St Asaph Industrial Estate. While buses do run to the estate, they are not at times convenient to business operations.

DEN2 gave an informative comparative case study about how they were reviewing different location factors between their HQ and manufacturing sites at Corwen, where the company was founded, and their assembly plant on the Deeside Industrial Estate. The company manufactures trailers which, with supplies, were costly to transport. This was due to their bulk and that it takes an hour to reach the M54 motorway from Corwen. Additionally, because of congestion, heavy lorry movements of articulated vehicles carrying trailers can only take place outside of core driving hours:

'The roads to us are small and narrow. We have artic loads of steel arriving on a regular basis and other components. That is a commercial disadvantage' (DEN2).

By comparison, their Deeside site was more conveniently located close to the national motorway network. The interview gave an opportunity to reflect on the relative opportunity costs of the two locations, as summarised in Figure 9-2 below.

Figure 9-2 Comparison of location factors at company DEN2 sites in Corwen and Deeside

Location Corwen - HQ, manufacture and galvanising plant	Location Deeside – Assembly plant
<u>Transport</u> - Higher transport costs: at least one hour to join motorway network (M54, M56) on often congested A5.	<u>Transport</u> - Close to motorway network making logistics of running business easier.
<u>Location</u> – Stunning rural location close to Snowdonia National Park.	<u>Location</u> - More practical industrial estate location to run business.
<u>Operation</u> - Planning restrictions on daytime hours of operation for manufacturing and galvanising plant.	<u>Operation</u> – 24/7 operation possible.
<u>Workforce</u> - Workforce live close to factory.	<u>Workforce</u> – More practical for staff recruitment with access to labour willing to travel to Deeside from Chester, North Wales, Liverpool, Manchester and Warrington.
<u>Financial incentives</u> – No financial incentives to locate.	<u>Financial incentives</u> – Enterprise Zone then offered locational incentives.
<u>Culture</u> - Welsh indigenous company.	<u>Culture</u> - Welsh indigenous company.

Source: Author

Given the issues raised above, it was not surprising that Denbighshire firms made more specific proposals for road improvements than all other firms. All these related to overcoming local bottlenecks that increased journey times to the motorway network, such as along the A5, A55, A494 outside Ruthin and A525 to bypass St Asaph. However, one Denbighshire company (DEN6), based at Rhyl, did identify that being on the railway line to London and being close to the A55 made them more centrally placed.

By comparison with Denbighshire firms, companies in Flintshire and Wrexham were more positive about their transport connectivity. Indeed, their journey connections to markets was viewed as a location advantage, with good local and motorway connections to and through NW England (FLT2, FLT3, FLT9, WRE3, WRE4, WRE5, WRE6, WRE7, WRE11, CHE2, WIR7).

Closeness of Manchester and Liverpool Airports (FLT6, FLT9, WRE3) and the fast journey to London by train (FLT9, WRE3) were also location strengths. Only two Flintshire or Wrexham firms raised connectivity issues, which in both cases related to their own circumstances. One firm was remote from its suppliers in NW England, to which it had to travel frequently. The concern expressed here was more about an absence of alternative local suppliers than transport links. The other firm was concerned that it was remote from its business opportunities:

'Very little of our business is conducted in Wales. If we were to have a free hand and could place our business anywhere in the UK, we would probably not place the business here in NE Wales' (FLT6).

Firms positioned on the Deeside and Wrexham industrial estates acknowledged local improvements to the A483 between Wrexham and Chester and to estate roads, so that: *'with the new road infrastructure, we are well placed to service the main road networks, rail networks and air links'* (WRE4). There was *'still room for improvement'* (WRE4), for example to widen roads further and add a truck stop (WRE4), but overall firms were complimentary that:

'The communications to the industrial estate of Wrexham have been fantastic since the new link road has been put in. That has made a huge difference, even getting onto the estate in the mornings. It used to take 25 minutes, it is now taking three or four minutes. So, I think we are quite lucky in this part of the world that we are not in car parks; it's not the M25. I think that is an advantage of North Wales over certain parts' (WRE3).

CW&C firms also perceived themselves as well connected nationally by the motorway network and having a good local road network (CHE4, CHE11). However, along with firms in Flintshire and Wrexham, there were reservations about growing congestion on the A55, M54 and M6 (FLT2, WRE8, CHE6). The value of having two international airports on the doorstep, Manchester and Liverpool, together with good rail links to London were also valued (CHE4, CHE11): *'Our guys are almost weekly on a flight back from the Middle East or going through Manchester or Liverpool airports'* (CHE11). However, poor local public transport connections were raised by the two firms in rural locations outside of Chester (CHE4, CHE7, CHE9). Transport connectivity was also perceived as a strength by Wirral firms. The Wirral is well

connected by road nationally (WIR8), by rail, particularly to London (WIR1) and internationally through Manchester and Liverpool Airports. It was also seen as a convenient location to get to for suppliers (WIR8). The only identified challenge was the cost of the Mersey Tunnel fees for a company that relied on reaching its customers with its fleet of vehicles (WIR5).

The quality of public rail connections was more likely to be raised by firms with urban locations. These were primarily but not solely services-based (CHE4, CHE7, CHE11, WIR1) rather than manufacturing companies (CHE6). All were located on the English side of the national border. There was universal praise for the quality of rail connections to London. But east-west connections, the subject of the Growth Track 360 campaign, for example to Manchester, were viewed as poor, so that: *'we would really be interested in better rail networks, since I think public transport up north is shocking'* (WIR1). As a result:

'You might say trains are good because you can be in London in two hours. Or, you might say 'don't get me started'. It takes an hour to get to Manchester' (CHE10).

The primary concern was the poor quality of rail links between Chester (and Helsby) to Manchester. CHE4 raised this from their perspective of specialism in IT recruitment, and by CHE7 observing the expansion of the IT market for jobs in Manchester as well as Chester and the importance of mutually quick transport links between the two cities.

'The bigger long-term growth in the IT jobs market is into Manchester. However, rail links, for example, from Chester to Manchester are terrible. If we had a fast rail service from Chester to Manchester that could transform a lot of links between the two in terms of switch of town' (CHE7).

This connects to the workforce issue raised earlier about the relative attraction of Manchester over Helsby as a work location (CHE6, CHE11). First, because it reinforces the attraction of a city location:

'Sometimes the transport links can put people off coming out and working in Helsby, because those people tend to be based in the Manchester's of the world' (CHE6).

Both CHE6 and CHE11 observed from having locations in both Helsby and Manchester. As outlined in Chapter 8, CHE6 has its HQ and manufacturing at Helsby and its R&D in Stockport, Manchester. The firm connected the quality of rail links between Chester (and Helsby) and Manchester with the relative attractiveness of Helsby and Manchester as work locations. First, because weak east-west rail links reinforced the attractiveness of a city location for employment. Second, because of the relative inconvenience of the present long commute between Helsby and Manchester:

'I think that if there was a train that could get here [from Manchester to Helsby] in half-an-hour, which electrification would give us, then that would be a big bonus, while it's nearly an hour and that adds two hours or more to somebody's commute each day' (CHE6).

Figure 9-3 summarises .issues raised individually by evolved, incoming and indigenous firms regarding transport connectivity.

Figure 9-3 Location factors for transport connectivity

Group of firms	Advantages	Challenges
Evolved	<ul style="list-style-type: none"> • NW England a regional hub for UK nuclear industry with local supply chain (CHE2) • Close to Manchester Airport (WIR7, CHE2) • Private rail infrastructure transport materials to and from plant (FLT5, CHE1) • Airfield and aircraft transportation makes transport costs consistent to other company sites (FLT7) 	<ul style="list-style-type: none"> • High costs of freighting goods (CHE8) • Remoteness from raw steel supply; rail infrastructure makes it cost effective, but seven-hour journey adds to costs (FLT5) • Local road access to site could be improved (CHE1, CHE2, CHE5) • Distance from customers and declining UK availability of raw materials (CHE8)
Incoming	<ul style="list-style-type: none"> • Manchester Airport convenient for deliveries (WRE9) • Good connectivity to customers (FLT3, FLT4, WR9) • Good local and motorway road connections (FLT3, WRE4, WRE11) • UK is still the company's largest European market (WRE4) 	<ul style="list-style-type: none"> • Transport costs higher than for company's European plants (FLT2) • Supply chain has drifted from UK to Central and Eastern Europe, adding significant cost disadvantage (FLT2).
Indigenous	<p data-bbox="392 860 539 884"><u>Denbighshire</u></p> <ul style="list-style-type: none"> • Direct rail connection from Rhyl London in around two hours, where the company trades (DEN6) <p data-bbox="392 1091 611 1115"><u>Flintshire/Wrexham</u></p> <ul style="list-style-type: none"> • Good local and motorway road connections into NW England (FLT6, FLT9, WRE3, WRE7, WRE10) • Close to Manchester Airport (FLT9) • Good rail connections to London e.g. Chester, Runcorn, Crewe (FLT9, WRE7) 	<p data-bbox="1108 860 1256 884"><u>Denbighshire</u></p> <ul style="list-style-type: none"> • Remote from motorways e.g. M54, M56, adding to costs (DEN2, DEN4, DEN5) • Poor local road connections for transporting goods (DEN2, DEN4, DEN5) • Additional transport hiring costs with lorries empty for one leg of journey (DEN5) • Poor public transport to St Asaph Industrial Estate from Rhyl (DEN3) • Cardiff is very remote from Denbighshire (DEN6) <p data-bbox="1108 1091 1328 1115"><u>Flintshire/Wrexham</u></p> <ul style="list-style-type: none"> • Opportunity cost of driving to and from suppliers in NW England (WRE1) • Distance from UK customers outside of Wales (FLT6)

Group of firms	Advantages	Challenges
	<p><u>CW&C</u></p> <ul style="list-style-type: none"> Well-connected nationally by motorway and good local road network (CHE11) Good rail connections to London. <p>Close to Manchester and Liverpool airports (CHE4, CHE11)</p> <p><u>Wirral</u></p> <ul style="list-style-type: none"> Wirral is well connected by road to other UK locations (WIR5, WIR8) Good rail connections to London, and internationally through Manchester and Liverpool airports (WIR1) 	<p><u>CW&C</u></p> <ul style="list-style-type: none"> Poor rail links to Manchester (CHE4, CHE6, CHE7, CHE11), as well as westward into North Wales (CHE6) Poor public transport connections to rural locations outside Chester (CHE4, CHE7) <p><u>Wirral</u></p> <ul style="list-style-type: none"> Mersey Tunnel fees a disadvantage for firm relying on logistical connections (WIR5) Underinvestment in public transport in the north of England (WIR1)

Source: Author

9.4 Site infrastructure

A question about site and infrastructure investment by firms elicited two types of response. From evolved companies, it was about the legacy of embedded investment and from incoming firms, regarding the consequences of site overcapacity. From indigenous firms there was little feedback. A summary of issues is given in Figure 9-4.

As outlined in Chapter 7, an important distinguishing feature of evolved firms is their history of embedded investment in their site and supporting infrastructure. This may contribute to a firm's competitive advantage to being in this location (e.g. FLT8, CHE2, CHE8, WIR7). For example, FLT7 has both 75 years history of aircraft manufacture on the site, with accompanying infrastructure including an airfield. This is then combined with £2 billion of new investment onto the site over the past 15 years, including constructing the largest factory ever built in the UK. Both FLT5 and CHE1 own and use their own private rail lines for the transportation of supplies and raw materials. This and other examples of site and supporting infrastructure investment create significant barriers to entry for any new firms, or indeed the possibility of moving or building new plant in the same industry elsewhere in the UK. As was pointed out:

'History has played a key big role in determining where we are. When you have a site the size of ours, it is not something you can pick up and move somewhere else' (FLT5).

And:

'Nobody is ever going to build a new fertiliser factory here in the UK unless there is a shale gas revolution.... We are here because this is where the assets are' (CHE5).

It also means that investing in new plant is very expensive, leading to making do or reliance on older equipment, where there is not a strong new investment case:

'The chemical industry is very complicated, and it is very capital intensive, so it is expensive to build plants. So, when the company is deciding where to make something, a key part is who's got equipment that can do that already and how

quickly can they convert it. We rarely put in a new reactor, but we spend a lot of money on converting what we have already got' (CHE8).

Amongst incoming firms there were two examples of overcapacity, where the plant was designed with expectations of market expansion that no longer apply. Today, these present a cost management problem for the company. As referred to in Section 7.2, the WRE4 factory was built at a time of UK peak demand for cereal products. Even though the UK market remains large, overall demand for breakfast cereals is in decline. The company recognises this and internationally is shifting production towards balancing between cereal, snack and frozen products. However, a challenge is that the Wrexham plant is designed for cereals manufacture. With changing markets:

'The problem is that we have a site that is almost 50% under-utilised and we pay the fixed costs for that, which are huge, and we are not given any relief on that' (WRE4).

As a food manufacturing site, the maintenance and utilities budget for their equipment is huge. As a result, site innovation has centred on efficiency improvements in plant utilisation and finding solutions to reducing energy costs at the plant.

The other example is FLT2. When the company invested in Deeside in the 1980s, it likely saw the UK as its base to advance entry into the European automobile market. Their Deeside engine plant may have been viewed as both supplier to the Derby car plant and eventually to provide for automobile production in Europe. Certainly, there is enough empty space within the factory boundary to more than double the size of the existing plant. In 2007, prior to the global financial crises, employment at the factory was more than 900 people, producing 700,000 engines. At the time of interview, production had reduced to one engine type, occupying 50% of floor space and employing just under 600 people. Subsequently, in 2017, the company announced that a new hybrid engine was to be built at the factory, with an investment of over £7 million by the company and a £700,000 grant from the WG (BBC, 2016). With the company owning the site, the costs of under-occupancy were not as serious as in the case of WRE4, where it significantly impacts production costs. Nevertheless, it adds to cost disadvantages compared with its Central and Eastern European competitor plants, together with higher salary costs and more remote supply chains, as discussed earlier.

9.5 Energy costs

Concerns about the impact of UK energy policy on company operating costs were raised by evolved and incoming firms, but not by indigenous companies, as summarised in Figure 9-5. For several of the evolved firms, and particularly those found in Cheshire West, energy costs were the primary cost factor that eclipsed all others (CHE1, CHE2, CHE5, CHE8): *'Our obsession has been with energy recently and anything else has gone by the wayside in all honesty'* (CHE1). Underlying this was concerns about UK application of climate change policy and the EU Emission Trading Scheme (ETS), which was perceived to be *'a bureaucratic mess'* (CHE8). This coincided with the belief that there was the lack in the UK of a long-term and consistent energy policy that acknowledged competitive issues faced by intensive energy users:

'... if you are competing with China, that takes a different view [on energy policy] then you solve your climate change problem by effectively offshoring all your manufacturing to people who don't take such a view' (FLT5).

Underlying these views was the concern that UK energy costs for electricity were higher than those in mainland European countries, despite the application of ETS across the EU. Since these evolved companies were associated with the chemical or nuclear industries, they were all high energy users. For CHE2, in the nuclear industry, energy costs accounted for about 30% of the cost of running the site. CHE5 is a major user of gas in the manufacture of fertiliser and access to gas supply is a major determinant of the firm's competitive position in relation to other fertiliser manufacturers internationally.

Energy policy was not such a significant competitive concern for incoming firms as it was for evolved companies, although was a cost factor (FLT2). It was raised, for example, in the illustration above in the context of managing plant over-capacity (WRE4). It was also put forward as a cost factor by firm CHE3, which uses energy intensively for bottle recycling processes. WRE11 felt undermined by UK government policy when it looked to enter the solar panel manufacturing market. Lack of public policy support to bring to the plant the additional electrical power needed for production, was contrasted with the likely approach in Japan:

'If in Japan, the company went to their local government and said we wish to manufacture this product and we need this amount of power, the government would do everything possible to get that power to them. Whereas here, the company must pay for that power to be put in' (WRE11).

Figure 9-4 Location factors for site, infrastructure and place

Group of firms	Advantages	Challenges
Evolved firms	<ul style="list-style-type: none"> • Embedded investment in site (FLT5, FLT7, FLT8, CHE1, CHE2, CHE5, CHE8, WIR7) and other related investments (e.g. rail link – FLT5, CHE1, and airfield – FLT7, FLT8) • Site has physical locational advantages (e.g. access to raw materials, access to sea) (CHE1, CHE2) 	<ul style="list-style-type: none"> • Company’s Dutch plant more competitive, with access to deep sea harbour (FLT5) • Site location an ‘accident of history’; embedded costs of site and equipment mean that it cannot be moved (FLT5)
Incoming firms	<ul style="list-style-type: none"> • Quality of culture and countryside (FLT2) • Good local infrastructure (e.g. housing, energy and schools) (CHE3) • Overseas visitors think that Chester is a great place (FLT4) 	<ul style="list-style-type: none"> • Good housing hard to find and is expensive (CHE3) • Location is ‘a bit of a backwater’ from within company (FLT3, WRE4) • Site is being used well below its production capacity (FLT2, WRE9)
Indigenous	<p><u>Denbighshire</u></p> <ul style="list-style-type: none"> • Brand values closely associated with qualities of Wales (DEN5, DEN6) • Company has Welsh bilingual identity (DEN2, DEN5) • Family roots in the area, quality place to live (DEN2, DEN4) • Own premises (DEN2, DEN4) • Local availability of raw materials (DEN5) <p><u>Flintshire/Wrexham</u></p> <ul style="list-style-type: none"> • Low business crime rates (WRE5) • Attractive and quality area to live and work (FLT6, WRE10) • Reasonable cost of rents (FLT9, WRE1) • All round, a low-cost location (WRE7) • Nearby Chester is an asset for firm visitors (WRE7) • Financial assistance (FLT6, FLT9, WRE10) 	<p><u>Denbighshire</u></p> <ul style="list-style-type: none"> • Remote location for networking with other companies on face to face basis (DEN1) • Belief that Deeside would be a less remote and better-connected business location than Denbighshire (DEN2, DEN4, DEN7) <p><u>Flintshire/Wrexham</u></p> <ul style="list-style-type: none"> • Rural Wales location hard to sell to potential customers in urban NW England (WRE10)

Group of firms	Advantages	Challenges
	<p><u>CW&C</u></p> <ul style="list-style-type: none"> • Well positioned close to Manchester and Liverpool (CHE4) • Take advantage of momentum created by Media City (with BBC relocation) and Northern Quarter, Manchester (CHE3, CHE7) • Rent and rates competitively low in rural location outside of Chester (CHE7, CHE9) • Take advantage of piece of fixed specialised equipment (CHE6) <p><u>Wirral</u></p> <ul style="list-style-type: none"> • Central marine industry location for firm in shipbuilding and ship repair business (WIR3) • Good location to service local clients (e.g. Iceland, Liverpool FC, Manchester City FC) (WIR1) 	<p><u>CW&C</u></p> <ul style="list-style-type: none"> • Younger staff and those living in Manchester, prefer to work in the city, rather than at Helsby (CHE9, CHE11) • Low awareness of Chester Zoo facility in South of England, even though only two hours from London by train (CHE4) • Chester has a shortage of good quality office space (CHE7) <p><u>Wirral</u></p> <ul style="list-style-type: none"> • Dependent on business from one dominant local customer (i.e. WIR6) with strong historical shipbuilding associations with the area (WIR3) • A Liverpool (for Wirral) postcode is a disadvantage in the publishing industry, which is London centric (WIR1) • Reviewing whether to open a second premise in Birmingham to service customers in Birmingham and further south to London (WIR5)

Source: Author

Figure 9-5 Location energy factors

Group of firms	Advantages	Challenges
Evolved <ul style="list-style-type: none"> • None 		<ul style="list-style-type: none"> • Energy is the most significant competitive cost factor (CHE1, CHE2, CHE5, CHE8) • UK energy costs, particularly electricity, is higher than for competing plants in mainland Europe (CHE1, CHE2, CHE8) • UK lacks a long-term and consistent energy policy (CHE2, CHE5, CHE8)
Incoming <ul style="list-style-type: none"> • None 		<ul style="list-style-type: none"> • Utilities costs are high, reinforced by under-use of available plant (WRE9) • Industry energy costs are an issue (CHE3) • In Japan government would intervene to meet added electricity power needs (WRE11)
Indigenous <ul style="list-style-type: none"> • None 		<ul style="list-style-type: none"> • None

Source: Author

9.6 Business services

Feedback about the delivery of business services by institutions to firms in Wales and England was discussed in Section 7.5 for evolved and incoming firms and in Section 8.4 for indigenous firms. This identified that business services were not a high priority issue for most firms. But when they were delivered, there was a universal view that personal relations were critical over remote delivery. This section looks at what firms shared about the two most commonly highlighted business services issues: Broadband delivery and capital finance. In each case, focus is exclusively on the experience of indigenous firms since both evolved and incoming firms address both these issues internally within the company.

Concerns about the quality of Broadband services came primarily from the Welsh side of the border. Five of the seven firms in rural Denbighshire (DEN1, DEN2, DEN3, DEN4, DEN5) complained about the slow speed of Broadband services in the county. The two exceptions (DEN6, DEN7) were found in the town of Rhyl. Although firms made variable use of the Internet, typical of complaints was:

'We have poor internet connections relative to the wider world and improvements are not on the immediate horizon. This means that we have limited scope for video conferencing, which would make a difference to us'
(DEN1).

There was mixed feedback about the quality of Broadband services in Flintshire and Wrexham. The primary complaints were about a contract to develop Broadband services issued by the WG on an exclusive provider basis. These services were perceived as *'uneconomical'* (WRE8), reflected in low business take-up on the main Wrexham and Deeside industrial estates. It also appeared to have bypassed some of the smaller estate. The alternative options for firms unable to or not using the service were limited (WRE1, WRE3). *'We are not talking superfast Broadband here; we are barely talking Broadband. We are talking dial-up speeds, so it's abysmal'* (WRE1). Also, *'overall, the internet service to the [Coedpoeth] industrial estate is shocking'* (WRE3). Two firms taking-up the contracted service on the Wrexham Industrial Estate said that the Internet service was

good. Another firm in the IT sector found an alternative source, through a company based in Rochdale, but at a high price.

On the English side of the border, one firm reported that Broadband was not as fast in their rural location outside Chester as it was in the city centre (CHE7). Otherwise, feedback on the quality of Broadband services was good (CHE1, CHE6, CHE9, CHE11). Just one firm (WIR1) in the Wirral was concerned about the quality of Broadband connections, which was a provider rather than locality issue. Otherwise, the quality of Broadband services was perceived as good (WIR3, WIR4, WIR5, WIR8).

About access to capital finance, Welsh firms gave three types of answers when responding about their own business. First, most firms looked to fund any capital projects internally (DEN1, DEN2, DEN3, DEN6, WRE1, WRE3, WRE8, WRE10), or through the holding company (FLT9). This was partially because they felt able to do so from profits retained by the business, but also due to a wariness of banks post the global financial crisis of 2007 to 2008. As one firm put things, *'we have seen terrible things happen to other firms'* (DEN2). There was concern that this lack of trust in the banking system as a source of finance might be a barrier to the long-term growth of these smaller to medium-sized local firms.

Second, there were three cases where firms had borrowed from banks (DEN7, FLT6, WRE5). Two companies had sought help during times of trading difficulties (DEN7, FLT6), but had found their banks to be supportive. The third firm was borrowing at the time of interview and was not finding it a good experience, complaining about the absence of relationship management from the bank: *'I just want to believe in a bank and I want a bank to believe in us'* (WRE5). Nevertheless, the view was that preferred position was not to have to borrow, as one fast-growing firm put it:

'We do have a good relationship with the bank. They have given me a letter of support if I need it. If you have got a good business and a good relationship with your bank, access to funding is easy. But we don't borrow, we don't want to' (WRE3).

Third, three firms provided examples of how they had received grants through WG agencies, for example, for people and premises development (DEN1, WRE7, WRE10). A fourth firm had been turned down for funding support after going through an application process because of the sector that it was in. Like firms on the Welsh side of the border, English firms were likely to self-fund capital investments (CHE4, CHE6, CHE7, WIR4, WIR5). CHE11 has raised money internally, including providing staff an option to purchase shares in the company, as well as borrowing from the bank to support an acquisition programme. Apart from WRE11, only WIR1 and CHE9 mentioned sourcing borrowing through the bank, which they have found to be supportive. CHE6 had benefitted from tax credits and capital allowances to support its programme of innovation. WIR8 had received a significant grant towards the purchase of a new premises, through Invest Wirral.

9.7 Conclusions

This Chapter has reviewed how evolved, incoming and indigenous firms perceive their location in the Mersey Dee in relation to factors that impact on the competitiveness of the firm: labour markets; transport connectivity; site infrastructure; energy and business services. This Chapter identified shared issues and differences across evolved, incoming and indigenous firms. There were also contrasts between urban and non-urban located companies. First, there were shared views that as a location, the Mersey Dee has strengths in its combination of industrial skills and polycentric distribution of employment. Firms consistently reported a flexible, loyal and skilled labour workforce with low levels of turnover, whilst acknowledging that an ageing workforce in manufacturing and a shortage of specialist (e.g. engineering) skills were challenges. The Mersey Dee's geographical position between North Wales and NW England was valued as being well connected to the rest of the UK, to Europe and internationally with good road, port, airport and fast rail links (at least to London).

Second, consistent with industrial complex vertical corporate structures (see Section 2.4.3), both evolved and incoming manufacturing firms emphasised the importance of local location factor (labour, site and energy) and distance-transaction costs, in comparison with other company sites internationally. However, local differences in plant

history of re-investment and breadth of devolved responsibilities led to differences in which competitive costs evolved and incoming firms emphasised. Labour costs were a lower priority for evolved firms, whilst distance transaction costs and, for some companies, energy costs were more crucial. Incoming firms stressed the critical importance of labour productivity alongside distance transaction costs.

Whilst evolved and incoming firms value the strengths of the local labour market, they may in practice conduct recruitment regionally or even nationally e.g. in the nuclear, aerospace and automotive industries. This was particularly so for evolved companies, with their presence in the graduate and post-graduate recruitment markets and engagement in research with universities. Pay rates for both evolved and incoming firms were set in comparison with leading industrial comparators and were frequently higher than local market rates paid by indigenous firms. Site and energy costs were also important. Evolved firms were concerned about how up to date their site and capital equipment was compared with international competitor sites. Incoming firms gave examples of how site over-capacity impacted on production costs. Sunk investment costs acted as a barrier for the firm to relocate elsewhere in the UK, or to any new potential entrants to the area. Energy costs in the UK were particularly significant for evolved firms in comparison with competitor locations internationally.

Distance transaction costs are crucial to how both evolved and incoming firms evaluate their location. Firms manufacturing locally for UK markets, may encounter lower distance-transaction costs than an international rival facing higher bulk-transport and speed of delivery expenses to the UK. However, for Mersey Dee firms trading internationally, administrative and other barriers to trade and off-shoring of supply chains increase costs compared with competing international plants in the same company or industry. These issues place Mersey Dee MNEs in a situation of hazard, particularly in the context of Brexit, given that many of these firms are branch plants operating comparatively peripherally within Global Product Networks (see Chapter 7) (Coe et al., 2004; Yeung, 2020).

Third, the situation for indigenous firms with regard to competitive and location transaction costs was different, given their relative immobility in place. Local labour markets were important, with examples of the significance of local skills sets from earlier industrial history (e.g. from BICC's presence in Helsby and Pilkington's optical expertise at St Asaph), together with the relative immobility of labour. Opportunity cost factors also played a role in concerns about overcoming remoteness, from the consequence of distance transaction costs and poor broadband availability in rural locations.

Fourth, agglomeration differences between urban and rural locations were apparent. The attractions of urban areas were illustrated by the concentration of IT skills in Chester and examples of the relative attractiveness of Manchester over Helsby for younger graduates. It was demonstrated by how firms chose to separate functions between their rural and urban locations, with the city beyond the Mersey Dee, being a site of choice for R&D, for face to face contacts and for younger graduate employment and a more rural location the choice for manufacturing and company administration. The one financial services incoming firm based in Chester valued its location in place as being important by deliberately associating its brand identity with the City and investing in civic projects. For urban firms, frustration about poor rail links to Manchester from Chester showed how long journey times impacted the opportunity-cost of engaging in face-to-face relationships in the larger city, whilst these issues were rarely raised by firms on industrial estates.

Fifth, this analysis has confirmed the picture presented in Chapters 7 and 8 of a locality that is segmented in its firm economy. Contrasts have been highlighted between evolved, incoming and indigenous firms in their patterns of industrial complex, social network and, in a more limited way, pure agglomeration characteristics. The Mersey Dee has in previous decades been an economy, centred on an industrial complex model of local economic development, dependent on attracting and anchoring inward investment. But as shown in Chapters 7 and 8, there is evidence that the quality of firm to institutional relations is becoming more important to the future development of the local economy (Ridgway, 2020). And yet, previous history remains important as the Mersey Dee remains vulnerable to the consequence of local to global trends of how

MNEs, as part of their own vertical global production networks, respond to shifts in location factor and distance transaction costs. Referring to the framework set out in Figure 3-2, the governance challenge is not about selecting between the three models for pure agglomeration, industrial complex and social network firms. Evidence from this study suggests that for the Mersey Dee, the pure agglomeration model currently has relatively weak application, the industrial complex model has been central to the area's evolution and the social network model has increasing relevance going forward. The institutional challenge for the local economy is to concurrently focus on the contribution of towns and a city to the local economy, respond to a transition from historical dependence on inward investment, whilst enabling and integrating a stronger indigenous economy that lies alongside the area's MNE companies. This is not just a local challenge for a mixed rural and urban area but comes within a multi-level framework of governance that reaches locally to nationally, where different processes of agglomeration coincide together in the context of place.

Chapter 10 Conclusions: drawing together place, firms and institutions

10.1 Introduction

This study has considered the role of local economic development to realise local economic potential through the interaction of place, firms and institutions. This is of relevance to mixed rural and urban places that reach outside of a major urban centre. Local and central government experience (see Section 4.5) and subsequent study confirmed there was a research and policy gap regarding economic development and governance approaches for such areas (Harrison and Heley, 2015; Harrison, 2017; Beel et al., 2020). In response, this investigation builds on theoretical foundations related to the international ‘place’ debate to consider the intersection of place, firms and institutions through a case study of the Mersey Dee cross-border economy. This concluding Chapter presents findings in relation to the study’s aim and objectives (see section 1.6).

This study has shown that in the intersection of place, firms and institutions, both ‘within’ and ‘without’ matter for shaping territorial and relational place in the wider economy. Places are not ‘islands’ or isolated spaces but are inter-dependent and interconnected relationally to other spaces locally to globally. Central to this observation are three propositions that are brought forward into this final chapter. First, relates to the key distinction between space-neutral and place-based approaches regarding, respectively, the homogeneity or heterogeneity of place. Here a case is made that for mixed rural and urban areas, such as the Mersey Dee, a heterogeneous understanding of place has greater relevance. It is reflected in how place has both relative and relational characteristics that are dynamic and fluid with changing meanings and outcomes over time and space. Second, that a distinctive character of such places lies in their particular mix of firms and combination of processes of agglomeration that impact its economic character. In this case study, industrial complex and social network traits were found to be particularly prominent, reinforcing the area’s external connectedness and the importance of trust as a local characteristic. Third, that in making choices for the appropriate design of institutions, this study shows how in the context of a local

economy, solutions might be more appropriately built bottom-up as well as top-down, within a multi-level context, in which places are inter-dependently and relationally connected.

10.2 The economics behind sub-national policy in England and Wales (Objective 1)

Chapter 1 provided context to this study, by reviewing the economics behind UK sub-national policy. It showed that whilst there is general agreement that the UK sub-national economy has two critical problems – the UK (and particularly England) is too fiscally and governmentally centralised and is spatially and sectorally imbalanced – there is an absence of consensus on how these issues should be addressed. Chapter 1 illustrated that such diversity of views is rooted in different philosophical understandings of the working of market mechanisms, the role of the state and contributions of communities to local and regional development (see also Section 4.2) (Pinch and Henry, 1999; Garretson et al., 2013; Haughton et al. 2014, 2015; Overman, 2014). This was illustrated by the international place debate and in five different approaches to development (see Figure 1-2) (Barca, 2011).

It was shown that the key underlying distinction between the space-neutral and place-based approaches lies in their respective underpinning assumptions about the homogeneous or heterogeneous character of space. The space-neutral world is where spatial adjustment occurs smoothly between levels of equilibrium in response to market signals in a homogenous and predictable urban system, with foundations in neo-classical economics. It is also associated with the agglomeration-driven model of development (from Figure 1-2). The contrasting place-based world is heterogeneous, where the combination of history, culture, geography and institutions creates unpredictable outcomes in the urban and regional system. Three concepts were identified that underpin a place-based approach. First, that local diversity is shaped through different geographical, historical, cultural, social and institutional settings. Second, with knowledge embodied in place (in firms and people) being uncertain, it is necessary to discover it by bottom-up processes. Third, since institutions both shape and are shaped by economic geography, the rooting of their economic activity into their local

institutional fabric is important to realise economic potential (Barca, 2011; Tomaney, 2014; McCann, 2016; Pike et al., 2017).

Chapter 1 showed that within the local economy, this place debate is connected both spatially and institutionally with distinctions between territorial (or absolute) space – i.e. *‘the bounded jurisdictional space of local authorities,’* and relational space – *‘the networked, porous nature of space and scale’* – and their interrelationship. The space-neutral agglomeration-driven approach primarily focuses on the functional bounding of territorial space to best capture the benefits of agglomeration. By comparison, the place-based approach combines territorial, relative and relational analysis to emphasise place’s diverse, distinctive, porous and fuzzy character that is shaped relationally both from within and outside the area under consideration (see sections 1.5.1 and 5.1) (Massey, 2011; Haughton and Allmendinger, 2017: 36; Jones and Wood, 2013; Jones, 2017). It is contrasts in these approaches that have informed the investigation in this study.

10.3 Investigating firms and institutions in place (Objective 2)

Chapters 2 and 3 addressed the interaction of firms and institutions with place within the local economy and beyond. Chapter 2 explored how the localness of an economy might be understood by investigating how its firms relate to place, other firms and institutions. Analysis started from three firm models described by Gordon and McCann (2000) – pure agglomeration, industrial complex and social network – and Markusen’s (1994) insights about the study of firms in their relations to place. The pure agglomeration-type firm, with its looser set of firm and institutional relations, draws knowledge from outside the firm and the diverse range of public and private organisations that occupy the space; likely to be urban in character. For the industrial complex, primarily MNEs, knowledge flows operate vertically, largely within the firm locally, nationally and internationally and through its supplier and customer relations (McCann and Mudambi, 2004, 2005). With the social network firm, two patterns are observed. For the trust-like model, these knowledge flows are likely to be vertical rather than horizontal, but based on trust-like embedded relations, unlike the industrial complex. For the competence-based firm, they are likely to be in the form of trust-like

external relations with competing firms and appropriate institutions (Iammarino and McCann, 2013).

It was recognised that one of these models may be dominant within any local economy. For example, a successful city centre economy can have a prevalence of pure agglomeration type firms (Serwicka and Swinney, 2016; Clayton and Serwicka, 2017). Also, industrial complex firms may concentrate on industrial locations beyond urban areas (McCann and Mudambi, 2004). However, it is possible for a local economy investigation to identify a diversity of firm types (a segmented economy). For example, contrasts may be found between larger MNEs and smaller predominantly locally owned companies (Taylor and Thrift, 1982a, b, 1983). In addition, it is not just that the pure agglomeration firm type may be more closely associated with the agglomeration-driven framework and the social network model with a place-based perspective. But also to emphasise that a *distinctive character of place lies in its particular mix of firms and combination of processes of agglomeration, within and beyond the local economy.*

Chapter 3 built on this analysis of firms to show first, why institutions may matter in economic development, and then, how institutional roles associated with the presence of pure agglomeration, industrial complex and social network firms contrasted (see Figure 3-2). The pure agglomeration model is associated with an agglomeration-driven framework. Here, the institutional focus is territorial in capturing the benefits of agglomeration by minimising the disbenefits of administrative fragmentation, whilst providing for the possibility of local policy experimentation (Cheshire and Magrini, 2009; Cheshire et al., 2014; Ahrend et al., 2014a, b). The industrial complex association with local institutional governance may, in its more limited form, be centred on 'anchoring' type relationships. This is because of the relative mobility of capital through MNEs across nation states and their priority to retain the internal control of company knowledge within their integrated plants and suppliers structure. But more broadly, it is relational through the '*strategic coupling*' of multi-level territorial networks with firms GPNs (Phelps and Fuller, 2000; Coe et al., 2004; Coe and Yeung, 2019).

The social network type reflects a different approach, where significance is placed on trust-based firm-to-firm and information spillovers and inter-firm relations. Also, given underlying assumptions that place is heterogeneous, institutional solutions may be sought to develop a collective approach in a particular territorial setting to enable '*place representation*', build trust, develop shared rules of conduct and create a shared context for innovation, which together underpin the concept of institutional thickness (Amin and Thrift, 1995: 100-101). This Chapter concluded that *the particular mix of clustering of firm types in the local economy presents choices for the design of institutions across different spatial scales*.

10.4 Testing the framework through a local economy case study (Objective 3)

10.4.1 Research framework

As described in Chapter 4, the empirical research for this project was conducted with four elements, centred on a bottom-up investigation of the Mersey Dee (see Figure 4-1). First, to understand 'what makes a place' by addressing the appropriateness of two representations of place to describe the Mersey Dee, as a 'city-region' – drawing on agglomeration-driven characteristics, and as a 'locality' – reflecting 'place-based' attributes. Second, building on observations regarding the Mersey Dee as a place, to investigate the contribution of governance and economic institutions. Third, to investigate how firms in the Mersey Dee relate to place through their firm-to-firm and institutional relations. Fourth, to compare findings from the above three elements regarding the interaction of place with firms and institutions in relation to the two representations of place as an agglomeration-driven city region and a place-based locality

10.4.2 To understand what makes a place (Objective 3a)

This study has shown how different conceptions of place are rooted in contrasting theoretical ideas that are situated in assumptions regarding the homogenous or heterogeneous character of place (see sections 1.3 and 10.1). Conceptually, as summarised in Figure 1-3, such differences lead to different epistemological understandings (see Section 4.2.2) of the interacting role of time (or history), space (or

spatial geography), relations (through people, firms and institutions) and knowledge in shaping the character of place. Chapter 5 considered within this context, the appropriateness of two contrasting conceptions of place used to characterise the area.

First, as a 'city-region', which within a UK context has been associated with an agglomeration-driven (and space-neutral) framework for development (see Figure 1-2). Here, time is assumed to be neutral in its effect, as regions and localities follow standard development paths. Space is homogenous in relation to city size. Whilst relations are acknowledged in the agglomeration model of sharing, matching and learning (see Figure 3-2), as enabling economic concentration in a functional economy, learning is of lesser significance. This is partially because it is difficult to measure, but also given assumptions about time, space and relations, knowledge (in people and firms) is seen as predictable (Duranton and Puga, 2004; Cheshire et al., 2014; World Bank, 2009; Hildreth and Bailey, 2013; Harrison, 2017; Waite and Morgan, 2019).

Second, as a locality, reflecting a place-based approach, in which there is assumed interdependence between time, space and relations, which underlies unpredictable knowledge and heterogeneous spatial outcomes. (Barca et al., 2012; Hildreth and Bailey, 2013; Jones, 2017). Little evidence was identified in Chapter 5, from analysing the Mersey Dee's labour market flows and its firm-to-firm and institutional relations, to associate such a mixed rural and urban economy with that of conventional agglomeration economies, more associated with the Mersey Dee's metropolitan neighbours of Liverpool and Manchester. From historical analysis of the area's relative character (Section 5.3), there was no case to accept the city-region model's homogenous assumptions about place. Indeed, it is inconsistent with the diverse geography of rural and urban areas of CW&C, the Wirral and NW and NE Wales and the importance of history in shaping the spatial character of the area (Jones, 2017; Beel et al., 2020). But the general point from this localities framework is that the place characteristics identified from the Mersey Dee are particular (rather than generalised as for the agglomeration-driven model). The issues identified here would be relevant to other mixed rural and urban areas, but with their own distinct heterogeneous outcomes (Beel et al., 2020).

Thus, as described in Chapter 5, the localities model is of value in applying a place-based approach to investigate both territorial and relational qualities of place. The only, but limited overlap between the city-region and locality models is that both acknowledge the possibility of territorial coherence as a discrete space. But whilst territorial coherence is central to the city-region model, the locality approach acknowledges value in organising social, economic and political structures to enable shared action for a space that might in practice have fuzzy boundaries. This may be through a local authority, a travel-to-work area or coinciding with economic development initiatives. But then, this is situated alongside the relative and relational qualities of place which makes this model different and creates the situation in which the '*in there*'-within the locality, and the '*out there*' – beyond the locality are relationally intertwined and matter together to create a locality's material and imagined coherence (Jones and Wood, 2013; Haughton and Allmendinger, 2017; Jones, 2017: 22, 27).

Chapter 5 showed the value of understanding the relative and relational qualities of a locality, through analysis of labour markets and historical analysis. It identified how shared industrial history, functional connectivity and cross-border identity between England and Wales, rather than bounded administrative geography, enabled collective identity. Yet, the outcome is not a specific territorial 'place', but rather place as a dynamic concept that is re-shaped interactively through time, space and relations. As a result, conceptually the locality may be associated as a 'soft', rather than a 'hard' space of governance, whilst being '*naturally constitutive with hard spaces*' (Haughton and Allmendinger, 2008: 143; Haughton et al., 2010). Thus, unlike for the city-region model, not being a bounded space may not undermine value in economic development collaboration, particularly when relative, relational and absolute qualities combine to enable both imagined and material coherence (Jones and Wood, 2013; Jones, 2017).

The case study also illustrates how history and geography may enable the distinctive polycentric qualities that functionally connect the Mersey Dee's core centres and cross border labour market (see Figure 5-6) that is central to its spatial identity. For a polycentric pattern of development, the Mersey Dee is unusual in having only one small city and a rural character and limited functional linkages into a larger city, such as its neighbour Liverpool. It is also distinctive with its manufacturing employment

concentrated primarily on large industrial estates. Much of its employment is neither urban in character, nor having been dispersed from urban areas. This has resulted in both ‘functional polycentricity’ – from the spatial organisation of firms, as well as ‘morphological polycentricity’ – from the distribution of urban settlements of different sizes (Hall and Pain, 2006). Thus, as presented in Section 5.5, the Mersey Dee most closely fits the description of an inter-urban model of distributed patterns of employment, with ‘*the tendency of economic activity to cluster in several interacting centres*’ (Davoudi, 2003: 982; Özkul and Hildreth, 2016). Whilst such a polycentric pattern may not be replicated similarly in other mixed rural and urban areas, the case study illustrates that patterns of development through time, space and relations shape the heterogeneous qualities of place.

10.4.3 The contribution of economic institutions to place (Objective 3b)

As indicated earlier, differences in homogenous and heterogeneous assumptions in relation to place result in contrasting conclusions between the agglomeration-driven and place-based approaches regarding the contribution of institutions to place. Whilst, the focus of the agglomeration-driven model is on the appropriate functional territorial bounding of economic space, the more relational focus of the place-based approach is to enable places with heterogeneous characteristics to develop their own particular collective approach towards providing integration and coordination where places are heterogeneous within an open and globalised world (Amin and Thrift, 1995).

Whilst this study did not seek to measure ‘institutional thickness’, it provides evidence about how such institutional conditions may be enabled. First, that local institutional characteristics may be formed by historical timing and patterns of path dependency. In the case study, today’s industrial landscape was enabled by public and private investment in manufacturing and former ordinance sites associated with or immediately after the Second World War and by post-1970s inward investment policies. For example, the former is connected with the establishment of aircraft manufacture at Broughton, the nuclear industry in West Cheshire and the creation of the Wrexham Industrial Estate. The latter with the establishment of the Deeside Industrial Estate, on the former Shotton Steelworks site and coordinated efforts to attract new and repeat investment by the

former Welsh Office, WDA and local government. This, with the development of the area's core centres, led to the complementary distributional pattern of employment. This in turn enables a collective identity and high level of institutional interaction that underpins the multi-level collaboration that exists regionally between North Wales into NW England.

Second, that such history may reinforce patterns of institutional conduct that may be inclusive or exclusionary. Whilst local economic development is a project led by elected representatives and other institutional actors, evidence was not found of exclusionary behaviours from interviews or other sources of evidence. Regionally, there are cultural differences in approach. For example, NW Wales has a stronger Welsh language culture and a relatively isolated settlement structure, whilst parts of Flintshire and Wrexham are embedded in the cross-border region (Mann and Plows, 2016). C&WLEP is similarly pulled in two ways with the interconnectedness of the CW&C economy with North Wales and LCR and Cheshire East and Warrington closer to the agglomerations of Greater Manchester and West Midlands. Nevertheless, a strong culture of collaboration towards shared aims was found to be evident. For example, Chapter 5 showed how coordinated efforts to both attract and retain inward investment has left a long-term legacy. Shared experiences of, and collectively recovering from, an economic crisis across NE Wales in the late 1970s, provided institutional memory of what can go wrong and the value of pulling together in a crisis, which in turn has reinforced a culture of shared norms and values.

Third, that as an outcome, the area has developed value institutionally as a soft rather than a hard space of governance (Haughton and Allmendinger, 2008; Haughton et al., 2010). It has enabled a focus to bring together the principal public institutions (local authorities, HE, FE, regional partnerships) as well business groups (NWBC and WC&NWCCI). Both the WSP and its draft replacement NDPF, support the MDA's role by recognising the strategic importance of the cross-border economy and the importance of regional collaboration between North Wales into NW England. But this is enabled by particular relational characteristics that are reflected in the significance of multi-spatial

scales of institutional relations across regional, locality and local levels (Amin and Thrift, 1995).

Fourth, that because of its distinctive geographical position, the Mersey Dee regionally *provides a strategic bridge to connect regional institutions* from across North Wales into NW England (NWEAB, LCR and C&WLEP) as well as nationally with the WG and the APPG. As such, as outlined in Section 6.5, it demonstrates characteristics of a multi-level space of governance that is set up for a specific purpose or role (Hooghe and Marks, 2003; Bache et al., 2016). This strategic role is aided from being consistent with the Council of Europe (CoE) definition of a cross-border partnership of being *'characterised by homogenous features and inter-dependencies because otherwise there is no need for cross-border cooperation'* (COE, 1995; Perkmann, 2003), as illustrated in its functional connectivity.

Fifth, that institutionally, locality identity and meaning builds from and encompasses the core urban and industrial centres of employment in the Mersey Dee (e.g. Chester, Wrexham, Deeside, Ellesmere Port and Birkenhead). These in turn lie within local authority spaces - Flintshire, Wrexham, C&W and Wirral (and formerly Denbighshire) – which provide spatial planning, business support and economic development services. For example, Flintshire and Wrexham have contributed to industrial estate development, CW&C to Chester's improvements and business engagement and Wirral to the regeneration of Wirral Waters with the private sector. The local is also the context for private sector led groups, such as the WBP in Wrexham, the DBF on the Deeside Industrial Estate and Cheshire Professionals and Cheshire Business Leaders in CW&C. These mobilise and communicate with local and central government for the business community (see Sections 7.5.3 and 8.4.3). The labour market also can be institutionally very local, with illustrations in Section 9.2 given for the Wirral, Wrexham and Helsby. In Helsby, for example, it has reinforced strong relationships between local firms and a local secondary school over apprenticeships.

Sixth, there is an important distinction to be made between institutions that contribute integrally to the economic success of a locality and thickness of institutions per se. This

study shows the value of institutional strengths that contrast with those associated with the territorially bounded city-regional model. Progress in replicating institutions, sharing knowledge, innovation, trust, shared purpose and adaptability have derived from informal institutional characteristics of shared geography, industrial and settlement history, cultural identity and institutional settings. Geography has given the locality the benefit of being central to industrial connections and shared trade routes across North Wales and NW England that encourages multi-scalar collaboration. Industrial and settlement history has gifted the area its polycentric distributed pattern of employment and has fostered the area's cross-border identity. Institutional settings have been shaped out of shared experiences and learning by responding to previous crises. It is these that have shaped institutional presence of '*codes of conduct, support and practice*' (Amin and Thrift, 1995: 103). They in turn will be crucial for the area as it faces economic shocks from the covid-19 pandemic and Brexit. Formal organisational structures are important and by contrast represent a comparative weakness in the context of public sector austerity in England and Wales. But whereas new funding and stronger structures can be replicated, the informal institutional characteristics that underpin the Mersey Dee are more difficult and slower to reproduce.

Thus, case study evidence presents a contrasting picture of how institutions contribute to place compared with the focus on bounding in the city-region model (see Section 3-3). It reinforces a case for the place-based principle that institutions both shape and are shaped by economic geography (and their history). This in turn suggests that the rooting of economic activity into local institutional fabric is important to realise economic potential. It shows how institutional fabric is also built bottom-up and not top-down, with institutional strengths layered and combining through different spatial levels of relationships. It shows the multi-level character of institutional relations that stretches well beyond the locality itself. And, it also reinforces a case that institutional strengths are both informal as well as formal. Indeed, it suggests that informal institutional characteristics that are shaped relationally over long periods of time are an important foundation for formal institutional effectiveness. In these senses, institutional thickness may be less about quantity of institutions, but rather about the conditions in which institutions are formed and are shaped to give purpose to enable places to create '*place*

representation, their own *'sense of place'*, *'local economic integrity'* and mobilise *'practice-based knowledge and expertise'* (see Section 3.5) (Amin and Thrift, 1995).

10.4.4 Firms and economic place (Objective 3c)

Chapters 7, 8 and 9 presented the results of interviews and other source material (see Section 4.5.5) to investigate how firms relate to place through their relations with other firms and institutions, both locally and outwardly in economic place. From this analysis, a key finding is that the Mersey Dee may be characterised as a segmented firm economy. This local differentiation is not centred on sectors (or clusters) (see Figure 5-10), even though sectoral relationships were identified within and particularly beyond the area. Rather, in parallel to Taylor and Thrift's portrayal of the segmented economy (see Section 2.1), Mersey Dee firms were found to be differentiated first, by the nature of their ownership and following this, by other relational characteristics. However, whilst Taylor and Thrift considered companies' power and performance relationships after ownership, this study centred on the nature of differences in firms' relationships in and with economic place and institutions (Taylor and Thrift, 1982a, b; 1983).

First, firms with industrial complex characteristics, whose knowledge flows operate vertically within the firm and its firm-to-firm and institutional relations, particularly expose the Mersey Dee to the external global economy. How these firms evaluate their location factor and distance transaction costs is central to their decisions to locate and retain investment in place. This is because they enter in competition for investment within vertical company complex structures (Phelps and Fuller, 2000; Iammarino and McCann, 2013). They are exposed to GPNs, where local economic potential is shaped not just by local conditions e.g. quality of labour markets, but also as a result of wider GPN firm, institutional and market relations. This is since the 'strategic coupling' of GPNs and regions involves an interface of institutional activities across different geographical and organisational scales (regional, national and supra-national). Regional development is dependent on the capacity of coupling to enable processes of value creation, enhancement and capture. This is to enable economies of scale and scope, localisation within GPN and configuration of regional institutions to 'hold down' GPNs (Coe et al., 2004; Coe and Yeung, 2019). Study findings confirm academic observations that spatial

patterns of employment and integration of firms' relationships in the local and regional economy, reflect how production is organised internationally within the industrial complex. As discussed in Section 2.4.3, Markusen (1996) distinguished between the satellite, with its shallow local firm relationships, and the hub-and-spoke, with its more integrated engagement within the local and regional economy. Massey (1995) identified differences in the spatial division of labour between company plants depending on how control over processes of production is devolved in different locations by the company complex. In addition, Yeung (2020) recognises that company plants will vary in how central or peripheral they will be within MNE global production networks (GPNs), depending upon international decisions to retain or enhance site investment and the individual site's value within the complex.

This study has contributed to these academic observations by demonstrating how such differences may be reflected in the history of local investment by MNE firms. Thus, evolved firms, with their longer histories of reinvestment and production reinvention are likely to be relatively less peripheral within firms' production networks and incoming firms more likely to be so. This was indicated in the breadth of locally devolved responsibilities, scope for product innovation, capacity to develop local and regional supply networks and likelihood of recruiting at graduate as well as school leaver level. Also, evolved firms were more likely to engage in trust-based relationships with universities. Nevertheless, there is a caveat that nearly all of the industrial complex firms had plant status and very few had HQ roles. Thus Phelps et al. (2003) caution whether the locally embedded MNE still applies (see Section 2.3.4). As a result, rather than just interpreting these firms territorially, it is essential to understand their position locally within their own global to local firm and institutional relational networks, for which in the Mersey Dee, historical path dependency plays an important role in shaping firms' relations with place (Bailey, et al., 2016; Coe et al., 2004; Coe et al., 2014; Coe and Yeung, 2019).

Second, is a more locally centred (or indigenous) firm economy. Indigenous firms commonly illustrated trust-based behaviours through their relational ties with other firms, with a mix of competence-based, trust-based and, more frequently, looser trust-like behaviours. They were formed from within the area – as a new start-up, by related

diversification or from take-over – by owners with local ties. Often, these ties were very local, for example with personal commitments by their owners to Ruthin, or Wrexham or Wirral. This might be for family ties, or historical association to a particular location. For two firms, it was due to immovable equipment. For others, it was because of the availability of specialist skills in the local labour market. As a consequence, indigenous firms were largely immobile with their ties to place. A small minority weighing up options of relocating did so only in regard to a local alternative site. They frequently approached innovation as a collaborative activity of responding to their customers' needs and challenges. They also engaged in institutional relations, through business networks, collaborative partnerships with universities and valued personal engagement with local and central government. They took responsibility for their firm to institutional relations and were prepared, when encouraged, to contribute to bottom-up processes of building place-representation and enabling supportive interaction in the local economy. There was a place dimension, with those with social network traits being less urban. Whilst a minority of firms clearly demonstrated trust-based or competence-based social network traits, all non-urban firms illustrated close customer collaboration in innovation. They also sought loyal, and where possible, local suppliers. Even urban firms on the Wirral and around Chester were transactional in their customer and supplier relations, emphasising their strong Wirral ties.

It is acknowledged that a gap in this research about firms and place is what has become referred to as the 'foundational economy'. In contrast to the tradeable economy addressed in this study, the foundational economy *'is that part of the economy that creates and distributes goods and services consumed by all (regardless of income and status) because they support everyday life'* (Bentham et al., 2013). Interest in the foundational economy arose out of criticism that the UK's approach to industrial strategy was focused just on exportable technology intensive sectors. As a contrast, it was estimated that the foundation economy – being important for citizen well-being- accounted for 33% of total employment in England and 38% in Wales. Within their definition CRESC identified *'everyday activities that underpin social and economic life that will be locally produced'*, as: a) piped and cabled utilities e.g. energy, water, sewage and telecoms; b) private corporate activities, such as retail banking; food and petrol

retailing and food processing; c) networks and services such as bus or rail to transport people and goods; and d) labour intensive activities of health, education and welfare/social care (Bentham et al., 2013).

But there remain challenges to provide a consistent formulation of the foundational economy. Definitions shift in what it includes, with Earl et al. (2017) expanding classification to include about 70% of Welsh employment, including tourism, universities and furniture manufacture (or the 'overlooked economy'). It is not clear how sectors like retail banking and food retailing are locally rooted with the explosion of internet services and delivery. A more holistic definition of the foundational economy has been suggested, linking it with concepts of: a) periphery – what remains when the core economy is lost in post-industrial areas; b) rootedness – thinking about appropriate local ownership structures; and c) socially useful – asserting the primary importance of social over individual consumption (ap Gwilym, 2019). This indicates that in definition the foundational economy remains a work in progress that is conceptually different to the issues addressed by this project. Thus, a study of the foundational economy in place would constitute a contrasting but valuable research project.

10.5 The intersection of place, firms and institutions (objective 3d)

This Section brings together findings from this study about the interaction of place with firms and institutions. Underpinning this analysis has been three key observations. The first is that – *a key underlying distinction between space-neutral and place-based approaches lies in their respective underpinning assumptions about the homogenous or heterogeneous character of space* (see sections 1.3 and 10.2 and Figure 1-3) (World Bank, 2009; Gill, 2010; Barca, 2011; Barca et al., 2012; McCann, 2016). This is reflected at a local economy level in contrasts between two representations of place - as a city-region - within an agglomeration-driven framework and-as a locality-within a place-based one, which are central to this investigation.

It is also because each of the three firm models of pure agglomeration, industrial complex and social network (see Chapters 2 and 3), draw on contrasting observations regarding their firm and institutional relations, by comparing the nature of knowledge

flows with implications for institutional approaches (summarised in Figure 3-2). Underpinning this are observations two and three. Proposition two is that - *a distinctive character of place lies in its particular mix of firms and combination of processes of agglomeration*. Then, proposition three that - *the particular mix of clustering of firm types in the local economy presents choices for the appropriate design of institutions at different spatial scales* (Section 10.3). Finally, the three propositions come together by recognising that contrasting observations regarding firm and institutional relations within processes of agglomeration, relate to either the homogeneity of heterogeneity of place. Thus, the firm and institutional models for a clustering of pure agglomeration firm is associated with the territorial bounding of space, within a homogenous spatial context. By comparison, the firm and institutional models for a clustering of industrial complex and social network firms may be situated within a heterogeneous setting of absolute, relative and relational space.

Links between these three observations is most clearly seen in the association of the agglomeration-driven model with the clustering of pure agglomeration firms. As indicated earlier (sections 3.3), the institutional focus of this model is to achieve territorial bounding by removing administrative barriers and enabling decision making to conform with the economic area of the city (Pinch and Henry, 1999; Cheshire and Magrini, 2009; Cheshire et al., 2014; Ahrend et al., 2014). Given that it is presented as an integrated framework, it is promoted by the Centre for Cities (Jeffrey, 2020) as an institutional solution for the structural reform of local government in England.

The position regarding the industrial complex appears less clear, because of reservations about the embeddedness of this firm model in place (see sections 2.4.3 and 3.4). For the industrial complex, agglomeration economies are internal to the organisation of the company, from scale, scope and possibly, complexity, and where the optimal location of the firm is interrelated with location factor and distance transaction costs. As such, firms' relationships are integrated relationally within GPNs, so that the division of labour, the organisation of production tasks and the centrality of plants within production networks are organised differently in separate locations. Whilst a basic institutional response is to seek to anchor these firms in the local economy, the GPN literature offers possibilities

of 'strategic coupling' within GPN firm, institutional and market networks across different spatial scales of local, regional and national economies. In this, the local (and regional) may offer institutional strengths of value to the industrial complex, such as the contribution of local labour markets to the industrial complex, due to the spatial immobility and flexibility of skills. In the Mersey Dee case study, universities also were valued as trusted partners to share in innovation. In this sense, places are heterogeneous for the potential for value creation that they offer the firm. However, within this context, the local economy is not envisioned as a bounded territory. Rather, it exists within and without as a relative and relational space, within the broad network of firms' relations from local to international (Section 3.4.1) (Massey, 1995; Markusen, 1996; Gordon and McCann, 2000; Amin, 2002; Parr, 2002a, b; Coe et al., 2004; Iammarino and McCann, 2013; Coe and Yeung, 2019; Yeung, 2020).

The situation for the social network has been shown to be that the embeddedness of these firms in place is not related to internal or external concepts of agglomeration, but whether they have needs and loyalties which keep them anchored in the local economy. Here the key factor that underpins these firms' relationships with other firms' and institutions is trust. But these trust-based ties are not territorially spatial. Rather, they operate within the setting of relative and relational place, since social network firms connections to place and relations will operate across varied geographies that are independent of bounded space. The quality of these ties, whether to place or to relationships, are particular to the firm. As a result, for social network firms, the focus of institutionalisation is about developing '*codes of conduct, support and practice*', as reflected in the concept of institutional thickness (Harrison, 1992; Markusen, 1994; Gordon and McCann, 2000).

As identified earlier (see sections 5.5 and 10.4.2), there are issues in adopting an agglomeration-driven city-region framework for mixed rural and urban places. First, in such areas, any towns and possibly small cities are most likely to be dispersed. As a result, employment is likely to be spatially distributed rather than concentrated through processes of agglomeration. It is also probable within the local economy setting that firms with pure agglomeration characteristics will be in the minority, probably limited to

urban locations. This may be more pronounced in more rural areas than the Mersey Dee, such as NW Wales, where settlements are not functionally connected within a shared labour market (Beel et al., 2020). Second, because of its underlying homogenous spatial assumptions, the agglomeration-driven model marginalises the role of history in the process of agglomeration in different places. However, evidence from this study (see Section 5.3 and Chapters 7 and 8), confirms that history, alongside geography, has been critical to the shaping of settlement, industrial, institutional and resulting labour market characteristics of the area (Pinch and Henry, 1999; Mann and Plows, 2016; Jones, 2017). Third, there has been no evidence presented within this study that indicates that the appropriate institutional governance solution for the Mersey Dee lies in the structural territorial bounding of the area.

By comparison, it is concluded that a place-based localities framework is more appropriate for interpreting the context of mixed rural and urban spaces reaching beyond a major urban area, such as the Mersey Dee. The concept of relative space is helpful as a starting point for analysis. It recognises, given heterogeneous spatial assumptions, that a process of discovery is necessary to uncover the particular character of locality space. This was demonstrated in Chapter 5, by analysing the Mersey Dee's spatial and economic character, from tracing the evolution of its core residential and employment centres. This demonstrated how history, geography and institutional settings influence local spatial character. This analysis also links with the firms' findings and their segmented character, of how within this locality setting, pure agglomeration, industrial complex and social network firms interacted differently to space.

Firms with pure agglomeration characteristics were a minority, centred around Chester and in Birkenhead. They were found to retain strong loyalty to 'place' with close identification with the Wirral or with Chester. Beyond this, the notion of an urban economy - particularly Manchester, but also Liverpool - was observed as being 'out there', providing a distinctively different economic offer to their own location. Firms with industrial complex characteristics were central to the industrial history of the Mersey Dee. As stated earlier, this study identified support for other academic findings that spatial patterns of employment and integration of firms' relationships in the local

and regional economy reflect how production is organised internationally within the industrial complex. There was also support for the concept of 'strategic coupling', particularly in relation to the polycentric labour market and trust-based relationships with universities. Distinctive findings from this study showed how the history of firms' investment into the locality had impacted on the character of its relative embeddedness in place. As a result, there were connections between firms and relative space, such that: *'the particularities of a firm (with all its attributes and histories) enmesh with the particularities of that territory (with all its attributes and histories)* (Dicken and Malmberg, 2001). Firms with social network characteristics, often had local ties to place. These could be personal, access to local specialist skills or equipment, or how the firm was branded. Relational space is also important, although less so for firms with pure agglomeration characteristics. For industrial complex companies, this connected the local with the global, particularly because of the significance of location and distance transaction costs to the firm's local location, but also due to the role of coupling for GPNs. For social network firms, it was reflected in the importance of trust, particularly within, but not exclusively so, the local economy.

What these findings suggest is that the locality is not a single territorial space. It is more diverse than that, with distinctions highlighted through differences in the local firm economy. On one hand, for firms, place can be very local, where 'in there' is impacted by personal connections and other local factors that tie a firm in space. On the other, particularly for industrial complex firms, it is 'out there', where local is provided meaning within an international context. The locality may gain imagined meaning, where different and cumulative identities of space come together, such as the shared polycentric cross-border labour market of the Mersey Dee. As a consequence, imagined identity is itself shaped out of patterns of flows, networks and relations, that exist both within and without. As a result, rather than creating a single territorial space with hard boundaries, the locality outcome is a space that combines different meanings within its soft and fuzzy boundaries.

Thus, as an absolute space, there is less significance in the top-down functional territorial bounding advocated by the agglomeration-driven model. Nevertheless, for

material coherence, there is value in organising social, political and economic structures to enable shared action, for example through local authority organisation or collaboration. But, a fundamental difference with the locality model is that its value is not limited to 'top down' organisation. More important is the exercise of 'bottom-up' qualities of trust, leadership and collaboration, which are just as likely to be shaped by informal as formal institutional characteristics. This involves capacity to understand how, within an economy shaped by contrasting processes of agglomeration, over time and geography, local diversity is shaped and economic relationships are conducted. It also has to engage with the 'out there', to be capable of operating within local, regional to national multi-level frameworks, given that the local economy is unbounded by its relational ties in a local to global nexus. In this context, the concept of institutional thickness has some meaning. This is not because of the need for many institutions. It is rather, as has been pointed out by Professor Keith Ridgeway, the recently appointed Chair of Industry Wales, that in a case for building an 'industrial commons', there is value in fostering shared tacit knowledge and collaborative relations to drive innovation in products and processes in the local economy (Ridgeway, 2020; Piscano and Shih, 2009).

Overall, there is a paradoxical outcome to this study. This is that whilst a space-neutral (agglomeration-driven) framework seeks to top-down territorially bound space, a place-based (localities) approach suggests something very different. Place becomes a relative and relational concept that has territorial connections. As such, it is both a dynamic and fluid concept that evolves meaning over time, space and relations that require interrogation from different perspectives. This is why the place-based principle of uncovering knowledge through bottom-up investigation is so important. It challenges our understanding of how local economies work, questioning an emphasis just on centralising processes of economic concentration. It also questions common misunderstandings about what place-based is about. It is not primarily centred on place investments. It is rather about understanding, within multi-level contexts, long-term interactive processes through time, space and relations that result in heterogeneous development outcomes for different spaces within the whole urban and regional system. Finding appropriate multi-level responses to this is key to realising local

economic potential (Massey, 2011; Hildreth and Bailey, 2014; Gray and Pugalis, 2016; Jones, 2017).

10.6 Lessons for sub-national economic policy (Objective 4)

Chapter 1 illustrated how the UK government has promoted a single sub-national devolution approach of Combined Authorities and metro mayors. It has been shown how this model reflects the dominance of agglomeration-driven ideas in government (Section 1.3.1). Yet, by being the only solution, it has led to a fragmented approach to sub-national governance in England (McCann, 2016). It is also an inward-looking solution with its focus on territorial boundedness to consolidate the economic benefits of agglomeration. It also reflects a conditional localism approach in which the government offers, through a City Deal a relatively standardised solution for different places (Hildreth, 2011; Beel et al., 2020). Evidence from this case study suggests that a Combined Authority and metro mayor solution is not the right outcome for localities, such as the Mersey Dee, that lie beyond major cities. The underlying challenge for such areas is not to consolidate top-down the benefits of urban density from overcoming administrative fragmentation. Instead it is a bottom-up question of how best to mobilise institutions within a distributed or inter-connected functional spatial pattern, shaped out of varied settlement and industrial histories, that at the same time concurrently operate 'within' and 'without' across absolute, relative and relational space.

In practice, a different philosophical approach could have been taken towards metropolitan areas in the UK. As illustrated from helping to coordinate a Council of Europe seminar on democratic governance in Europe, the UK is the only large European country to have a metropolitan model without having regions. In Germany, for example, metropolitan areas are established within a federal (or regional) structure. Their purpose is to develop effective cooperation across urban and rural areas that come within functional metropolitan areas. Metropolitan areas are built bottom-up, often with cooperation going back to the 1950s or even earlier. There are also wide differences between metropolitan areas in Germany in their land area, population, urban structure, breakdown of urban and rural space and fields of responsibility. As a result, no two metropolitan models are the same. In Germany, metropolitan areas do not constitute

additional administrative units, but are platforms for regional cooperation, even to the point that their boundaries may overlap with more than one Federal State (Blätter, 2017; Council of Europe, 2018).

Place is not central to the design of sub-national policy in the UK. The illustrations given above illustrate the nature of this problem. Yet, despite the dominance of a space-neutral framework, the government frequently uses place-based rhetoric to describe its approach (HMG, 2018). To shift genuinely towards offering a place-based alternative for places beyond major cities would involve the UK government to step outside the present comfort zone in the base, policies and rhetoric of its sub-national economic policy. However, it is possible from findings from this research to begin to identify key elements of what such an approach might involve.

First, it would require acknowledgement that places are heterogeneous – inter-dependently shaped within their distinctive geographical, historical, social and institutional settings – and that this matters. This study has shown why this is important to understand the identity and economic and firm profile of the area. It is quite different, for example, to the firm case studies described for the Tech City (Section 2.4.2) and Motor Sport Valley (Section 2.4.4.). To make the case that differences matter requires a different approach from prioritising more successful places (e.g. London and the SE of England) towards a more balanced approach of accepting that growth is possible in all types of regions and localities (OECD, 2012). The context of any potential Brexit disruption may make adopting such a mind-set essential, if underlying causes of Brexit are to be confronted (McCann, 2019).

Second, governance arrangements should be capable of addressing the inter-dependence of absolute, relative and relational space. A challenge of creating mechanisms for cooperation across relational space, is that they will likely encompass a geography that is wider than recognised by existing institutional arrangements. So, in the case of England they may need to go beyond the present limited geography of LEPs, which may have limited scope, depth and capacity to be effective (Hildreth and Bailey, 2014). Any approach to governance structure will need to address mechanisms that

achieve effective strategic bottom-up collaboration between partners. This and appropriate geographies require further investigation. The solution presented by the Centre for Cities is to introduce unitary authorities everywhere in England, based on functional economic areas, with a minimum population size of 300,000 and a mayoral model to provide stability and clearer accountability (Jeffrey, 2020). Irrespective of the merits of this solution, a problem is that it is a structural approach centred on the same agglomeration-driven model. It does not overcome a key issue identified that places are relational at variable spatial levels through different functional relationships, from local to regional.

Third, government should encourage local and regional institutions to undertake a process of discovery requiring strategic collaboration between public and private sectors (Rodrik, 2004). And in doing so, recognise that knowledge about local places (firms and people) is likely to not be known in advance either by the government, firms or local stakeholders. A start was made in England with local industrial strategies guidance – to be developed bottom-upwards collaboratively and supported by a robust evidence base (Gov.UK, 2018). But the limitations of local industrial strategies is that they may be outcome driven, focussed on gaining government approval, with evidence presented by consultants rather than genuinely uncovered by local actors and tied to limited LEP geography.

Fourth, government needs to establish a multi-level governance framework that addresses both locality and national actors' judgemental weaknesses. For government, it is about acknowledging its deficiencies in making sound judgements appropriate to local contexts and its limited capacity to foster local stakeholder engagement (Section 1.4). Yet, it still has an important role to play in initiating the design of devolved responsibilities that enable the realisation of the potential of different places to contribute towards national prosperity. By comparison, the locality needs exogenous input to incentivise collaborative behaviours that enable boundary spanning and referent leadership behaviours. Government also needs to resource localities appropriately to do the job well.

10.7 Opportunities for future study

It is acknowledged that evidence from this single area case may only go so far in pointing a future direction for place-based policy. There are research gaps to be addressed, with three being identified below.

First, is a need to design an appropriate institutional framework for places that reach beyond major urban areas. This study involved a bottom-up investigation of the Mersey Dee, through firm and institutional interviews. It identified and analysed different models of the firm (Markusen, 1994; Gordon and McCann, 2000) and their evolution (Iammarino and McCann, 2013). This was reflected in the presentation of particular case study illustrations of evolved, incoming and indigenous firms. It considered different spatial representations of the area, aligning with the concept of a locality, framed by concepts of absolute, relative and relational space (Jones and Wood, 2013). It also applied ideas about institutional thickness (Amin and Thrift, 1994, 1995), to further identify the potential of value place-leadership concepts to more dispersed and functionally related localities (Beer et al, 2019). In addition, this study could have taken account of other literatures such as smart specialisation industrial strategies to enable regional diversity and related diversification (Bailey et al., 2015; 2016). The important point is that whilst the route followed realised the aim for this study, it required a more challenging journey than might have been the case for an equivalent metropolitan area enquiry. Therefore, a future research priority should be to design governance models for more integrated place-based spatial framework that is convincing in national policy.

Second, as already discussed, there is evidence for what makes effective metropolitan governance, by consolidating the benefits of economic concentration within space by reducing governance fragmentation. We know less about what makes effective governance arrangements where, as for areas beyond major cities, the focus is on enabling the contribution and collaboration of different institutions across distributed and interrelated spaces. Here the growing interest in the role of place-leadership - '*the part played by deliberative actions of key individuals and institutions in shaping the future of places*' (Beer et al., 2019: 171) – may offer a way forward. This includes identifying evidence about how to achieve effective boundary spanning, reference

leadership and achieving strong respect for the legitimacy of other actors from different communities. What structures are needed and at what geographies? How could effective place-leadership be incentivised? How to measure success? Within this framework, the Mersey Dee would make a valuable case study to explore within a place-leadership framework; about how local institutions might contribute effectively to the success of the area.

Third, there is a need for more place-based case studies, to test whether the findings for the Mersey Dee may be relevant or not to other geographical areas. This may include areas both beyond major cities and also by comparing with a metropolitan area. Discussions about this have taken place with Professor David Bailey and in sharing a joint presentation comparing the Mersey Dee and West Midlands at the Regional Studies Association (RSA) Winter Conference (Hildreth and Bailey, 2016). A comparison would be interesting given that both areas have strong manufacturing sectors and service industries as well as being spatially very different. It would also provide a test for the wider applicability of this study's findings particularly regarding the nature of the firm economy and may also challenge assumptions that there is a limited role for manufacturing alongside services in cities (Ferm and Jones, 2017).

10.8 Conclusion

This study has applied a place-based framework to a case study of the Mersey Dee cross-border economy. It has illustrated how the Mersey Dee has been shaped from its distinctive geographical, historical and institutional context. It has shown that the area may be represented as a locality that operates across different spatial levels: local, through its core centres, towns and industrial estates; locality, that is functionally connected with a polycentric distributed pattern of employment; regionally, with firms and institutional economic relations encompassing North Wales into NW England. It has demonstrated the appropriateness of a bottom-up investigation that connects place with firms and institutions, identifying information about the area that was not known in advance. It has also shown why the Mersey Dee is a heterogeneous spatial context, in which its institutional fabric is rooted both in its history and for the realisation of its future potential.

The study has also illustrated why there should be a stronger focus in sub-national policy on the relative and relational role of place, through its overlapping levels. This would require acknowledging limitations of the application of space-neutral ideas in reinforcing centralism, inflexibility in governance and limit openness to new ways of operating. It would involve greater willingness to learn from contrasting ontological and epistemological positions. This is particularly to overcome a long-standing UK problem of central government rigidity to different ideas, since:

‘.... the ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else’ (Keynes, 1936: 383).

This study has not pretended to find solutions to the UK sub-national economic problem, as summarised in Chapter 1. It would be beyond the reach of a single case study and the chosen methodology to undertake it. But it has shown how the present base of economic ideas is a barrier to understanding the heterogeneous nature of place. Progress towards ‘*levelling up*’ is more likely to be achieved, not by more top down, short term and fragmented initiatives, but through a long-term approach to policy, where the centre values differences in connections between and across places with firms and institutions. The Mersey Dee case study illustrates that the way forward does not lie primarily in structures or piecemeal initiatives. Instead these should be founded on central government working with and incentivising regional and local actors to build a long-term culture of trust, effective leadership and strategic multi-level working focussed on the long-term realisation of local economic potential.

For the Mersey Dee, as it faces the uncertainty of a post-Covid-19 world and life outside the EU, there are lessons for realising local economic potential. First, the Mersey Dee is positioned within multi-level frameworks and that it is important to make institutional connections from the local to the regional, which will require communication and coordination. Second, that its strategic role is to be a bridge between North Wales and NW England. Third, that the character of its firm economy is broadening from an industrial complex model towards one with social network characteristics. This does not mean more public agencies, but requires economic institutions to be smarter, more

responsive and better able to respond to knowledge from firms and the labour market about what is most needed going forward. Fourth, that the area can draw on its institutional and economic history to know that it already has a wealth of experience and local culture of trust to go forward.

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Appendix 1 Interviewee consent form

Informed Consent Form for *Interviewees* for PhD in Research Studies

Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research.

Title of Project: **Understanding the Contribution of Governance Institutions Toward Shaping Economic Geography of Place: A Local and National Perspective – Paul Hildreth**

This study has been approved by the UCL Research Ethics Committee (Project ID Number): **5542/001**

Thank you for your interest in taking part in this research. Before you agree to take part, the person organising the research must explain the project to you.

If you have any questions arising from the Information Sheet or explanation already given to you, please ask the researcher before you to decide whether to join in. You will be given a copy of this Consent Form to keep and refer to at any time.

Participant's Statement

I

- have read the notes written above and the Information Sheet and understand what the study involves.
- understand that if I decide at any time that I no longer wish to take part in this project, I can notify the researchers involved and withdraw immediately.
- consent to the processing of my personal information for the purposes of this research study.
- understand that such information will be treated as strictly confidential and handled in accordance with the provisions of the Data Protection Act 1998.
- agree that the research project named above has been explained to me to my satisfaction and I agree to take part in this study.
- I understand that my participation will be taped/video recorded and I consent to use of this material as part of the project.
- I understand that the information I have submitted will be published as a report and I will be sent a copy. Confidentiality and anonymity will be maintained and it will not be possible to identify me from any publications.

Signed:

Date:

Appendix 2 – Coding of firm interview transcripts for the Mersey Dee

Key word(s)	Categorisation
<p>1. Legal status</p> <p>A. MNC?</p> <p>B. Indigenous?</p>	<p>a) New plant; b) take-over; c) Single UK plant; d) Multi-UK plant</p> <p>a) Start-up; b) take-over; c) Single plant; d) Multi-plant</p>
<p>2. Size – Employees?</p>	<p>a) 1-9; b) 10-49; c) 50-99; d) 100-249; e) 100-249; f) 250-499; g) 500+</p>
<p>3. Size – Turnover (£m)</p>	<p>a) 0-1; b) 1-2; c) 2-5; d) 5-10; e) 10-30; f) 30-50; g) 50-100; h) 100+ i) Not available (e.g. if not cost centres)</p>
<p>4. When started? And why?</p>	<p>a) Year of formation/take-over (approx.); b) When was original company formed (if taken over) and function; c) reasons? (And why?)</p>
<p>5. Embedded factors</p> <p>A. Corporate status?</p> <p>B. R, D & D?</p> <p>C. Local suppliers?</p> <p>D. Skills develop?</p> <p>E. Repeat invests?</p> <p>F. Plant at capacity?</p> <p>G. Anchor/ Regional Company?</p>	<p>a) Manufacturing only; b) Manu. + upstream; c) Manu + downstream</p> <p>a) Yes; b) No</p> <p>a) Yes; b) No</p> <p>a) Yes; b) No</p> <p>a) Yes; b) No</p> <p>a) Yes; b) No</p> <p>a) Anchor; b) Regional; c) None</p>
<p>6. Where trade?</p>	<p>a) Wales (local); b) UK; c) global</p>
<p>7. Supply chains</p>	<p>a) Wales (local); b) UK; c) global</p>
<p>8. Response to devolution?</p>	<p>a) Positive b) Neutral or negative¹⁵ (Wales and England)</p>
<p>9. Civic/business engagement</p>	<p>a) Business organisations; b) sector organisations; c) professional organisations; d) local partnerships; e) universities/colleges; f) charities; g) schools; h) local authorities; i) other</p>

¹⁵ Also correlate with anchor or regional company status

10. How collaborate?	a) Vertically; b) Horizontally; c) universities; d) FE; e) WG; f) local authorities; g) others
11. Identify as Local (Welsh), UK or global?	a) Local (Welsh); b) UK; c) Global; d) combination (most likely)
12. Meaning of 'place'?	a) Different illustrations given; b) any evidence of impact of cities?
13. How relate to local economy?	Different illustrations given
14. Advantages and disadvantages of location (e.g. Flintshire, Wrexham etc.)	a) Advantages; b) disadvantages (and illustrations)
15. Comparative cost factors (including international examples for MNC's)	a) Salaries; b) Transport; c) premises; d)energy; e) supply chain; f) other
16. Public policy expectations	a) Access to capital; b) transport infrastructure; c) skills and education; d) business regulation (including planning; e) ICT; f) other
17. Labour market, skills and education	a) Different illustrations given; b) access to skills; c) turnover; d) roles of universities and FE (e.g. apprentices)
18. Key challenges and barriers for future growth of company	Different illustrations
19. Innovation	Different illustration and case studies given

Appendix 3 – University ethics approval letter

UCL RESEARCH ETHICS COMMITTEE
GRADUATE SCHOOL OFFICE



Professor Peter Hall
Bartlett School of Planning
22 Gordon Street
UCL

25th April 2014

Dear Professor Hall

Notification of Ethical Approval

Project ID: 5542/001: Understanding the contribution of governance institutions towards shaping economic geography of place: a local and national perspective

In my capacity as Chair of the UCL Research Ethics Committee (REC) I am pleased to confirm that I have approved your study for the duration of the project i.e. until April 2015.

Approval is subject to the following conditions:

1. You must seek Chair's approval for proposed amendments to the research for which this approval has been given. Ethical approval is specific to this project and must not be treated as applicable to research of a similar nature. Each research project is reviewed separately and if there are significant changes to the research protocol you should seek confirmation of continued ethical approval by completing the 'Amendment Approval Request Form'.

The form identified above can be accessed by logging on to the ethics website homepage: <http://www.grad.ucl.ac.uk/ethics/> and clicking on the button marked 'Key Responsibilities of the Researcher Following Approval'.

2. It is your responsibility to report to the Committee any unanticipated problems or adverse events involving risks to participants or others. Both non-serious and serious adverse events must be reported.

Reporting Non-Serious Adverse Events

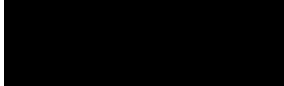
For non-serious adverse events you will need to inform Helen Dougal, Ethics Committee Administrator (ethics@ucl.ac.uk), within ten days of an adverse incident occurring and provide a full written report that should include any amendments to the participant information sheet and study protocol. The Chair or Vice-Chair of the Ethics Committee will confirm that the incident is non-serious and report to the Committee at the next meeting. The final view of the Committee will be communicated to you.

Reporting Serious Adverse Events

The Ethics Committee should be notified of all serious adverse events via the Ethics Committee Administrator immediately the incident occurs. Where the adverse incident is unexpected and serious, the Chair or Vice-Chair will decide whether the study should be terminated pending the opinion of an independent expert. The adverse event will be considered at the next Committee meeting and a decision will be made on the need to change the information leaflet and/or study protocol.

On completion of the research you must submit a brief report (a maximum of two sides of A4) of your findings/concluding comments to the Committee, which includes in particular issues relating to the ethical implications of the research.
With best wishes for your research.

Yours sincerely



Professor John Foreman
Chair of the UCL Research Ethics Committee

Cc:
Paul Hildreth, Applicant
Professor Mike Raco, Head of Department

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