Wales Centre for Public Policy
Canolfan Polisi Cyhoeddus Cymru

Strengthening economic resilience

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Summary

- In the face of economic uncertainty, policy makers are interested in how the economic resilience of economies might be strengthened. This report examines the evidence available to help inform policy debates in Wales.

- Economic resilience is not only the ability of an economy to withstand or recover from an economic shock. It is also the ability to adapt to new circumstances. Over the longer-term it implies a capacity for transformation. A resilience goal challenges traditional ways of thinking about the economy and demands new approaches.

- Economic resilience is typically measured in terms of aggregates such as employment and income. However, a nominally resilient economy can mask inequalities that contribute to vulnerability to future shocks. The Well-being of Future Generations Act provides an important foundation for more long-term thinking.

- There is mounting evidence as to what factors strengthen the resilience of economies. A diverse industry mix with good connections between firms and sectors assists the recovery process. Innovative and productive economies tend to be more resilient. Resilience is critically affected by the decisions taken by individual firms, workers and other actors.

- Locally embedded (grounded) firms can be a source of stability, but in the face of wider economic shocks, strong export orientation and external ownership can also provide positive resilience outcomes. Firm culture and attitude are more important than firm-size for resilient economies.

- Economies with higher skill levels tend to be more resilient, and can promote the resilience of neighbouring economies. Higher skilled workers also tend to be more individually resilient.

- Good governance processes, particularly those that are open and collaborative, enhance economic resilience. Collective approaches, such as a Task-Force, can help mitigate the effects of major economic shocks through joined up responses.

- A strategy for a resilient economy will involve a mix of policy approaches, cognisant of context. There is a case for immediate policy responses and those that are more considered. Policy-makers require a good understanding of precisely what they are seeking to achieve, for whom and by when.

- Current approaches in support of economic resilience tend to be ad hoc and reactive. There is a strong case in Wales for a more holistic and proactive approach, spanning the social, ecological and economic, that fosters the adaptive capacities of all actors.

Introduction

The Minister for Economy and Transport and the Deputy Minister for Economy and Transport have asked the Wales Centre for Public Policy to advise them on the evidence base that can help inform policies to improve the resilience of the Welsh economy. Of particular interest to Ministers is the role that ‘grounded enterprises’, and the ‘missing middle’, could play in supporting economic resilience given claims by some commentators that Wales lacks a strong foundation of mid-sized locally-owned firms (IWA, 2015; FSB, 2017).

The concept of economic resilience has gained prominence in the decade since the financial crisis of 2008/09, raising debate as to why some economies appear more able to withstand economic shocks, or to recover more strongly, than others. The recognition that the ability of firms and local economies to successfully navigate economic shocks affects the wider prosperity and well-being of communities, not only now but also into the future, adds to policy interest in this topic (Martin and Sunley, 2015; Webber et al, 2018).

Within Wales, as elsewhere, the closure of major local employers, and the lasting impacts that can follow, signal the importance of the economic resilience of local economies to the welfare of communities. The Economic Action Plan (Welsh Government, 2017) highlights the importance of promoting the resilience of workers, firms and the economy as a whole. Current debates on the potential economic impact of Brexit, the economic consequences of climate change and announcements of the closure of important local employers remind us of the ongoing relevance of a resilient economy.

Overall, the Welsh economy has proved relatively resilient to recent economic shocks, such as the financial crisis of 2008/09 (Bristow, 2018; Bristow and Healy, 2015; Sensier and Artis, 2014). Employment levels in particular have proven able to weather the economic uncertainties facing the Welsh economy (Bristow, 2018). However, a resilient economy need not be a highly performing economy and, on many measures, Wales has struggled to keep pace with the economic growth experienced elsewhere in the UK and other European economies. Equally, a resilient economy does not automatically imply better long-term economic outcomes if the focus is on simply ‘getting by’ (Bristow and Healy, 2015). This raises pertinent questions as to the end goal for economic policies.

It also highlights an important policy dimension to economic resilience. Whilst some policies may help economies to withstand a particular shock, these may be of only short-term benefit if they simply assist firms and households to cope with immediate circumstances. Policies to strengthen the economic resilience of an economy may also need to promote the longer-term transformation of an economy and to help lay the ground for responding to potential economic shocks in the future. As the Bevan Foundation eloquently puts it “Resilience is not just a response to change but also anticipation and planning for it” (2019, p.16).

In this report we review the state of the current literature on economic resilience, highlighting those aspects that can help to strengthen the resilience of an economy. The evidence is drawn primarily from the UK, Europe and North America, with a strong focus on experience gained from the global financial crisis of 2008/09. The report also considers the specific lessons learnt from the closure of a major manufacturing plant in the West Midlands, offering pointers to the value of different policy approaches over time. Finally, the report examines the suggestion that mid-sized firms, embedded in their local economy, provide a route to a more resilient economy.

Key questions in economic resilience

What is economic resilience?

The process of economic renewal is constantly present within economies (Boschma, 2015; Simmie and Martin, 2010; Schumpeter, 1942). It is, however, more pressing during economic shocks. Whilst resilience is commonly described as the ability to withstand a shock or, failing this, to bounce back from it, it is now also recognised that a resilient economy is one that is able to adapt to changing circumstances. Developing the concept further, Martin and Sunley (2015) emphasise how a resilient economy needs to possess a transformative capacity in order to navigate major system shocks.

Crucially, this suggests that resilience is about more than simply coping with the consequences of a shock. There is a copious literature that points to how short-term coping strategies may simply sow the seeds for vulnerability to shocks in the future. A resilient economy is one that is able to learn from the past, cope with the immediate effects of a shock, adjust to new circumstances and prepare for future shocks. Where economies prove unable to fully adapt to new circumstances then their recovery may be incomplete, leading the economy to settle at lower levels of economic activity than might otherwise have been achieved (Simmie and Martin, 2010).

One of the pervasive critiques of economic resilience is that it is a fuzzy concept, enabling the same term to be applied to very different contexts. It is also a field where similar terms are used but which refer to very different processes. One example is the use of the term adaptation when referring to changes within the existing development path of an economy, and adaptability when referring to the transformation of an economy to embrace new pathways (Boschma, 2015). Adaptation may see a worker accept lower wages or a lower paid job or a firm cut their costs and profitability in an effort to see themselves through a shock, whereas the adaptability of a firm or a worker would involve them developing new product lines or retraining in order to secure their future. In essence, adaptation tries to hold on to what one already has, whilst adaptability looks to develop new pathways. As the term resilience can mean different things to different people there is also the risk that it can be a term that is devoid of practical policy or analytical value. To guard against this, advocates often focus on four key questions: the resilience of what, to what, for whom and over what timeframe.

The resilience of what?

One of the key questions in studies of resilience is to ask what is being made resilient. As Wales's Economic Action Plan suggests, a resilient economy is not the sole ambition for Wales. There is also interest in supporting the resilience of communities, workers and of firms. Ideally, actions that strengthen the resilience of any one of these should promote the resilience of others. However, this can fail to recognise the tradeoffs that may be present, particularly if the concept of resilience becomes conflated with a preservation of existing structures. Similarly, indicators measuring the resilience of an economy may place greater emphasis on one aspect over another (Diodato and Wetering, 2015; see also Pike, Dawley and Tomaney, 2010). As the economy is an aggregation of many connected entities – firms, households, public bodies – we should not lose sight of the fact that the resilience of the economy as a whole is the sum of the resilience of each of these realised through a complex web of interconnections.

Related to this is the question of what indicators are being used to measure the resilience of an economy. Whilst some would argue that 'we know resilience when we see it', the academic literature tends to focus on a small number of key indicators. Most commonly this includes GVA, as a proxy for the resilience of business activity, and total employment, as a proxy for resilience in the labour market. Some researchers believe that the level of unemployment is also indicative of the degree of resilience. Less common but potentially useful measures include levels of household income, wage income, the annual turnover of companies or the stock of companies. Some researchers assess the vulnerability of companies or households to shocks using measures of credit or debt, as indicators of an economy's capacity to cope with a potential shock.

Crucially, different measures can indicate different resilience outcomes. This is partly a consequence of the interplay of resilience processes, such as where wage income is reduced as part of immediate responses to an economic shock. It also indicates the trade-offs that are present in economic resilience, highlighting the important influence of what society and policy-makers prioritise as constituting economic resilience.

A final 'what' question concerns the scale of the economy being considered e.g. whether a locality, city, city-region, region or nation. The literature tends to divide between those that assess economic resilience at the national and sub-national level and those that are more local in their focus. The spatial interactions between neighbouring and nested economies are often significant (Webber et al, 2018) highlighting the risks of artificially demarcating economies according to administrative boundaries. Changes to governance arrangements in the UK are also raising interest in the particularities of economic resilience in devolved nations and regions,

Broadly speaking, and all other things being equal, the size of an economy can also be significant. Smaller economies tend to be less resilient than larger economies, owing to the fewer options available in the face of a shock. How smaller economies might be supported through economic shocks by external policy actors is an area that remains underexplored (Healy and Bristow, 2020).

... to what?

Not all shocks are the same and different shocks can have varying economic effects. This raises a key question as to what shock policy-makers are seeking to strengthen the resilience of an economy to. In Wales's Economic Action Plan, a resilient economy is one that is resilient to the effects of climate change, to which we might add the effects of moving to a net-zero carbon economy. Other shocks include major economic perturbations, such as the financial crisis of 2008/09, or more localised shocks, such as the closure of the Ford engine plant in Bridgend scheduled for 2020. Sector specific shocks, such as the effects of the outbreak of Foot and Mouth Disease in 2001 on rural economies in Wales, can also have substantial wider economic impacts. The latter example also usefully highlights how natural events can instigate economic shocks. Finally, it is important to acknowledge that economic shocks can be induced by political events or deliberate policy-decisions, with Brexit being a prime example.

Debates as to the form that Brexit might take, and the potential impacts of this, highlight the range of potential shocks that might be induced by a single event (Begg and Mushövel, n.d.; Young, 2017). These stretch from firm closures, through cost reduction strategies by firms to reductions in household incomes owing to increasing import costs and a scarcity of goods. What this example illuminates is that a resilient economy does not simply need to navigate one shock, but may need to respond to multiple shocks occurring consecutively or in short succession. It is this cascade effect that can prove most challenging for the resilience of an economy and for economic actors. As some shocks have a global reach, whilst others are highly localised, the implications for strengthening the resilience of an economy can vary. Equally, some shocks will fall within the influence of political authorities but others will be outside their responsibility, limiting the scope for action to that of dealing with the consequences.

… for whom?

Critiques of economic resilience note how resilient economies may favour some over others (Fainstein, 2015). They argue that a resilient economy must also be just, with any gains (or losses) distributed in such a way as to promote a reduction in inequalities. Evidence from the 2008/09 economic crisis suggests that resilient economies tend to exhibit lower levels of income inequality, although causal relationships are difficult to evidence (Bristow et al, 2014a; see also Pike, Dawley and Tomaney, 2010).

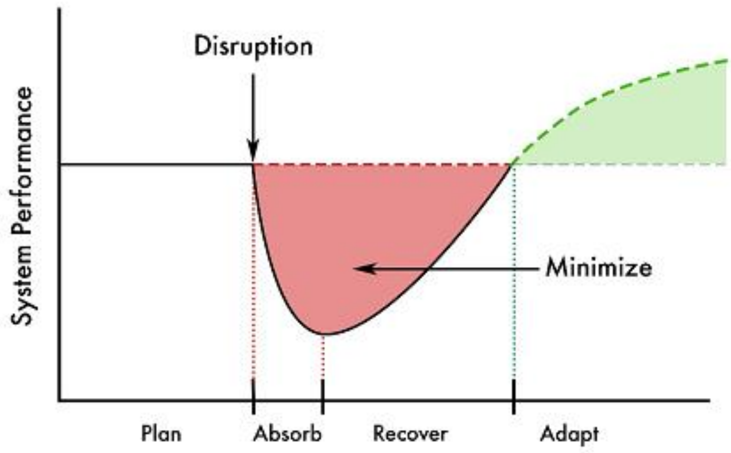
… and over what timeframe?

A final consideration for economic resilience is the timescale over which resilience is considered. There are two elements to this. The first is the speed with which a shock materialises and the duration of its effects. Short sharp shocks may require different capacities of response than those that are slower to materialise but longer-lasting, so-called slow-burn shocks. The second is the time frame over which the resilience of an economy is considered. The perceived resilience of an economy may differ when looked at from the perspective of 6 months after a shock, 2-years after a shock and 10-years later, particularly as the consequences of shocks can reverberate through economies for many years. In their follow-up research on the longer-term implications of the Longbridge closure, described later, Bailey et al (2014) identify the lasting impacts experienced by many workers despite securing re-employment.

Stylised models of economic shocks often suggest that stages of economic resilience can be identified. Figure 1 illustrates a typical model divided into 4 periods. First, the period prior to a shock, which determines how prepared an economy is, second, the period immediately after a shock when the goal of a resilient economy is to absorb the shock and minimise disruption, third, the period after the worst effects of the shock, when the goal is to promote recovery and, four, the subsequent period of adaption (in preparation for a future shock).

In practice such ‘stages’ are difficult to identify contemporaneously and different economies may experience the various stages of a shock at different times (Sensier and Artis, 2014). There can also be uncertainty about the expected duration and magnitude of a shock. This can lead to short-term responses displacing longer-term actions. Short-term actions also set in train development paths that can influence the opportunities that are available in the future.

Figure 1: A stylised resilience 'cycle'

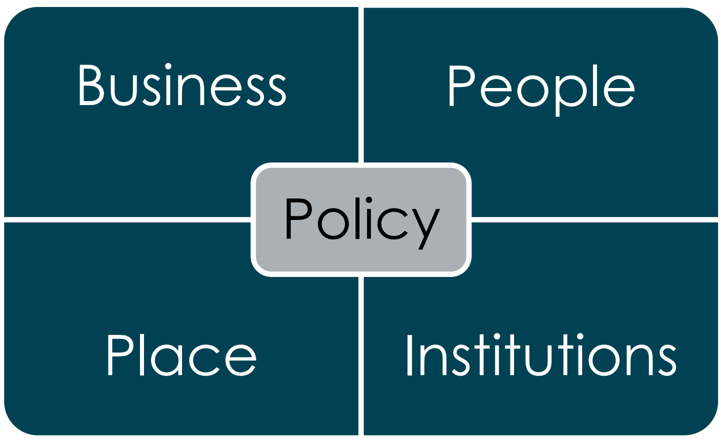


Source: Linkov et al (2019)

What factors influence economic resilience?

Research on economic resilience highlights the important role played by the structural characteristics of an economy. For simplicity (Figure 2) these might be divided into business characteristics, such as the structure of the economy; characteristics of the population, such as the skills mix; physical characteristics of particular places; and shared institutional structures (Bristow et al, 2014a). Policy can play a fundamental role in shaping the resilience of an economy through its influence on each of these aspects.

Figure 2: Stylised representation of key aspects for resilient economies



Research suggests that alongside these structural characteristics, the decisions made by individual actors and organisations such as firms, households, policy makers and public bodies can also influence the economic resilience of an economy (Bristow and Healy, 2014b). This is because the process of crisis and change is fundamentally played out through the actions and responses of firms and workers, of communities and governments. How these actors react is shaped by their past experience, by prevailing social and cultural norms, previous choices and decisions and their expectations of the future. Most actors make decisions based on the best information available to them at the time, but this places a premium on the quality of the information available. In the following sections we examine the evidence base for each of the aspects identified in Figure 2, before turning to questions of choice and decision-taking.

Business environment

There is an increasing consensus that one of the strongest features of a resilient economy is a diverse economic base (Kahl and Hund, 2015; Bristow et al, 2014a; Brown and Greenbaum, 2016). Xiao and Drucker (2013) argue that the effects of diversity on resilience are "unambiguous", even though specialisation may be more conducive to economic growth prior to a shock and support post-shock growth (Kahl and Hund, 2015). Several authors seek to marry these two elements by considering the role of firms that share skills and competencies even though they may operate in different economic sectors (what Boschma notably refers to as 'related variety'). Cainelli et al (2019) find that related variety in an economy assists adaptation over a three-year period (but has no effect over one-year), and so promotes resilience over the medium-term (see also Eriksson et al, 2018 for how related variety can help in the re-employment of affected workers).

Drawing on comparative data from American counties, Goetz et al (2016) suggest that whilst diversity can help limit the effects of a shock to an economy, it actually hinders longer-term recovery. In their analysis, they argue that 'complex' economies, that is those with diverse but inter-related and connected sectors, promote better recovery rates and so impart stronger resilience over time. There are strong parallels here with the evidence for the role of related variety in promoting more resilient economies.

The mix of industries in a region also affects the resilience of an economy (Groot et al, 2011). This is most apparent where a shock is sector specific but, more generally, researchers observe that a concentration of manufacturing activity tends to amplify economic shocks, whilst business services are more likely to act as regional shock absorbers and promote recovery (Ray et al, 2017; Diodato and Weterings, 2015). Doran and Fingleton (2018) similarly find sectoral mix important. In their research a higher proportion of workforce in educational services, arts, entertainment and recreational services or public administration signals a poorer recovery post-shock. This partly reflects austerity in public sector budgets but also indicates how aggregate falls in discretionary expenditure impacts on local recreational activities. However, work by Webber et al (2018) suggests that regions with greater employment shares in sectors that are less susceptible to demand fluctuations are more resilient, demonstrating that understanding the particularities of specific shocks is essential for effective policy design. Whilst most UK regions now have broadly similar sectoral mixes, Martin et al (2016) point to the importance of inter-sectoral differences in performance as contributing to varying resilience outcomes. Research in Ireland supports this, noting how differences in the resilience of the economies of Cork and neighbouring Kerry could partially be ascribed to differences in the performance of their respective engineering sectors (Healy, 2018).

Economies which exhibit higher levels of innovation also appear to have higher levels of resilience to economic shocks (Bristow and Healy, 2018b). However, the causal relationship has been difficult to identify with Bristow and Healy noting that it is difficult to discern the effects of developing new and improved products and processes from the broader capacity for adaptability and adaptiveness. Critically, the extent to which firms retain expenditures on research and innovation during an economic shock, or in its aftermath, may determine the ability of an economy to weather a future economic shock.

The level of new firm start-ups, sometimes referred to as ‘entrepreneurship’, is equally often associated with more resilient economies but again, many authors sound a note of caution as the number of new business registrations can rise in the aftermath of a shock as ex-employees seek to find new income generating activities, only for these to prove short-lived or to stagnate and so fail to provide a mechanism for post-shock growth, renewal or transformation.

The ability of a sub-national/sub-state economy to withstand and recover from a shock is not only related to the resilience of its own economy but is also positively associated with the strength and resilience of the wider (e.g. national) economy of which it is a constituent part (Groot et al, 2011; Webber et al, 2018). The resilience of neighbouring economies also has a positive bearing on the resilience of an economy (Ezcurra and Rios, 2019). Together these studies illustrate the importance of not considering local and regional economies in isolation, but as part of wider interconnected webs of activity that can both transmit shocks but also serve to provide enhanced capacities for resilience.

The highly integrated networks of trade and production that connect global economies mean that the resilience of any one economy is closely connected to that of its major trading partners (Rutherford and Holmes, 2014). Whilst some writers have suggested that this can be a source of vulnerability (Briguglio, 2009; Hudson, 2010) experience during the financial crisis indicates that it can also be a source of strength, in so far as it offers opportunities to access economies where market demand remains strong. High export rates provide a source of adaptive capacity, with firms able to access new markets to counter downturns in their existing activities (Pickles and Smith, 2011; Eraydin, 2016; Petrakos and Psycharis, 2016; Bristow et al, 2014a). Whether external trade is a source of resilience or not then broadly depends on the ability of firms to exchange existing declining markets for new emerging markets.

Similarly, McCann and Ortega-Argilés (2013) highlight the significance of regional embeddedness in propagating shocks. Where firms have strong linkages to other firms in a region then the effects of shocks tend to be magnified. This can be the case even where firms are in apparently diverse sectors, as Finland experienced with the downturn in economic fortunes at Nokia, owing to the nature of modern production networks. However, as embedded sectors often possess a different skills mix (Diodato and Weterings, 2015) regions that are vulnerable to such propagation effects may still be able to recover quickly, if affected firms are able to adapt. This again highlights the value of a diverse economic base and the capacity of individual firms to adapt and extend their networks when faced with a shock (Kahl and Hund, 2015).

A contested theme in economic resilience is the positive and negative effects of firms that are embedded in their local economy versus those that are more footloose. For some, the presence of multinational branch plants can be a source of vulnerability owing to the risk of plant closure and the lack of local influence. However, evidence from the financial crisis paints a more complex picture, as this suggests that externally-owned firms can have access to resources (capital and experiential knowledge) that are unavailable to locally-owned firms (Bristow et al, 2014a; Soroka et al, 2019). This can boost the resilience of an economy through providing the capacity to successfully manage an economic downturn. We return to the potential role of embedded, or grounded, firms later.

One element of economic resilience that remains under-researched is how firms' positions in global production networks change as a consequence of economic shocks and the implications of this for the economic resilience of an economy. Blažek (2016) shows how trade shocks, such as the opening of markets in Eastern Europe following accession to the EU, can lead firms to adopt positions lower in the value chain owing to an inability to compete with more technologically advanced companies. As lower positions in value chains tend to emphasise price-based competition this tends to reduce the ability of firms to navigate future economic shocks.

As a final consideration under the theme of business, research is also beginning to point to the significance of firm-level productivity and economic resilience. It is well-known that the UK has a productivity gap compared to other advanced economies, and that Wales has amongst the lowest level of productivity in the UK (Jones, 2016; Webber et al, 2016). It is not for this report to dwell upon the reasons for this (see Jones, 2016 for a synthesis). However, whilst the UK's productivity gap predated the economic crisis of 2008/9, it has worsened in the aftermath of the crisis (Schneider, 2018). Haldane (2018) explains this as the consequence of lower levels of technology adoption, weak transfers of knowledge between companies operating through network connectivity or labour-market churn, and weaker institutional structures that inhibit knowledge transfers. What is apparent from Haldane's analysis is that post-crisis caution amongst workers and firms is leading to weaker productivity performance which, in turn, slows recovery and inhibits the resilience of the wider economy. In so far as this then contributes to on-going caution amongst workers and firms the cycle then continues.

Place

Economic resilience is tightly connected to place, as many of the factors influencing the resilience of an economy are rooted in particular places. Not all places are the same however and some spatial characteristics appear to influence the economic resilience of places more than others.

There is some evidence that the nature of particular places can influence resilience outcomes. Cities, for example, tend to be more resilient to economic shocks than rural areas (Bristow et al, 2014a), at least in part due to their skills mix and more diverse (and adaptable) economies coupled with their ability to reap economies of agglomeration through denser network ties.

In rural economies, whilst many family farms have proven highly resilient over time, surviving to the third or fourth family generation (Lobley et al, 2002), this has often been at the expense of rising farm incomes. Glover (2012) explains this as the consequence of family farms rebuilding to the same (or a similar) model, which is explained by limited access to fewer adaptive strategies, such as network or investment capital, constraining their ability to learn from others and diversify. Dwyer (2018) points to the rising age of principle farmers in Wales, providing empirical evidence of how long-term patterns of resilient economic activity can end where there is no succession of new-generation ownership.

The role of other spatial characteristics, such as coastal areas, mountainous regions and border zones has also been considered. However, the evidence is ambiguous, with research suggesting that the economic resilience of these areas is, in general, more closely connected to the resilience of wider national economies than to the specificities of spatial characteristics (Healy and Bristow, 2020).

The role of transport infrastructures in promoting the economic resilience of places has been subject to a small number of studies. Overall, these find that, despite the risks of enhanced competition, greater accessibility can boost the economic resilience of places (Bristow et al, 2014a; Giannakis and Bruggeman, 2017; Östh et al, 2018). In their work, Östh et al find that the local effect is greater for more sparsely populated regions, such as found in Sweden, rather than more densely populated areas, such as in the Netherlands. However, their findings suggest that in the Netherlands the importance of accessibility rises as the spatial area considered increases in size. As their work focuses on labour market resilience, it partly demonstrates how greater accessibility can promote a wider range of adaptive responses by workers, rather than necessarily signalling stronger resilience of a particular place-based economy (as those seeking work are able to extend their search radius). This provides an important context to the concept of accessibility, its significance lies in how this facilitates stronger levels of geographical proximity among collaborating organizations which in turn facilitates adaptive processes (Kahl and Hund, 2015).

Qualitative research undertaken by Bristow et al (2014a) also suggests that the presence of international gateways, such as ports and airports, can have a positive influence on the resilience of regional economies. Similarly, their work also suggests that broadband connectivity plays a role in promoting more resilient economies. Empirical work testing this remains limited and examples can also be given of where transport gateways failed to promote economic resilience, such as in Spain, suggesting that, like many aspects of economic resilience, the role of particular factors is complex and nuanced.

In terms of the resilience of particular communities Bec et al (2018) highlight how demographic structure and more qualitative factors such as emotional stability, personality, beliefs and values, place attachment, lifestyle attributes, and exposure to change can all affect observed resilience outcomes. Strong place attachment can, of course, lead residents to adopt coping strategies which maintain the presence of the community but at lower levels of activity. In a survey of households in the Cardiff Capital Region Healy and Bristow (2018) found that attachments to place were strong despite households recognising that these places no longer offered optimal access to significant economic opportunities. This serves to illustrate how strong place attachments can lead residents to accept lower economic outcomes creating communities that appear to be resilient in the face of an economic shock (they remain) but where reduced levels of economic activity suggest that they have not been economically resilient. This is critically important when considering the policy implications of economic shocks.

People

There is a strong consensus that labour force characteristics have a strong influence on the economic resilience of economies. Fundamentally, a work force with higher levels of skills and educational levels is consistently associated with more resilient economies (Doran and Fingleton, 2016; Giannakis and Bruggeman, 2017; Bristow et al, 2014a). Significantly, Bristow et al (2014a) argue that when assessed over time it is those regions that had long-standing levels of higher skills and education that were more resilient to the financial crisis of 2008/09. Regions which had rapidly increased skills levels in the years immediately prior to the crisis were less likely to reap a resilience dividend from this. Why this should be subject to debate, but one explanation could be the ability of an economy to absorb the skills available. Doran and Fingleton's work (2016) also suggests that male, middle-aged and unionised workers tend to be more resilient to economic crises. This illustrates that it is those who may be in more precarious employment situations who bear the brunt of economic downturns, demonstrating the relevance of debates on the distributional dimensions to resilience and the important role played by job progression and fair work opportunities (Webb et al, 2018).

Whilst higher skills levels are associated with higher levels of innovation and, by association, the capacity of firms to adapt to changing circumstances, they also enable workers to adapt as well. How they do so can have an important influence on the economic resilience of an economy. Diodato and Wetering (2015) highlight how workers' skills relate to other sectors can have a significant influence on their ability to transfer between sectors in the advent of an economic shock. In the absence of such inter-relatedness, workers may be forced to accept employment at lower skill levels or to look for employment opportunities outside of their home labour market (Eriksson et al, 2018). Whilst both options demonstrate resilience responses by the workers concerned, they are less supportive of the economic resilience of the wider economy. The experience of ex-workers affected by the closure of the Longbridge manufacturing plant (described by Bailey et al, 2014) illustrates this point well (see later Section). Ezcurra and Rios (2019) find that the skills endowment of neighbouring regions also has a positive relationship to the resilience of a region, highlighting the role of labour force mobility and spatial spillovers.

The potential outflow of workers following an economic shock is well-reported (Monras, 2018) and, as with all 'brain-drain' dynamics, can affect the longer-term growth potential of an economy, which in turn impacts on its longer-term resilience prospects. Making such a move is not without a cost and so such decisions tend to be long-lasting, reducing the amount of human capital available in a region on a long-term basis. For some places, remittances from residents working elsewhere but remaining within a region can support a degree of economic resilience but this is not a strategy for a resilient economy. This highlights the value of policy approaches that seek to retain labour through a period of economic downturn, which we turn to under the rubric of policy.

In some limited cases there is evidence that where a highly skilled labour force is affected by a particular economic shock, it can act as an attractor for new firms to an economy. As such, skill levels can provide a resilience mechanism in their own right. This has been reported in the case of the decline of Nokia in Tampere, Finland. Here, the redundancy of highly skilled and specialised labour led a number of international firms to invest in Tampere in order to take advantage of the surplus skills available (Kurikka et al, 2017).

An important dimension to the economic resilience of regions is the nature of the response to any particular shock by firms and workers themselves. To reduce costs firms may seek to reduce their labour force or to limit the costs incurred by reducing wages or the hours worked. During the financial crisis, many workers chose to accept reduced hours in order to retain their employment (Bristow et al, 2014a). Such strategies can promote the resilience of an economy in the aftermath of an economic shock. However, if the economy settles at lower wage and income levels then this may signal an inability for the economy to transform and calls into question the resilience of the economy in the longer-term. Reduced incomes can also affect aggregate demand within an economy and so set in train negative spillovers that further hinder economic recovery.

One attribute of economies that are more resilient to economic shocks is that they tend to have higher levels of labour market participation (Bristow et al, 2014a). The reasons for this remain to be fully ascertained, however, it seems plausible to suggest that higher levels of labour market participation provide more opportunities for household incomes to be maintained as well as providing greater opportunities for diversity in the labour market. It is noticeable that during the financial crisis in Ireland, participation rates increased as those who had left the labour market during the boom years returned during the crisis (Healy, 2018). It is suggested that this was to help stabilise household incomes at, or near to, levels which, prior to the crisis, had been maintained by a sole-earner in the household, demonstrating the role that individual choices play in aggregate resilience behaviours. Research by Foden et al (2014) in the South Wales coalfields demonstrates how economic shocks can change labour market structures with asymmetric outcomes, as well as permanently reducing available economic opportunities. In this case, the new jobs created tended to be taken by female members of the labour force, in contrast to the lost mining occupations which had been dominated by males.

One aspect of economic resilience referred to earlier is the extent to which workers move between firms. In a tight labour market, workers can be reluctant to move to employment where there is less certainty for their future, and where they may be less protected in terms of potential redundancy (Bailey et al, 2014). This may inhibit the resilience of the wider economy, although there is little empirical work exploring this. Haldane (2018) highlights how workers in the UK are unlikely to move to firms in productivity quartiles beneath those that they currently work in. This limits the transfer of knowledge between more productive firms and those that are less productive. Similarly, Bell et al (2017) note how lengthening job tenure suggests reducing levels of inter-firm movement. Whilst research on how labour market churn relates to the resilience of economies is currently limited, the link between this and company performance is broadly accepted, which suggests this is an area for further consideration (Eriksson et al, 2018).

Institutions

The important influence of institutions for economic development is increasingly acknowledged in the literature (Rodríguez-Pose, 2013). By institutions, writers refer to the sets of established norms, practices, conventions, policies and legal arrangements that influence the behaviour of firms, labour and financial markets, as well as the nature of policy interventions (Martin et al, 2016). The role of institutions in regulating and governing economic activity has come under scrutiny as a potential factor in strengthening economic resilience (Hu and Yang, 2019).

One element that has attracted much attention is the role played by government in economic resilience. This tends to stress the role of the state as a co-ordinator, animateur and facilitator as much as its role as a regulator (Morgan, 2013; McInroy and Longlands, 2010). This perspective emphasises the ability of the state to influence system behaviours in ways that are external to the formal structures of government and highlights the role of government as just one actor in the governance of an economy. Developing this further, Morgan and Sabel (2019) argue for an experimental state with flexible and porous structures, where the state continuously reviews and revises policy approaches in the light of emerging evidence and arguments. This adaptive approach is one which finds strong traction in the resilience literatures, although supporting evidence from practice remains sparse. Writers on governance for economic resilience emphasise the value of collaborative, open and networked approaches as mechanisms for developing holistic approaches where new, or alternative, perspectives can gain traction and for building shared ambitions (Bristow and Healy, 2014).

One aspect of past economic crises has been the degree to which institutional and organisational structures have been reconfigured in response to a shock (Bristow et al, 2014a). This can take the form of the introduction of new institutional structures, the removal of those that appear ineffectual, or a transfer of powers between bodies. Again, few studies have provided empirical evidence as to the success or otherwise of such measures (see Boschma (2015) as an exception).

There is a popular debate as to the potential benefits offered by decentralised government structures, with increasing resources devolved to sub-national bodies (Morgan and Sabel, 2019; OECD, 2019b). Empirical evidence on the value of this for economic resilience is, though, not yet available, leading to calls for more research into this area (Bristow and Healy, R&R). In practice, it seems plausible to suggest that a balanced governance model, which combines locally-informed actions with the greater reach and resources of higher governance levels, may offer a resilience dividend, but this remains to be tested.

Qualitative research suggests that fragmented governance structures impede resilience (Bristow et al, 2014a). Rather, resilience appears to be enhanced where public authorities work together with neighbouring authorities; where different levels of government work together towards shared objectives, and where there is a collaborative approach to working with economic and social partners. Brooks et al (2016), for example, highlight the important role that civic leadership can play in boosting resilience by developing collective strategies/approaches.

In their work, Bristow et al (2014a) suggest that where local government has more limited powers this acts against resilience, although the finding is not without exceptions. One reason for the mixed results is that it is not just the capacity to act which is important, but also the willingness and capability of a sub-national authority to do so. This emphasises the influence of the knowledge, experience and outlook of decision-makers on shaping policy-actions as much as the actions themselves.

One aspect of governance that has been well-explored is the role of good governance, Ezcurra and Rios (2019), for example, provide strong evidence of the positive effect that good governance has on economic resilience across regions in the European Union. In this context, good governance is defined as being impartial and uncorrupt in the eyes of its citizens, rather than making qualitative judgements about its effectiveness (Rothstein and Teorell, 2008).

The role of social capital, such as the strength of social ties, is often referred to in economic resilience debates. Certainly, the capacity and willingness of those in communities to help each other during periods of difficulty forms a powerful narrative (Solint, 2010). In practice, whilst there is evidence of the power of social capital in supporting places to cope with economic downturns, and of local efforts to mobilise activity – such as 'buy local' campaigns – more research is required if the effect of social capital on longer-term resilience outcomes is to be demonstrated.

This is not to downplay the significance of local social values and Huggins and Thompson (2015) demonstrate how this can play an important role in fostering entrepreneurial resilience. They highlight how societies that exhibit more open and diverse characteristics experience higher levels of entrepreneurial resilience. The importance of context is also referred to by Holl and Rama (2016) who show how firms in the Basque County, Spain, were less likely to reduce innovation activity than firms located elsewhere in Spain. They similarly ascribe this to the mediating role played by variations in institutional settings.

Building on the concept of social capital, Huggins et al (2012) argue that the strength of the network capital of a region can have implications for its economic development. By this they mean the strength and depth of the networks between firms and with other bodies, such as universities (see also Goddard et al, 2018). Whilst a similar analysis has not been undertaken for the role of network ties on the economic resilience of a region, it is suggested that stronger and more diverse network relationships can promote economic resilience.

In a critique of such a simple analysis, however, Boschma (2015) considers how local network structures may become excessive and inward-looking, and network partners may become too proximate on various dimensions. He argues that these types of networks lead regions to score highly on adaptation but because they become locked-in to particular development trajectories their adaptability is impaired, with negative implications for their resilience over time.

Boschma (2015) also suggests that it is remarkable how little attention has been paid to the sensitivity of regional (knowledge) networks to the removal of specific nodes or the dissolution of particular linkages. For example, what impact might the closure of a major company have on the wider network as a whole? Boschma poses the view that whilst the closure of a firm in one particular industry may not have a particular impact this is not the case where the firm is located in a boundary-spanning industry, that is, one that bridges two distinct technology fields. If such a firm disappears from the region, Boschma argues, then the recombination potential of the region may be more seriously affected.

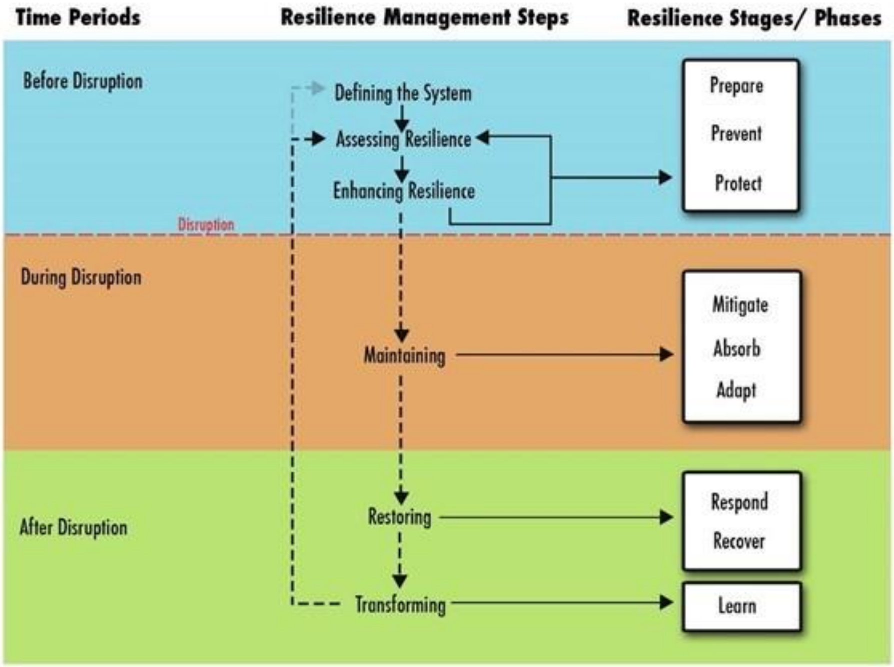
Policies

Whilst there is no shortage of literature promoting the role of various policies in promoting the economic resilience, there is less evidence for how this impacts on the resilience of economies in practice or the relative value of different policy instruments (Eraydin, 2016; Martin et al, 2016). In part, this is ascribed to a lack of research tackling this theme but it also owes much to the complexity of the resilience agenda, especially how appropriate policy actions will vary depending on the particularities of any shock and the context in which this occurs.

Firstly, there is the question of the type of economic shock that policy aims to address. Bristow et al (2014) usefully remind us that it is beneficial to distinguish between economic shocks that are experienced directly (such as the closure of a local employer), systemic shocks (such as the global financial shock of 2008/09) and those that result from second order effects transmitted through supply chains and/or the results of natural hazards or disasters. It is also worth remembering that some kinds of policy decisions can induce, rather than help to guard against, shocks to an economy.

Secondly, different policies may be appropriate at different phases of the resilience cycle (Figure 3). Many policies provide a valuable ‘buffering’ role in the immediate aftermath of a crisis. This can include automatic fiscal stabilisers, such as welfare benefits, as well as policies introduced specifically for that purpose, such as wage subsidy schemes or deferments of VAT and PAYE contributions. Typically, such policies aim to limit the extent of a shock by helping actors to ‘ride-out’ the immediate effects. This can help prevent otherwise viable firms being forced into administration or reducing payroll, for example, owing to short-term cash-flow shocks. However, as many of these ‘stages’ are ill-defined and overlap in practice it is unlikely that a neat policy timetable could be identified.

Figure 3: Aligning policy with resilience 'stages'



Source: Linkov et al (2019)

Other policies can assist in strengthening the ability of an economy to adapt to changing circumstances. Good examples of the latter include the ReAct and ProAct programmes in Wales (Box 1). Here individuals and firms were encouraged to invest in training that would assist their economic futures, utilising the shock as an opportunity for this. Evaluations of these programmes suggest that both provided net benefits, but that support aimed at businesses had stronger resilience outcomes (Roe, 2015; Short et al, 2011). Other examples of policies supporting economic resilience are those that encourage firms to explore alternative markets or new ways of working, or which encourage new firm formation. These provide examples of policies that promote the adaptation and transformation of economic activities.

In seeking to promote the transformation of an economy, such policies also lay the foundation for supporting the resilience of an economy to a future shock. In the case of Cork, Ireland, politicians stressed how their policies had been informed by the memory of the closure of major industries in the city in the early 1980s (Healy, 2018). To avoid a repetition of their past dependency on a few key employers, politicians had actively encouraged policies that promoted a more diverse economy. This paid dividends during the financial crisis. Policies to strengthen the resilience of an economy to a prospective shock can also be aimed at existing firms. In the case of Longbridge, West Midlands, the threatened closure of a major employer provided the impetus for policies promoting supply-chain diversification (as described later), whilst in Wales, the Development Bank for Wales and Business Wales operates the ‘Brexit Resilience Fund’ a loan and grant scheme to assist businesses adapt to the potential impact of Brexit on their business (Business Wales, 2019).

Box 1 Support for workers and firms affected by economic shocks.

ReAct (Redundancy Action Scheme) was established in the late 1990s to help tackle the aftermath of factory closures. Aimed at individuals who had recently been made redundant or who were under notice of redundancy, ReACT was refreshed in 2008 to help tackle the effects of the financial crisis. It provided funding for training, skills development and other support to assist workers return to work as soon as possible. It also included a contribution towards wages and help with training costs for those employers recruiting the affected workers. In 2011, ReAct was amended to strengthen the emphasis on encouraging employers to take on redundant workers, highlighting how policies themselves adapt as the resilience agenda changes.

ProAct was a financial support package launched by Welsh Government in 2008 to assist viable businesses cope with the economic downturn. It aimed to help firms to “use quiet periods to upskill staff to prepare them for when the upturn comes”. It was available to businesses which had introduced short time working and faced the threat of redundancies. Support consisted of a wage subsidy per individual who was involved in training and help towards those training costs.

Source: National Assembly for Wales (2011).

Policy interventions with short term benefits do not always serve to strengthen economic resilience over the longer-term. Kakderi and Tasopoulou (2017) relate the case of one region in Greece where Central Government compelled a state-controlled industry to employ many of those made redundant through the closure of other local employers. Whilst this helped the region to stabilise the economic effects of these closures it left the region dependent on one major employer that proved vulnerable during the economic crisis of 2008/09.

Policy approaches towards resilience tend to be focused on typical economic activities and outcomes. There has been less emphasis on policies that support the development of social and network capital. Where policies have strengthened these forms of capital it tends to have been an ancillary outcome of other policy goals (such as through cluster policies). Economic resilience can also be strengthened through traditional policy instruments, such as those promoting accessibility or research and innovation, alongside macro-economic policies. Policies promoting transformation, such as digital economies, smart cities or decarbonisation, to take three key themes, can also help firms, households and workers prepare for changing economic futures and so act to strengthen economic resilience even though they are not couched in this format.

What is notable from the literature is that most policies that address economic resilience are simply that, policies. As Cox et al (2014) argue, there are few examples of policy actors taking a systematic approach to building economic resilience (p.39). Rather, economic resilience is regarded as a secondary objective, something that is considered after primary objectives, such as promoting economic growth, are met. This underplays the value of a resilient economy and may be one reason that examples of policies that have supported economic resilience are elusive. As resilience is more than simply an economic outcome it cannot be easily measured by traditional economic indicators. At best commentators use proxy indicators (such as employment or incomes). Where these are adopted as policy it runs the risk of subverting the policy approach towards delivering that indicator rather than the goal of a resilient economy.

A more systematic approach to strengthening the economic resilience of economies might also assist policy-makers to design policy approaches that fit their particular context. Cowell et al (2015) warn of the risk of importing generic, and often mimetic, policy approaches that do not distinguish between different geographies. Equally, there can be a pressure to 'reinvent the wheel' where potential policies are rejected simply because they were 'not invented here'.

The complexity of resilience

Despite the wide literature that highlights the potential determinants of economic resilience, most authors argue against seeing the resilience of an economy as some fixed capacity or tangible attribute. They stress the dynamic dimension to economic resilience, noting how what went before can influence what comes after as well as how shocks differ in time and place (Simmie and Martin, 2010, Bristow and Healy, 2015). This means that there is not some checklist of factors which can be ticked off to secure economic resilience, nor that the presence of the identified determinants assures the economic resilience of an economy. Two explanations are put forward for this complexity.

Firstly, it is the interplay of the different factors associated with economic resilience that leads to the emergence of a resilient economy (Bristow and Healy, 2015). The manner in which these factors combine is rarely constant which has meant that researchers have struggled to demonstrate how these interactions promote resilient economies. This means that many claims for the determinants of resilient economies are subject to caveats. For example, economies that witnessed a rapid rise in the proportion of well qualified employees in the years prior to the global financial crisis proved less resilient than those that had maintained a high skills base over a long period of time (Bristow et al, 2014a). In practice this means that not only does each place possess a unique combination of attributes (and constraints on action) that can influence its resilience to a shock but also has different roads to economic resilience open to it (Swanstrom, 2008; Wink, 2016).

The second dimension to the complexity of resilience relates to the decisions made by actors (Bristow and Healy, 2015). Hill et al (2011), for example, highlight the significant, and often instrumental, role played by the strategic decisions and behaviours of businesses in response to shocks. The aggregate decisions made by firms are fundamental in shaping the overall resilience of those economies with which they are engaged. These decisions are informed by how firms regard the present and the future, as well as their learning from the past. Public bodies also take decisions that can have lasting economic consequences. One of the lessons from the financial crisis and other shocks is that firms and public authorities with prior experience of dealing with economic downturns were more rapidly able to manage changing circumstances than those for whom this was a new experience (Bristow et al, 2014a; Bailey et al, 2010).

Decisions are also made by individuals. Workers decide on whether to remain in jobs but on reduced hours, or between jobs located nearby against those further afield. Again these choices are influenced by past experience, the influence of social contacts and perceptions of the future. In a study of communities Becs et al (2018) highlight how those who regard change in a positive light demonstrated enhanced perceptions of resilience. This suggests that one role for government may be to present positive framings of change in order to promote more positive outcomes.

Empirical evidence as to the significance of decisions and choices on resilience outcomes remains sparse. It is a field where quantitative research has been particularly limited. In a notable exception, researchers in Germany demonstrate how local firm owners chose to support locally-based competitors during the global financial crisis in order to maintain cluster capacities for the future (Wrobel, 2013). Comparing the outcomes of similar firms in these locally-connected clusters with comparable firms elsewhere in Germany they found that the seemingly altruistic behaviour of these cluster-based firms promoted a more resilient local economy. The impacts on neighbouring economies were not assessed.

One further area where differences in decision-making can impact on the resilience of an economy over time concerns the nature of the choices taken. Where firms or workers simply seek to maintain their existing pattern of activity (or are encouraged to do so by policy initiatives) then this may not lead to economic renewal (Grabher, 1993). Yet for many actors, seeking re-employment in the same industry or occupation, or reducing costs to maintain competitiveness in existing or similar markets is the option with immediate returns. Michael Ignatieff (2018) styles this as the dynamic best response of individuals, where firms or households continuously act with the best of intentions but where their short term gains lock them in to less advantageous trajectories over the longer-term. For an economy to demonstrate adaptive capacity, actors, and the economy, need the capacity to move on to new development paths which may require deferring gains and incurring short-term costs. There is a role for government here in promoting the development of new paths but, as Boschma (2015) warns, they need to be careful not to let the search for the new be at the expense of what already exists. He suggests that an over-emphasis on adaptability may impair adaptation (see p.6 for the distinction), as it may reduce the cohesiveness of local economies and so reduce positive externalities in a region. As with all aspects of economic resilience policy-makers require a good understanding of precisely what they are seeking to achieve.

Lessons from a Task Force: Longbridge, West Midlands

Longbridge is synonymous with the closure of MG Rover, one of the UK's leading car manufacturers. It provides a valuable insight into an economy's response to a major economic shock and the role played by a 'Task Force' in enhancing the resilience of the affected economy. A Task Force such as this can be described as a 'task-oriented, temporary, non-statutory partnership(s) with multi-sector but selective membership' that provides an institutional platform for rapidly mobilising distributed expertise and resources (Bailey et al, 2014, p.61).

In 2000, BMW abruptly announced it was breaking up the loss-making Rover Group, which it had acquired in 1994. The threat of major job losses was abated as various parts of the Rover Group were retained or sold off as going-concerns, with the Rover factory in Longbridge, Birmingham, being purchased for the nominal sum of £10 by Phoenix Venture Holdings and rebranded as MG Rover. In 2005, MG Rover placed itself in administration and ceased all production and trading activities resulting in the direct loss of more than 6,000 jobs and several thousand more affected in the supply chain.

The threatened closure of the Longbridge plant in 2000 was wholly unexpected and raised awareness of the extent to which the West Midlands' economy was dependent on one manufacturer. It provided a salutary warning that galvanised action in the form of what is now known as the first Rover Task Force. The final closure of the MG Rover plant in 2005 was less unexpected and the Department of Trade and Industry had convened a joint planning group to prepare for such an eventuality in 2004, which formed the nucleus of the second Rover Task Force.

As Bentley et al note (2010), Task Forces have been used extensively in British economic policy, typically as a response to a particular shock. The focus of a Task Force can be sectoral, spatial or employer-based (Pike, 2002). The value of a Task Force is seen to be its ability to draw together cross-governmental agencies coupled with a desire to involve parties beyond government (Bentley et al, 2010).

The first Rover Task Force primarily targeted employers in the region. It aimed to diversify the economy and reduce reliance on MG Rover's operations, by: improving the productivity of firms in the automotive supply chain; diversification of activities away from MG Rover and the automotive sector, and a corridor based approach to regeneration.

The success of this programme of diversification and modernisation in mitigating the economic shock to the region is widely acknowledged (Bailey and MacNeil, 2008). In 2000, some 161 companies were reliant on MG Rover for at least 20% of their activities. By 2005 this had fallen to 74 companies (of which 57 were in the West Midlands). It is estimated that the programme 'saved' at least 10,000 jobs that were at risk across the region in 2000 but were no longer vulnerable when the MG Rover plant closed in 2005 (House of Commons, 2007; Bailey and MacNeil, 2008). The Task Force approach was retained, until the abolition of English RDAs in 2012, and applied to subsequent closures of major employers in the West Midlands, capitalising on the skills and experience developed during the Longbridge crisis.

A key lesson here is the success that measures promoting diversification and modernisation can have when married to firms that are aware of their own vulnerability and wish to reduce their reliance on particular markets. The Accelerate programme, which formed the backbone of the approach, was also a pre-existing instrument that Advantage West Midlands was able to extend both in scope and reach (to ensure that it was available to firms in all parts of the region), meaning that actors were not designing new programmes from scratch.

The second Rover Task Force was launched as part of a multi-agency response to the closure of MG Rover. It included national government departments, MPs, local authorities, the Regional Development Agency, Trade Unions, Skills Agencies, employers and employer bodies. It did not include Job Centre, which was later seen as a potential oversight. The aim of the Task Force was to help affected workers find new jobs, assist the communities affected and help suppliers to keep trading and diversify their activities.

Financial support consisted of aid packages totalling more than £180m spread over three-years. Ex-post evaluations have suggested that it was the ability to defer VAT and PAYE payments that proved most valuable to affected suppliers, alleviating their immediate cashflow pressures. For workers, support such as extending or refinancing car loans also proved valuable, as this helped them to retain their mobility in searching for new jobs.

One of the primary benefits of the Task Force was its ability to provide an immediate response as soon as MG Rover closed, notably it started work within a day of the firm being placed in administration. This proved critical to protecting jobs in the affected supply chain, as well as supporting those workers made redundant (financially, psychologically and in terms of employment and training advice).

Many of the managers, professional employees and skilled engineers proved able to find new jobs relatively quickly through their own contacts and initiatives. Others were supported through government schemes which rewarded firms taking on an ex-Longbridge worker.

Older and less-skilled workers were least able to find new jobs. Overall, around 90% of ex-workers were found to be in work 3 years after the closure, but two-thirds were working for reduced wages. New employment was also more precarious with workers reporting that they were more likely to be made redundant during a downturn (such as that of 2008/09) (Bailey and de Ruyter, 2015). Job gains of ex-workers were also often at the expense of the existing unemployed, with strong displacement effects reported.

One of the key lessons emerging from the Longbridge experience is the value of a diversified economy for regional economic resilience and of prior preparation. The work of the first Rover Task Force is credited with preparing the region for the eventual demise of MG Rover. Crucially, this was not just targeted on the MG Rover supply chain but also encouraged other firms in the region to consider how they might grow their business using the engineering expertise of firms in the region. The approach was to build an economy connected by skills and knowledge rather than by production chains.

A second lesson has been the importance placed by the Task Force on transforming the economy. Whilst automotive manufacturing continues this tends to be focused on niche higher value production processes. This was a conscious strategy. Most ex-Longbridge workers found new employment in the service sector representing further evidence of the evolution of the regional economy.

The experience of Longbridge demonstrates the positive impact had by the Task Force, but also the long-lasting shock that the closure had on the regional economy. Whilst the sheer scale, and speed, of the closure as well as the breadth of occupations involved proved challenging to the agencies involved, particularly Job Centre plus and training providers, there is no doubt that the presence of the Task Force was a major contributory factor in supporting the resilience of the West Midlands' economy. As Bailey et al (2014) note, in the context of a crisis, action is imperative and deliberation is a luxury, to be seen to act is the priority using whatever tools there are to hand. In such circumstances they say, it is "helpful to have knowledge and actors in place rather than attempting to 'firefight' after the event" (p.69).

One alternative perspective on the closure of Longbridge was expressed by Prof. John Bryson (Birmingham University). Speaking to the BBC in 2015 he argued that the traumatic closure of the Longbridge plant had actually been beneficial to Birmingham and the surrounding region, as it had spared MG Rover from an alternative death 'by a thousand cuts' (Chester, 2015). This serves to highlight how a sense of crisis can sometimes concentrate resources and mobilise action in a way that slow-burn events are unable to achieve.

The role of grounded firms

One question that receives particular attention in debates on the resilience of economies is whether the size or ownership structure of firms might make a difference. Often this is prompted by the closure of an important local employer owing to the decisions taken by a parent company located in a distant city. In contrast, the qualities of firms that are 'grounded' in their local economy are portrayed as providing the foundations for a more resilient economy.

Whilst there is no official definition of what constitutes a 'grounded' firm Brill et al (n.d) describe such firms as either:

a) firms of any size that are fundamentally attached in some way to their local economy and trade in niche products that are not scaleable, or,

b) larger private and public sector organisations that deliver basic goods and services (such as health services or utilities).

In looking for examples of the potential benefits of grounded firms much been written about the value of the German Mittelstand. Definitions of the Mittelstand vary, with some only including small and medium-sized companies and others extending the definition to include major companies such as Bosch. However defined, empirical evidence on the role of the Mittelstand is sparse (Berlemann and Jahn, 2016) and the value of the Mittelstand model of entrepreneurialism is subject to debate, particularly in Germany itself, where it is often compared unfavourably to that of Silicon Valley (Pahnke and Welter, 2019).

According to Pahnke and Welter (2019), it is the culture and attitude of Mittelstand firms that matters rather than the size of the company. They argue that their real strength lies in "the identity of ownership and management and a sense of belonging". Witt and Carr (2014) similarly suggest that their defining features are family ownership, innovativeness and longevity, as well as strong regional ties, social responsibility and investment in the workforce. They also note how successful Mittelstand firms are more likely to be global market leaders in niche markets than UK counterparts. Furthermore, Fear (2014) highlights the importance of Mittelstand firms' long-term outlook, commitment to staff (both in terms of training and retaining skilled staff during a downturn), focus on service, responsiveness to customer demands, and their constant upgrading of products. They argue that such firms are export-orientated and focused on an international niche strategy based on premium products; they are midsize "global players" and typically follow conservative financing strategies (retained earnings and bank loans) that maintain family control.

It is this concept of social responsibility coupled with a strong regional identity that underpins the importance of grounded firms. However, studies of their role in promoting economic resilience are limited. In theory:

- These firms have sufficient scale and embeddedness to deliver the propensity to innovate, a strong skills base and propensity to export;
- Family-owned firms may be more able to withstand temporary falls in profitability and so contribute to the longer-term resilience of the economy, as they do not answer to external stakeholders.

The flipside of this is that firms that are overly-dependent on local markets can amplify the effects of economic downturns, highlighting the importance of diversified markets. Similarly, family firms may prove to be risk averse and less willing or able to expand during periods of economic growth. In these circumstances the risk is that an economy dominated by such firms settles at a lower-level of long-term output with potential adverse consequences for future economic shocks.

Whilst writers may debate the size of firms to include in the Mittelstand, research suggests that medium-sized firms may be more resilient to economic shocks than smaller firms (see Kapitsinis et al, 2019). This is ascribed to their greater access to financial resources, higher-levels of diversity within the firm and stronger propensity to export. As such they may be more able to weather temporary economic downturns or to adapt to new conditions.

Earlier research has proposed that Wales lacks a base of mid-sized firms, particularly in mid-Wales (FSB, 2017). If so this could act as a constraint on the capacity for economic resilience. However, recent quantitative evidence commissioned by the Development Bank of Wales suggests that, on most measures, the position in Wales is similar to other parts of the UK and concludes that Wales does not have a 'missing-middle' (Kapitsinis et al, 2019). Drawing on comparative economic data from across Europe, their work also questions whether the proportion of mid-sized businesses in an economy is a good guide to economic performance. Rather, they highlight the importance of a diverse and heterogeneous business base.

In considering the resilience of the Welsh economy, Kapitsinis et al (2019) suggest that a lack of dynamism in the business base in Wales is of more concern. This is manifest in reducing numbers of small firms progressing to mid-sized status and a broader lack of profitability registered by firms in Wales. Both aspects could herald future challenges for the economic resilience of the Welsh economy. Heley et al (2012) support this contention with their finding that strategies for stability rather than growth tend to be the default position for independent businesses in Wales. Whilst this provides security for individual firms it does not secure a dynamic economy that is able to absorb the costs of the inevitable demise of individual businesses over time.

One final area of contestation is the extent to which successful mid-sized firms 'outgrow' the Welsh economy, leading to the out-migration of production or HQ functions as Welsh owners sell on their firms to external capital. Where this results in outflows of capital from the local economy and a demise in a firms' commitment to a locality it may strip Wales of precisely those characteristics that determine more resilient economic outcomes.

Whilst many individual examples of this pattern can be found, the empirical evidence for the consequences of this remains weak, particularly in terms of the resilience of the economy. As previously noted, external ownership can in some circumstances enhance resilience rather than constrain it suggesting that this is a theme for future research.

Implications for Wales

Current economic uncertainties are highlighting the importance of the resilience of the Welsh economy. Various shocks can be foreseen, from the closure of specific employers, through broader economic events, such as the potential repercussions of Brexit, to major structural transformations, such as a commitment to the decarbonisation of the economy or the economic implications of Artificial Intelligence. Whilst some may provide opportunities, all provide the risk of local, or national, economic downturns.

In seeking to strengthen the resilience of the Welsh economy, it is important to distinguish between these different types of shock as each has a particular fingerprint. In the case of an immediate shock, the capacity for immediate response to limit second-order impacts is critical. This was clearly demonstrated in the case of Longbridge and ProAct, where otherwise viable firms might have been forced into job-losses or administration without timely intervention. The role of a task-force style approach to achieve unified governance has merit in these circumstances. Further policy interventions can then focus on ensuring a strong economic recovery, assisting firms and workers to adapt to new circumstances. Arguably, it is this support for adaptation that is most important, rather than seeking to maintain, or retain, the status quo. This was one of the key lessons for policy-makers following the first Longbridge Task Force.

Where a shock is more systemic, such as the financial crisis or, potentially, in the case of Brexit, immediate actions remain important. More significantly, the literature highlights the importance of a diverse, but inter-related, economic base of outward-looking firms with positive innovation performance, good productivity levels and a highly skilled workforce in providing the foundations for a resilient economy. Wales performs more strongly on some of these measures than others, illustrating the relevance of existing policy themes. Whilst the reduction or closure of export markets can induce an economic shock, the evidence suggests that export-orientation remains a positive attribute for a resilient economy, particularly where firms can adapt and target new markets.

Finally, where policy-makers wish to consider the transformational dimension of resilience, the above features remain valid. Fundamentally, however, evidence appears to suggest that it is those economies that embrace change (the adaptability of economies, leading to new development pathways) that are most resilient over the long-term. This is perhaps most challenging for policy-makers who are faced with uncertainty regarding the viability of future paths and the calls of vested interests.

One important dimension to have emerged from this review is the significance of a dynamic business base. In Wales, contemporary debates on grounded firms, the foundational economy and the so-called missing middle all resonate. What emerges from the literature is that economic resilience is heavily influenced by the extent to which firms are networked, their depth of social capital; their commitment to locality; the quality of the jobs offered and their aspirations for the future. This is not a question of ownership, nor of sector or size, but rather highlights the important qualitative dimensions that underpin resilient economies. Additional research on the role of mid-sized firms in promoting economic resilience is strongly merited.

A second facet is the distributive element of a resilient economy. Urban and rural economies appear to have differing resilience dynamics, raising important questions for policy-makers in Wales. The influence of neighbouring economies also reinforces the spatial dimension of economic resilience. Both these factors suggest the Economic Regions could play an important role in the future in promoting a more resilient economy in Wales. In considering the distributional dimension to resilience, policy-makers will also wish to consider how changing labour market conditions may differentially impact on different population groups – as witnessed in the decline of the coalfield economies. Resilience should be seen as a progressive capacity rather than simply a coping capacity.

The example of the South Wales coalfields serves as a valuable reminder of the risk that once prosperous economies can settle at lower levels of economic output. This is also the risk of a non-dynamic business base. Whilst the form of future growth may be debated, a reduction in economic opportunity is rarely a recipe for a resilient economy. If the ambition is to strengthen the economic resilience of the Welsh economy, then policy must promote alternative economic futures. A resilient economy rarely retains the status quo and policy should encourage processes of renewal and adaptability. In practice this means active policy approaches, such as adopted under the Accelerate Programme in the West Midlands, as well as offering financial instruments.

Finally, Wales sits at a critical juncture for its economic development and wider prosperity. The potentially disruptive impact of climate change, decarbonisation and industrial automation are all increasingly recognised as long-term economic shocks. In the short to medium-term industrial restructuring and the economic impacts of Brexit will provide a test for the resilience of the Welsh economy. Resilience is a feature of the Well-being of Future Generations Act, of the Economic Action Plan and of Prosperity for All: A Low Carbon Wales, to name just three government agendas. All take a slightly different approach to a resilient

Wales, yet all are interconnected. There is a case for Welsh Government to draw together its various policy strands in the form of a strategy for a resilient Wales, drawing on what we now from the evidence base. The Well-being of Future Generations Act instils long-termism in thinking which is a critical element of strengthening the resilience of an economy. Alongside this there is a need for holism, a commitment to integration and a focus on promoting the adaptive capabilities of firms, workers and in government. The academic literature defines resilience as a ‘boundary object’, that is a concept that bridges separate disciplines. Wales has the opportunity to embrace this boundary spanning potential to develop a resilient economy that delivers social and environmental benefits over the generations.

Conclusions

The evidence base relating to economic resilience is expanding, but there still remains much debate as to what particular attributes of an economy act to strengthen the resilience of an economy to an economic shock. In part this reflects the range of shocks considered by the literature, variations in their magnitude and often fundamental differences in the timescales over which economic resilience is measured and the unit of interest. From the literature it is clear that there is no single route to a resilient economy, but also that there is no magic bullet. What is important is that approaches to strengthening economic resilience take into account the particularities of context, working with local attributes and recognising vulnerabilities. Whilst there may be no silver bullet to strengthening the resilience of an economy the evidence demonstrates unequivocally its critical value at a time of uncertainty and in the context of frequent, and systemic, shocks and change.

At a general level, resilient economies are those that are not only able to cope with the immediate effects of an economic shock but have the capacity to adapt to their changing circumstances. Looking to the longer-term, writers now also stress the importance of the transformative capacity of an economy, that is its ability to reconfigure its structure to take advantage of new opportunities and to limit its exposure to emerging problems. In considering the resilience of an economy, the collective resilience of individual actors whether this is firms, workers, households or places is also a factor. How these actors respond to shocks, and to the actions of others, highlights the complex, networked structure of resilient economies and how they are influenced by institutional traits. The significance of context serves to highlight the importance of taking a place-based perspective when considering economic resilience.

From the evidence available there are some broad indicators of the attributes that typically support the resilience of an economy. However, most are subject to caveats. There is strong support for the important role a more diverse economy can play, although this appears to be at the expense of longer-term growth rates. This has led to calls to promote diverse economies but with shared characteristics between firms. Economic structure has been found to be significant, but this may simply demonstrate the effects of the ability of an economy to transform to new economic conditions. More open economies strengthen economic resilience to shocks, but with the risk that external shocks are more readily ‘imported’. The capacity to innovate, broadly defined, is also significant, perhaps because it links so strongly to the adaptive capacity of both firms and workers. Higher levels of skills are equally of value, although skilled workers demonstrate a tendency to leave a labour market if job opportunities reduce (thereby reducing the resilience of an economy).

An emerging theme from the literature is the significance of perceptions, values and choices in the resilience of an economy. There is evidence that households and firms not only base their decisions on the lessons they have learnt from past experience, but also their perceptions of what the future might hold. There is a suggestion that more positive outlooks can lead to stronger resilience outcomes, highlighting the important role that framing narratives can play. However, this is an area where empirical evidence is sparse and the effects of positive perspectives are difficult to evaluate.

Policy can play a significant role in strengthening economic resilience, although it is important not to overstate its potential impact. In the short-term, policy approaches can provide a critical breathing space for firms to weather the immediate effects of a shock and so maintain economic capacity. Similarly, policies can provide relief for workers who have been adversely affected by a shock, such as through temporary wage subsidies, providing assistance for retraining or helping firms to take on workers who have been made redundant. Policies can also help to promote the diversification of economic activities to reduce, or offset, dependencies on firms or sectors that are vulnerable to changing market conditions, or help firms and workers to adapt to new circumstances as an economy recovers from past shocks. The potential role of the state in using policy instruments to shape perceptions of the future is less well-understood but is an important aspect in the armoury of policy interventions. These longer-term policy themes help to strengthen resilience capacities in preparation for future shocks, or support economic adaptation and transformation in the aftermath of a shock.

Important lessons can be learnt from past experience of major closure events. The experience of the Longbridge closure demonstrates the value of active industrial policies that promote the diversification of dependent supply chains prior to potential shocks. It also demonstrates the importance of labour market and industry interventions operating as soon as a closure occurs. However, the experience of Longbridge illustrates that not all negative effects can be avoided and that some firms and workers will experience long-lasting repercussions. The Longbridge case also reveals the importance of recognising the multi-level governance dimension to resilience policies and approaches, involving not only different tiers of government but also wider networks of actors and stakeholders.

The role of grounded firms in economic resilience is subject to much debate, but with limited evidence from empirical research. Insights from elsewhere suggest that where locally-based firms have a commitment to their locale this can strengthen economic resilience. However, this also depends on firms taking a long-term perspective on their activities, maintaining ownership structures and engaging in constant upgrading and innovation. Evidence suggests that strengthening economic resilience in Wales would benefit from an embedded network of dynamic and outward-looking firms connected by strong social ties. Whilst local firms active in local markets can provide stability to a local economy, they are vulnerable to localised economic shocks. Over time, the overall capacity of the local business base also has to be revitalised through upgrading and renewal to offset the natural loss of businesses over time.

Finally, it is worth reiterating the observation that few, if any, economic strategies have made economic resilience central to their aims and objectives. Where strategic approaches can be found this tends to be in response to a particular shock or crisis, as was the case at Longbridge. Actions here tend to focus on supporting workers and firms to cope with the immediate effects of a shock and then economic recovery. Where potential shocks are foreseen, such as with Brexit, then initiatives can also be introduced to reduce potential vulnerabilities. Yet, as these examples illustrate, such policies tend to seek to replicate existing economic structures.

Where the evidence base is particularly weak is on the theme of transformation. In Wales, as elsewhere, current debates on climate change, decarbonisation and the rise of Artificial Intelligence all suggest that the future economy could be very different from that of today. Welsh Government strategy documents recognise this and the need to promote an economy that is resilient to these forthcoming challenges. To meet this demand requires a cross-cutting governmental approach that recognises the role of Welsh Government as one actor amongst many and embraces the complex interactions between traditional policy domains.

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