



# Revisiting the dimensions of rural resilience: The CoVid-19 pandemic

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## ABSTRACT

Understanding the factors that improve the resilience of rural communities is an important area of academic research and focus for policymakers. In this context, the COVID-19 pandemic provides an important opportunity to study the dynamics of different aspects of rural resilience in a crisis period. In this paper, we adopt a mixed methods approach to explore three issues in the context of a rural community – the West Highlands of Scotland. We frame our discussion through the lens of economic, social and environmental resilience. We 1) examine the role of businesses in supporting rural resilience within a crisis period; 2) evidence tensions that emerge across different components of rural resilience; and 3) explore, in turn, the importance of the economic, social and environmental rural context for the resilience of rural businesses. We find support that businesses can be key to supporting rural resilience, but that the resilience of rural communities is also essential to the resilience of businesses. We evidence several tensions that emerge between economic, social and environmental dimensions of resilience as it relates to business activity in rural communities. Our findings have important implications for policy with the conclusion that during times of crisis local, and community-based, solutions are crucial as is local leadership capacity.

## 1. Introduction

Rural economies face several well-documented structural challenges ranging from demographic pressures, a lack of industrial diversity and the draw of policy resources to more populous parts. These challenges have stimulated a body of research exploring how to develop more resilient rural communities. One strand has focussed on the role of local private businesses (Martz and Sanderson 2006; Glover 2012; Steiner and Atterton 2014, 2015). Key is the concept of embeddedness, by which we mean how the rural context shapes the activities and behaviours of rural business owners.

However, rural economies are vulnerable to external shocks (Bennett et al., 2018). If not addressed, temporary impacts brought about by recessions can exacerbate long-term inequalities. The COVID-19 pandemic represents one such crisis. Indeed, the scale of public health and economic crisis is unprecedented in living memory. We explore the impact of this external shock on the resilience of rural communities, drawing upon a study of rural West Highland Scotland.<sup>1</sup> The term ‘rural resilience’ can be defined in different ways. Ashkenazy et al. (2018) define it as “how rural residents and regions can improve their well-being through changes in their behaviour and adaptation to new circumstances, as opposed

to feeling at the mercy of structural and external forces that appear to dictate their social and economic circumstances.” (Ashkenazy et al., 2018: 2). We adopt that broad concept in this paper.

Our specific research question is to understand – and add to the literature on – the role of rural private businesses in supporting rural resilience, by looking at a period of crisis. Adopting a mixed methods approach, we first track the impact of COVID-19 on the rural economy. Then, using a series of structured interviews with business owners, community leaders, policy decision-makers and employees of enterprise and skills agencies, we explore the role of rural private businesses during the crisis and how they acted (or did not act) to support the economic, social and environmental resilience of their communities.

We make three main contributions. First, we test whether the types of behaviours businesses might display in ‘normal’ times as identified in the literature, in supporting rural resilience continued during a period of crisis. Second, we identify trade-offs and pressures between different aspects of economic, social and environmental resilience, that arose as a result of, and during, the crisis. Third, and given these two sets of findings, we explore a feedback loop between rural economic, social and environmental resilience and the very resilience of local businesses themselves.

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<sup>1</sup> The three communities that are included in our study are Lochaber, Argyll and Skye & Lochalsh. The study area is highlighted in a map (Fig. 4) later in this paper.

The paper is structured as follows. Section 2 reviews the literature, section 3 sets out our methods and data collection, before section 4 presents our results. The penultimate section provides a discussion of our findings, including policy implications. The final section concludes.

## 2. Literature review

It is well established that there are significant differences in economic performance across regions (Tomanev et al., 2010; Rodríguez-Pose 2017), and that many of these reflect structural strengths and weaknesses. Rural areas can face unique challenges (De Guzman et al., 2020) – a so-called ‘rural penalty’. Most notably, barriers of geography (such as more expensive transport costs (Patterson and Anderson, 2003)); poor infrastructure (such as digital which plays an increasing role in rural resilience (Roberts et al., 2017) and which lags urban centres (Ofcom 2019)); and difficulties in developing businesses of scale or securing cluster/agglomeration benefits (Delgado et al., 2010; Rosenthal and Strange 2004; Schouten et al., 2012). In addition, many rural communities face wider socio-economic challenges, such as ageing populations (Mushinski et al., 2015).

One consequence is that rural communities can often find it more difficult to recover from external shocks than urban areas (Green et al., 1994; Martin et al., 2016). Of course, this depends in part upon the nature of the shock itself, but in general, it reflects underlying economic, social and environmental weakness to cope with any change in external conditions. Challenges over local skills supply, the loss of anchor institutions and limited resilience of infrastructure (Bennett et al., 2018; Patton et al., 2016; Hamrick 1997) can often make it challenging for rural areas to recover from economic downturns.

There is a well-developed literature exploring the factors that can help rural communities become more resilient. Much of this has focussed on the role of policy and community initiatives (Murray and Dunn 1995; Herbert-Cheshire and Higgins, 2000; Herbert-Cheshire and Higgins 2004, Markantoni et al., 2019; Wright, 2016). A nascent literature, however, explores the role that the private sector can play in developing resilience (Jack and Anderson 2002; Halseth and Ryser 2006; Bosworth 2012; Steiner and Atterton 2015). It is this literature that we contribute to most directly.

There are different analytical frameworks through which this resilience can be examined. For example, Ashkenazy et al. (2018) analyse it by broad outcome – such as a ‘sense of agency’, a ‘target level of income’ and so on. Glover (2012) focuses on themes, such as ‘strategies’, ‘innovation’, ‘resources’ and ‘learning’. From our perspective however, the most applicable approach is that of Steiner and Atterton (2015) who develop a conceptual framework based around ‘economic’, ‘social’ and ‘environmental’ resilience.

Economic resilience can be thought as having a robust and diverse economy that responds to structural change and short-term disruption (Steiner and Atterton, 2014). Private sector businesses can be crucial in helping to support the communities they are embedded within (Jack and Anderson, 2002). This can work through several channels. Creating local demand for jobs is the most obvious one, but so too is raising levels of entrepreneurship, business diversification, investment and quality of work. (Steiner and Atterton, 2015). These can bring direct as well as indirect benefits, including reversing out-migration. But rural economies can also suffer from private sector ‘leakage’ which erodes resilience, with benefits of rural economic activity captured by business owners and holders of local assets who live outside a rural area.

Social resilience concerns the ability of a community to improve its quality of life through the building of social capital. This can help deliver a proactive approach to problem-solving and local solutions. It can also help a community to reinvent itself in the face of change whilst retaining elements of distinctiveness. Some of this can relate to physical infrastructure, such as community venues, and sporting and cultural activities (Bruce et al., 2006). But it can also relate to leadership, a sense of place and community, confidence and social capability. Communities with strong social underpinnings can be more resilient (Schouten et al., 2012; McManus et al., 2012 Skerratt, 2013). Again, private sector

enterprises can be crucial, with local business owners often key leaders in rural communities. At the same time, as an employer, rural businesses can be important for supporting community organisations and activities. Rural businesses tend to be more closely integrated into their local community than their urban counterparts (Reimer, 2006), with both direct and indirect channels (e.g. local jobs can help support investment in public services, such as schools and nurseries, which often help bind communities together (Steiner and Teasdale, 2019)). Note that we are referring here to private sector businesses and not social enterprises who are likely, in most cases, to have social goals built into their founding ethos (for a review of social enterprise research in rural economies see Steiner et al., 2019).

Environmental resilience concerns the ability of a local area to protect and nurture its ecosystem. This is particularly important in many rural communities, where there can often be a greater emphasis on the natural environment, not just for historical and social reasons, but because many industries – such as farming, fishing and tourism – depend upon it (McManus et al. (2012); Skerratt (2013); Baldwin et al. (2017)). There can be tensions of course, particularly where resource extractive industries play a dominant role in a rural community. This typically includes mining and quarrying but in recent years, we have seen controversies over the deployment of renewable energy infrastructure, as private sector companies seek access to the wind, tidal and solar resources embedded within rural communities.

In this paper, we adopt this conceptual framework – economic, social and environmental resilience – to model and explore the different dimensions of rural resilience in real-time and the role of businesses in rural resilience.

## 3. Materials and methods

We structure our analysis in two parts. First, we undertook an analysis of secondary data to help us to identify the focal region of study. We then proceeded with a series of in-depth, semi-structured interviews. The nature of these interviews allowed for an understanding of both the issues communities were responding to and the underlying motivations, pressures and challenges faced. Crucially it enabled learning at firsthand how people behaved in the COVID-19 crisis, what meanings they give to their actions, and the issues concerning them.

### 3.1. Study sample

Our analysis of secondary data, reported in Section 4, enabled us to select a focal region. We identified the region of the West Highlands of Scotland as being an important area to study. Specifically, Lochaber, Argyll and Skye & Lochalsh.

Having done so, an initial set of interviewees were selected from the researcher’s understanding of the local context and informed by a review of local press reports and policy documents. One of the research team is an ex-senior government official who was able to draw upon their understanding of the rural economy in question. These initial contacts were then added to as the interviews progressed. This approach helped ensure access a broad range of interviewees.

Seven business owners and seven community leaders were interviewed. Community leaders consisted of local politicians and leaders within community organisations. Alongside this, we spoke with officials from three business representative organisations, five government enterprise and skills agencies and two government officials.<sup>2</sup> By obtaining

<sup>2</sup> In Scotland, delivery of economic development support – such as grants to business, investment in skills and training – is delivered by several public agencies independent of direct government control. These include, Scottish Enterprise, Highlands and Islands Enterprise, South of Scotland Enterprise, Visit Scotland and Skills Development Scotland. We refer to these as the ‘Enterprise and Skills’ agencies.

a mix of backgrounds, we were able to ensure that a 'one-sided' viewpoint was not presented. Appendix 1 lists the interviewees (with appropriate anonymisation).

The number of business owners we interviewed – coupled with business representative organisations – allowed us to obtain a diverse set of views from across rural business, whilst at the same time allowing for depth in discussions. Similarly, the five representatives from enterprise and skills agencies – given the social-economic focus of institutions such as Highlands and Islands Enterprise – was helpful in obtaining an overview of both business demands and needs alongside community concerns and aspirations.

Our community leaders enabled us to obtain the views of non-business members of the local communities, particularly in relation to business activity during COVID-19. Given that our focus is on the links between businesses and communities as a whole, we thought it crucial to speak to key leaders in communities who would be able to provide a comprehensive and cross-sectional picture of non-business owner residents' views of resilience during the crisis. We decided against interviewing a small selection of community residents, in part, because there would be no guarantee that their insights were representative. Engaging with community the via a larger survey would again raise questions about representativeness, but more importantly would lack the depth of insight that we need to understand these issues. In addition, given that our interest in understanding how communities influenced business behaviours we wanted to engage with key influencers within communities who could provide detailed insights about these important feedback mechanisms.

All our interviewees had been in their current role for a substantial period. Scope was given for snowballing to occur, where interviewees pointed to other interlocutors who could provide further insights.

Our questions were developed following our review of the literature. The questions first explored the characteristics of each organisation (if relevant), the role of the individual, and their perspective on the COVID-19 context. We then focussed on questions about how businesses had responded to the crisis brought about by COVID-19 and their interaction with communities, before exploring tensions observed between business operations and different elements of rural resilience (and vice versa).

### 3.2. Methods and data collection

Data for the secondary analysis and selection of focal region were obtained from official national statistics publications. All are publicly available.

Ethical approval for data collection in the form of interviews was approved by the Department of Economics at the University of Strathclyde. Each interview lasted around 60 min and were conducted either by telephone or online. All interviewees were ensured anonymity. Each interviewee was asked if they could be contacted post-interview to clarify points of fact.

Prior to interview, a documentary repository, including policy documents, newspaper articles, parliamentary evidence papers, rural statistics and up-to-date data on the spread of COVID-19, was created. This provided useful background information, helped to frame specific questions, and allowed insights from the interviewees to be cross-checked.

Interviews were transcribed and reviewed by the two researchers. All information was saved in a secure server at the University of Strathclyde. Following this transcription, key data was put into categories to identify common themes, synergies and inconsistencies. From this exercise, we identified core elements of resilience which formed the basis of our results section. Where specific examples of events or initiatives were given, we sought to find a secondary source of information – in most cases local press reports or social media – to gain further insight.

This approach elicited detailed information with respect to our research question. Quotes (with interviewee codes) are used to illustrate

the interviewees' responses in support of the findings identified. As with any such study, local context will clearly influence the findings. However, we believe that the methods undertaken, and the diverse sample collected, ensures that our findings have relevance outside our specific region of study.

## 4. Results

As described in the preceding section, our analysis proceeded in two parts. First, we considered the secondary data on the impact of the pandemic to assess the scale of the shock to rural economies arising from the COVID-19 pandemic. Second, we undertook semi-structured interviews to produce detailed data to explore rural resilience during a time of crisis. In this section we present our results from both pieces of analysis.

### 4.1. Impact of COVID-19 on rural economies and study area selection: secondary data analysis

At the time of writing, August 2021, globally there had been 200,840,180 cases of COVID-19, including 4,265,903 deaths (WHO, 2021). Shortly after a pandemic had been declared, countries across the world implemented unprecedented shutdowns. The global economy contracted by 3.2% in 2020, with many experiencing larger falls (e.g. a decline of 10.8% in Spain and 9.8% in the UK - IMF 2021)). The nature of the crisis has meant that its effects have not been shared equally. Ageing populations, and more limited health services, made rural communities particularly nervous about their vulnerability (Glass et al., 2021), even though they lacked the high-density populations that accelerated the spread of the virus.

In Scotland, while case rates (per 100,000 people) ranged from over 9500 cases in Glasgow to fewer than 700 in Orkney,<sup>3</sup> rural Scotland faced the same strict public health restrictions as urban areas. The rationale for this was made clear by Scotland's First Minister in April 2020: "... it's maybe worth stressing that nobody [should be] travelling – unless it is absolutely essential. That includes travelling for holidays or to second homes – in rural or island communities. These areas may be less populous, but they are especially vulnerable to the impact of the epidemic<sup>4</sup>". This was a point reiterated as travel restrictions were eased: "... if you are going to a more remote part of our country, whether that's the Highlands and Islands or any part of our country that's not as well served with health services and other infrastructure, respect that".<sup>5</sup>

Concerns were raised about wider challenges in rural areas arising from possible digital exclusion, food supply issues, pressures on loneliness and mental health and financial hardship (Currie et al., 2021). The tourism and hospitality sectors – vital to many rural communities – was severely impacted. In 2020, the international tourism economy contracted by 80% (OECD, 2020).

Fig. 1 sets out the scale of the economic shock experienced in the UK and Scotland. The Scottish economy contracted 23% between February and April 2020.

To try to understand what this might mean for different parts of Scotland, we began by considering the economic impact by sector (Fig. 2). This demonstrated a clear pattern of asymmetric impacts across sectors of the economy. Notably for our purpose, the Accommodation and Food Services saw a decline in activity of 83% between February and April 2020. While activity recovered somewhat, further lockdowns meant that, even by Spring (2021), activity remained well below pre-pandemic levels.

<sup>3</sup> <https://www.opendata.nhs.scot/dataset/covid-19-in-scotland/resource/e8454cf0-1152-4bc9-b9da-4343f625dfef>.

<sup>4</sup> <https://www.gov.scot/publications/first-minister-covid-19-update-8/>.

<sup>5</sup> <https://www.heraldsotland.com/news/18585121.tourists-contract-covid-19-visiting-scotlands-rural-areas-should-isolate-are/>.

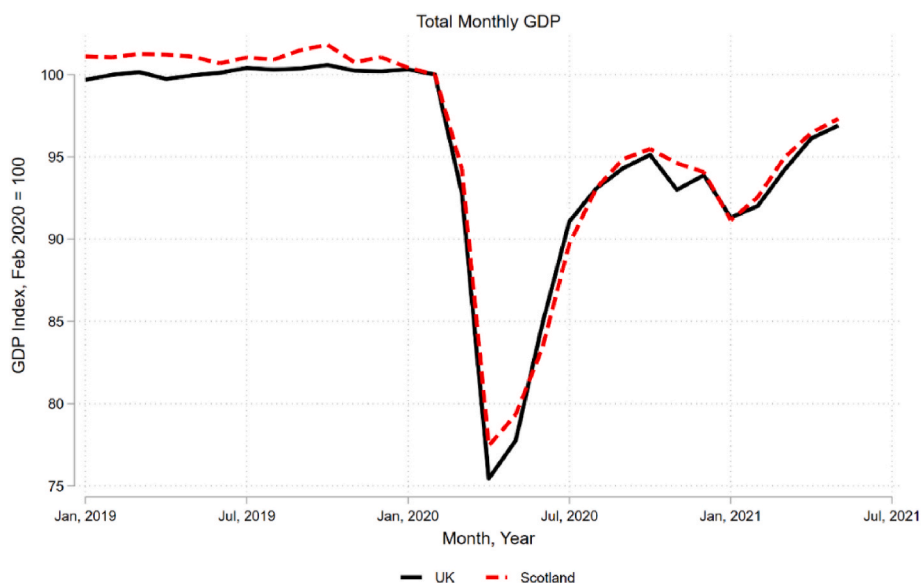


Fig. 1. UK and Scottish GDP, monthly, (Feb 2020 = 100).  
Source: Scottish Government and Office for National Statistics (ONS)

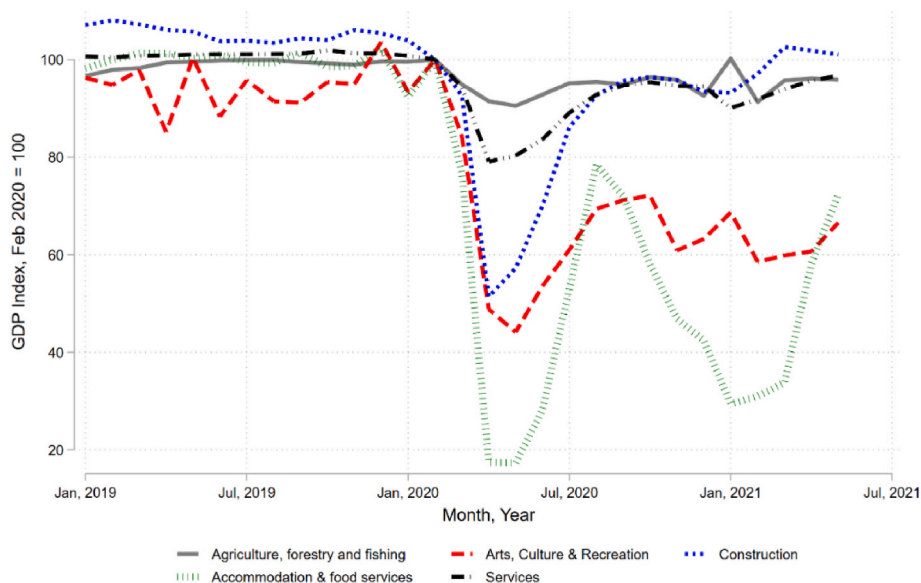


Fig. 2. Scottish GDP by sector, monthly.  
Source: Scottish Government

In rural Scotland, the Accommodation and Food Services sector makes up around 15% of total employment, almost double the percentage in the rest of the country (Scottish Government, 2021). Restrictions on travel within and to Scotland led to a sharp drop in visitor numbers. Social distancing guidance, which remained in place for much of 2020 and 2021, severely curtailed capacity even when restrictions were eased.

The next stage was to try to understand what this might mean for particular rural economies. To do this and illustrate the vulnerability of different regions, we created a measure of ‘employment vulnerability’. We mapped the number of jobs furloughed under the UK Government’s Coronavirus Job Retention Scheme by sector to local data-zones in Scotland. A datazone is the smallest statistical reporting unit (a population of between 500 and 1000). This illustrative counterfactual assumes that local furlough usage by sector tracks that of Scotland as a whole, thus if X% of jobs in construction are on furlough in Scotland,

that same share (X%) of construction jobs in each datazone are assumed to be on furlough. Whilst there might be regional variations, the nature of national restrictions means that this approach will provide a useful approximation for regional impact. We then measured the share of vulnerable jobs in each datazone in total.

Fig. 3 highlights the differences across Scotland (yellow lowest vulnerability; red highest). 60–70 here refers to the percentage of local jobs that might be furloughed based on the sectoral composition of local employment and the share of jobs in each sector in Scotland that were furloughed at this point. It identifies the West Highlands of Scotland as being – in general – particularly exposed to the economic crisis, compared to parts of the most populous ‘central belt’ presented separately – and at a larger visual scale – in panel b for ease of reviewing.

There are several reasons to believe that the impact on rural economies was even more substantial than implied by this analysis. For example, many businesses in rural areas are self-employed, but during



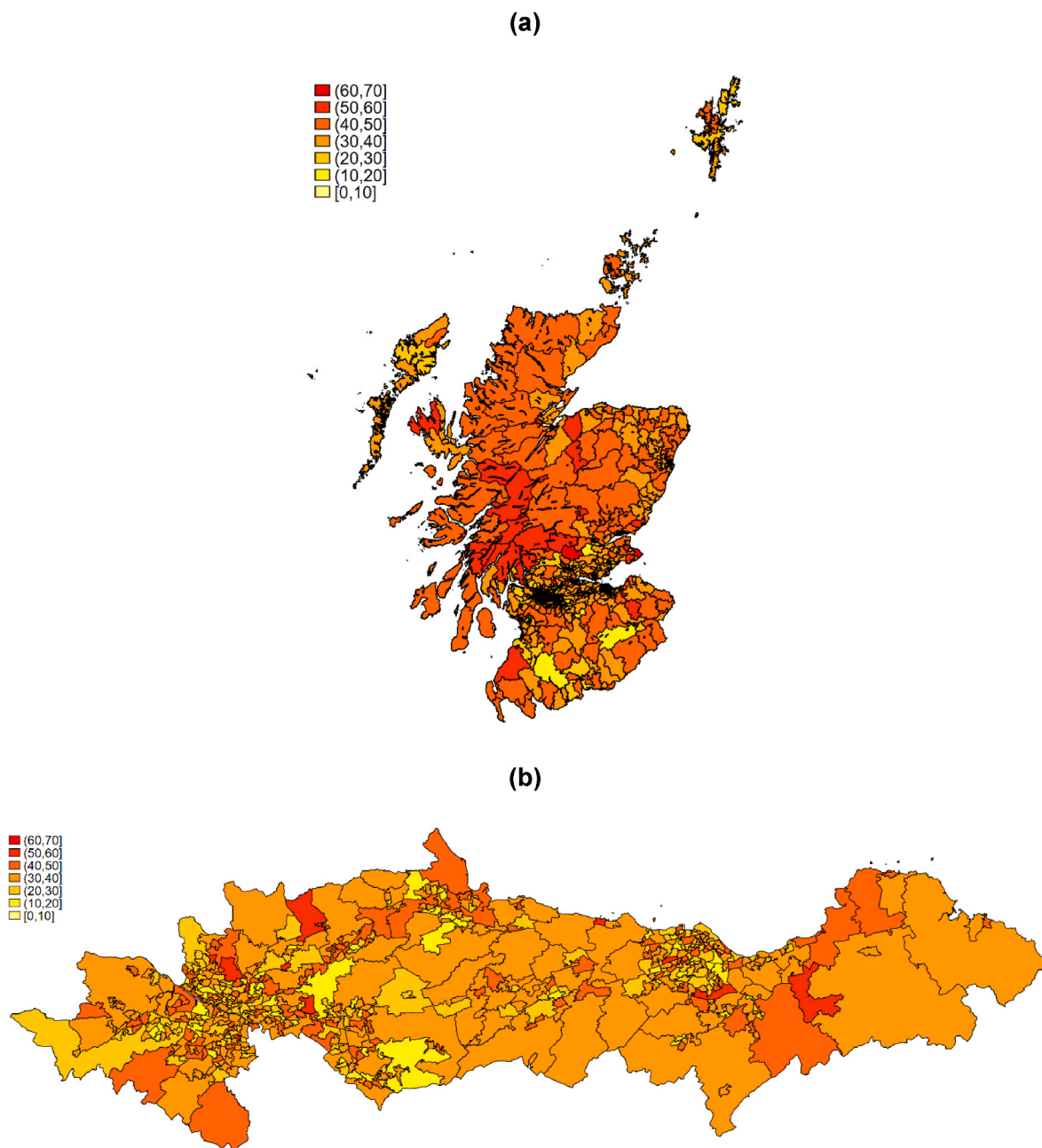


Fig. 3. Local job vulnerability based on furloughed job shares, Scotland (panel a) and the Central Belt of Scotland (panel b), August 2020. Source: Authors' analysis of HMRC Furlough Statistics and ONS Business Register and Employment Survey

the COVID-19 crisis access to financial support for these groups was more limited and more challenging to access than for other business models. Whilst we focus on economic aspects, our finding of greater risk to rural areas is consistent with that of other authors, such as Currie et al. (2021) who look at a broader suite of measures, including broadband access, population size and demographics.

These data motivate our interest in the West Highlands as a study region. Within that region, and consistent with the data shown in Fig. 3, we focus on three sub-regions Lochaber, Argyll and Skye & Lochalsh. This broad area is identified using combinations of local authority wards in Fig. 4. These areas were chosen, both for their relevance given the significance of tourism in these areas (which was particularly impacted), but also the relative maturity of community institutions and networks.

#### 4.2. Impact of COVID-19 on rural economies: primary data analysis

Having defined our study area, we then identified our target interviewees to help us understand three research questions: 1) the role of businesses in supporting rural resilience during a crisis; 2) whether tensions emerged between different components of rural resilience; and 3) the extent of feedback from rural resilience to business resilience. The next section reports our findings from these interviews, taking each of our key questions in turn and highlighting a cross section of the data gathered in the interviews.

##### 4.2.1. The role of businesses in supporting rural resilience during the crisis

We first explored the connection between rural businesses and economic resilience during the crisis in our interviews. While significant funding was offered, through a combination of Scottish Government



Fig. 4. Study areas of Lochaber, Argyll and Skye & Lochalsh.

business loans and the UK Government's furlough scheme, to help retain jobs, this only covered a fraction of the costs faced by businesses [interviewee 4]. For example, the furlough scheme did not cover non-wage staffing costs, such as National Insurance contributions.

Despite this, we heard that the drive to retain local employees was strong. A common finding was of businesses 'doing everything possible to support our employees and their families, all of them we know personally' [interviewee 3]. What was striking was the language that interviewees used to describe this: 'many business owners have known their employees for years – often decades, they are their friends with close-family ties too' [interviewee 12]; 'we owe it to them to protect their livelihoods as best as possible' [interviewee 2]; and, 'we see ourselves as much as an enterprise with a social role instead of seeking to just extract shareholder capital, and our employees are crucial in our thinking' [interviewee 1]. Some businesses spoke of topping-up wages (the UK Government furlough scheme paid only 80%) recognising the cost, on fuel and transport of living in a rural area, and the broader financial and emotional stress on individuals during the crisis [interviewee 20].

Businesses adapted to support their workers, including by directing revenues that had in the past been used to support community events to employment costs [interviewee 1] and running down business capital and personal savings [interviewee 5 and 22]. Local business organisations told us of being inundated with requests for advice on options to shift costs, secure additional public funds, and access bank lending with 'retaining their workforce a top priority' [interviewee 5]. Not all of this

was done out of altruism, but of an assessment of the recruitment challenges once the economy opened-up again [interviewee 10]. An issue several interviewees identified was of businesses offering employee support beyond protecting jobs. Flexible working patterns were prioritised, with additional flexibilities for those with additional needs (e.g., elderly/shielding family members) [interviewee 2]. Another business spoke of continuing to operate human resources services and wellbeing support for employees, including those on furlough [interviewee 21]. For many smaller businesses this support was more informal but similar principles were evident [interviewees 5 and 7].

Beyond direct employment support, an interesting dynamic concerned local supply chains and networks. In 'normal' times, rural businesses provide essential services and products helping to create a web of interdependences across local economies, often on an informal basis. The scale of the COVID-19 crisis meant that breaks in these linkages were inevitable. For some businesses, such effects were 'the greatest challenge in staying afloat' [interviewee 5]. Rural businesses told us about collective efforts to plug gaps in supply chains and networks as they emerged (including when local businesses stopped trading either permanently or temporarily because of employees self-isolating). That said, there were also tensions within economic resilience with examples of supply chains being broken through local firms having to go to outside suppliers (with the potential for these changes to be long-lasting) and the loss of demand in key sectors leading to negative multiplier effects across rural areas [interviewee 7]. These decisions have the potential to further weaken economic resilience over time, and make economic recovery more difficult.

Finally, several local businesses opted to remain 'open', even when it was more profitable to close. Local shopkeepers and takeaways for example chose to still operate, albeit at restricted times, to help ensure ongoing economic activity (and local economic multipliers) continued to flow [interviewee 1]. Such efforts were seen as much as a contribution to social resilience – for example, by seeking to maintain a degree of 'normality' for the population [interviewee 12] – as it was about economic factors.

We next focus on social resilience. The nature of lockdown meant that many aspects of day-to-day life in communities were turned on its head. Throughout our interviews we documented significant challenges to social resilience, from the loss of community services, through to engagement between neighbours, friends and families being scaled back with knock-on impacts for isolation and well-being. Rurality also exposed weaknesses in public service delivery, notably access to specialist healthcare. One interviewee highlighted how the nearest hospital for cancer treatments and elective surgery was over 130 miles away [interviewee 12].

A recurring theme of the interviews was that their communities, by being particularly close-knit, witnessed high levels of volunteering and social capital during the crisis [interviewee 19]. We heard of 'unprecedented' support by businesses for vulnerable members of the community. This included free delivery services for groceries, prescriptions, and other services (such as book-sharing) for elderly residents and those that were shielding [interviewees 7 and 8]. Local taxi businesses provided free travel for the elderly to vaccination and doctor appointments [interviewee 6]. This was not just limited to individual businesses operating on their own, but through collaboration. For example, a local family-owned bus operator used some of its fleet to deliver food and other supplies, arranging safe collection and drop-off points, on behalf of groups of businesses [interviewee 14]. Other examples included local hotels and restaurants opening their facilities to local community groups to provide meals for vulnerable households [interviewees 12 and 24], and the sharing of supplies with emergency services [interviewee 21].

Another theme was the community leadership role that many businesses – and their owners – played. In 'normal' times, such support might have taken the form of sponsorship of the local highland games, shinty team or community project. During the crisis a key area of focus

was charity initiatives to support families suffering from loss of income, such as donating raffle prizes for fundraising efforts [interviewee 23 and 13] or quickly establishing a local independent retailer voucher scheme (something that was not possible with national providers) [interviewee 6]. Meanwhile local builders and joiners installed hand sanitising stations in community buildings, new signage to promote social distancing, etc [interviewee 18] and businesses provided IT kit and training for members of the community [interviewee 6]. Finally, several business owners spoke passionately about efforts to 'give-back to the community during challenging times' [interview 9]. This included support, financial and in-kind, for initiatives during lockdown ranging from outdoor local cultural events [interviewee 1], through to hotel car park film nights [interviewee 7]. One of our interviewees was CEO of a sports facility, which provided access for local children as lockdown restrictions were gradually lifted [interviewee 21].

Concerns over rural environmental resilience were less prominent as an issue during the most acute periods of the COVID-19 crisis, relative to economic and social resilience. As we will set out there was a sense that this was true of the reopening and recovery too. That is not to say that links between business and environmental resilience were absent, however. Within some of those in the communities that we spoke with for example, and in particular those that have seen a sharp rise in visitor numbers over the last decade, the crisis provided an opportunity for certain aspects of the local environment to recover and for new investments to be made [interviewee 6]. This greatly eased some concerns about environmental resilience.

The 'lockdown' period enabled some joint business and community initiatives that sought strengthened environmental resilience, including litter collection [interviewee 23] and local beach clean-up days [interviewee 12]. At the same time, local businesses, economic development organisations and government took the opportunity to 'catch-up' on infrastructure priorities at tourist hotspots, such as in the Isle of Skye, where visitor numbers pre-pandemic had led to concerns around habitat damage and erosion [interviewee 1 and 16]. Some of our interviewees – those involved in business and community organisations and policy officials – also indicated that the crisis had, on occasion, offered up the potential for a broader discussion between business and communities than had been possible in the past about future environmental priorities and challenges [interviewee 12, 16 and 17].

Nevertheless, there was a nervousness amongst some of the community leaders that we spoke with, particularly those within a community with a large tourism sector drawing upon domestic visitors (i.e. Scottish and rUK visitors), that the unwinding of lockdown restrictions could lead to renewed pressures on local environments. Those we spoke to in spring 2021 in particular noted that they were anticipating significant inflows of tourists that summer season, and were braced for an even more challenging year for the local environment. Fears included heightened traffic on local roads and footpaths and pressures on local infrastructure, particularly from large numbers of motorhomes and campers. Of course on the other hand, a boom in tourist numbers would benefit many rural businesses. It is to these possible broader tensions that we now turn.

#### 4.2.2. Tensions between dimensions of rural resilience through the crisis

Having set out our results for how businesses impacted rural resilience during the crisis, through the prism of economic, social and environmental resilience, we also identified in our research a number of tensions that emerged between these components. They typically emerged because of the features of the CoViD-19 crisis but were also illustrative of more general tensions that can emerge during times of crisis. In particular, community concerns about the spread of the virus or because of consequences of changes to public health restrictions (e.g., in terms of tourist numbers). Whilst these concerns relate to the case in question – a global pandemic – they offer wider insights for rural resilience, not just for future crises (where the specific drivers of tension may differ but the themes remain the same) and in 'normal' times too.

Foremost was a significant tension between economic and social resilience. Following the period of full lockdown from March to June 2020,<sup>6</sup> restrictions were gradually eased as COVID-19 numbers fell. Efforts were undertaken to restart the economy, only for a series of lockdowns to be reimposed, including a near full lockdown from Christmas (2020) to March 2021. This exposed trade-offs between concerns about the vulnerability of rural communities to a spike in cases and the need to support local economic resilience. This trade-off put many businesses in the front-line of 'tense' community debates [interviewee 18].

Examples were given of where these tensions had escalated. These included small-scale incidents such as 'over 70 reports to authorities that I was not following social distancing rules, all of them were thrown-out' [interviewee 9] and 'negative social media comments' [interviewees 21 and 13]. But fears were also expressed about the potential for more serious longer-term reputational damage [interviewee 6]. Stories of locals 'policing' whether visitors into a rural community were there with good cause and were following the rules made national news.<sup>7</sup> Such tensions faced those businesses even choosing to remain open to provide emergency services for communities, such as hotel accommodation for essential workers (including power supply engineers and public health professionals) [interviewee 7].

These tensions put many businesses in a difficult position. We found differing views on how to respond. Many went to significant lengths to reassure communities, including 'going far beyond what was required of us in terms of the regulations and the number of visitors we could have in our restaurant each day' [interviewee 22]. In one case a local business community implemented their own 'local lockdown' in response to reports of a COVID-19 case being detected in a village care-home [interviewee 8]. Other businesses started local public relations campaigns to proactively reach out to the community, including 'a video of how our facility and services were operating in a social distancing way and to highlight our hygiene procedures – in advance of re-opening – which we posted on social media' [interviewee 21].

Alongside these tensions between economic resilience and social resilience, we found evidence of tensions elsewhere. While the impact of the crisis on environmental resilience has been less than on economic and social resilience, issues of environmental resilience and the trade-offs with economic resilience have risen to the fore in the economic recovery. Tourism is a crucial sector for the economy of the West Highlands, and prior to the pandemic there were significant concerns about over tourism. Such tensions have returned again, particularly with a sharp rise in staycations (including camping and campervans) in 2021 [interviewees 6 and 15].

Table 1 (column 1) summarises our key findings with key highlights of reinforcing and negating factors. But as Column 2 in Table 1 shows, we also found evidence where tensions between these different aspects can emerge. Our findings show that businesses make a crucial contribution to the resilience of rural communities during a time of crisis thus offering a new insight into these dynamics beyond existing studies in the literature.

#### 4.2.3. How rural resilience supported business resilience

In this final section of our empirical findings, we turn to an issue that emerged clearly through our research. Namely, the role that the different dimensions of rural resilience – economic, social and environmental – can play, in turn, on supporting business resilience.

Firstly, the underlying economic resilience of the West Highlands of Scotland exacerbated many of the challenges and strengths businesses faced. We identified the value of strong local economic networks, economic institutions, and local knowledge of local labour markets (key

<sup>6</sup> <https://spice-spotlight.scot/2021/08/06/timeline-of-coronavirus-covid-19-in-scotland/>.

<sup>7</sup> [www.dailymail.co.uk/news/article-8338371/Scotlands-rural-villages-send-visitors-clear-message-home-signs.html](http://www.dailymail.co.uk/news/article-8338371/Scotlands-rural-villages-send-visitors-clear-message-home-signs.html).

**Table 1**  
Business behaviours impacting upon rural resilience during COVID-19 crisis.

	Reinforcing factors Column (1)	Negating factors Column (2)
Economic	Businesses supporting continued local employment, and ongoing support for furloughed staff Businesses supporting local supply chains, and working together to address supply chain gaps locally	Businesses re-profiling their market demand away from local suppliers (disrupted during pandemic) Displacement of demand
Social	Businesses providing support for elderly and shielding members of the community Support for low-income families and children on free school meals Support for community activities Offering Training and development for individuals with limited IT skills	Business demands to 'open-back-up' inconsistent with community concerns around public health Tensions risking community cohesion Challenges with business resilience affecting local service delivery
Environmental	Businesses reappraising their role in shaping environmental risks/opportunities Taking opportunity to re-invest in environment	Concerns about environmental pressures as economy opens back up (especially from tourism – lack of infrastructure to cope with rise in staycations (camping, campervans etc.)

aspects of rural economic resilience) as being supportive to business resilience during the crisis. A sense of 'economic community' embedded within rural communities led to businesses working together [interviewee 4], often in new ways which could endure. This included businesses 'cross-promoting' their local area, sector, or group of businesses, including 'buy local campaigns' [interviewee 7 & 17]. Membership of local business organisations (such as local Chambers of Commerce and tourism management organisations) rose with new initiatives like increased training and mentoring [interviewee 20], supply chain development, and the establishment of new forums linking businesses with policymakers to develop local solutions to economic challenges across all sectors of the local economy [interviewee 15]. Several of our interviewees identified this development of an economic community as helping to establish a collective voice to national and regional policymakers [interviewee 20]. This included setting out a more coherent case for investment in long-term infrastructure and seeking to influence the scale and nature of the funding support for COVID-19 economic recovery. These actions strengthen the network and embeddedness effects found in the literature.

But significant challenges were identified stemming from weak economic resilience. The lack of industrial diversification meant that businesses struggled to secure supplies when local suppliers were closed (temporarily or permanently) [interviewee 5]. The dependence of many local businesses on one large business – e.g., a hotel bringing in high-spending international visitors or a distillery – meant that when these businesses scaled back operations, the multiplier hit to the local economy was significant [interviewee 6]. The crisis also exposed structural challenges in rural labour markets. The COVID-19 crisis hit not long after the UK left the European Union, and this exacerbated rural recruitment challenges, with shortages not just in skilled jobs but in unskilled jobs too [interviewee 13]. Concerns over rural housing have also been exacerbated, with knock-on implications for labour market recruitment. Supply has been a challenge for several years, but significant concerns have been expressed over the possible influx of demand for self-catering and second homes that the crisis has led to [interviewee 12].

Social resilience has also played a crucial role in affecting business resilience during the crisis. We found a significant increase in the willingness of communities to support local businesses through the crisis [interviewees 7 and 14]. This seems to have initially stemmed out of necessity (e.g., following government guidance to 'stay local') and local suppliers unable to shift their product to external markets. But it also seems to have arisen out of choice, with a number of communities seeing the value of key aspects of economic activity in their community. Such changes seem to have been most evident in food supplies. It is open to question how 'sticky' these will be, but the combination of lockdown and increased demand – coupled with targeted policy support – has enabled many local suppliers to innovate and adapt their route to

market. Highlands and Islands Enterprise for example, used discretionary funds to invest in digital solutions for businesses [interviewee 11]. This provided new market-access options from high-end online art and craft businesses through to local food producers, farmers, and fishers [interviewee 14].

But for all the positives, concerns around social resilience in rural communities (exacerbated by structural challenges) has, on occasion, acted to hinder many businesses operating at a level that might be observed in other parts of the country. The unique nature of rural communities, 'and the fact that everyone knows everyone' [interviewee 8] means that any weaknesses in social resilience impact directly upon businesses; tensions that are not unique to rural communities. However, their size and interdependence make these issues more visible and challenging to resolve. Business leaders are often not 'faceless' CEOs living outside of their community. They interact with the local community every day, and many of our interviewees talked about the personal stress placed on them. One long-standing member of a local community, whose family had lived in the same village for generations, stated that 2020 had been 'the most difficult environment to work in within our community that I can ever remember' [interviewee 9]. Another business leader spoke passionately of their anguish that 'many good friends saw me as the bad guy' [interviewee 22]. Ultimately, concerns in some instances meant that some businesses did not re-open as restrictions eased, even when it was possible for them to do so.

Finally, whilst issues of environmental resilience were less evident during this crisis it was not difficult to identify the crucial role that it will have during the recovery phase and beyond. The economy of the West Highlands of Scotland depends, in many ways, on the natural environment. Whether that be tourism or local food & drink production. But with some parts of the region facing increases in visitor numbers (driven by staycations) there are concerns over the sustainability of such growth and the potential environmental implications. With business demand so dependent upon these environmental resources, significant risks exist. The COVID-19 crisis has highlighted how a non-economic crisis (in this case a public health crisis) can spill-over into becoming an economic one. The same is true of climate change risks, and potential knock-on implications for key industries such as tourism and distilling. [Table 2](#) summarises these findings, again showing evidence of reinforcing and negating factors.

## 5. Discussion

Having set out the results from our study, we now consider the implications of our results for our understanding of the components of rural resilience and the role of private sector businesses.

Firstly, our findings show that businesses make a crucial contribution to the resilience of rural communities during a time of crisis thus offering a new insight into these dynamics beyond existing studies in the



**Table 2**  
Rural resilience impacting upon business resilience during COVID-19 crisis.

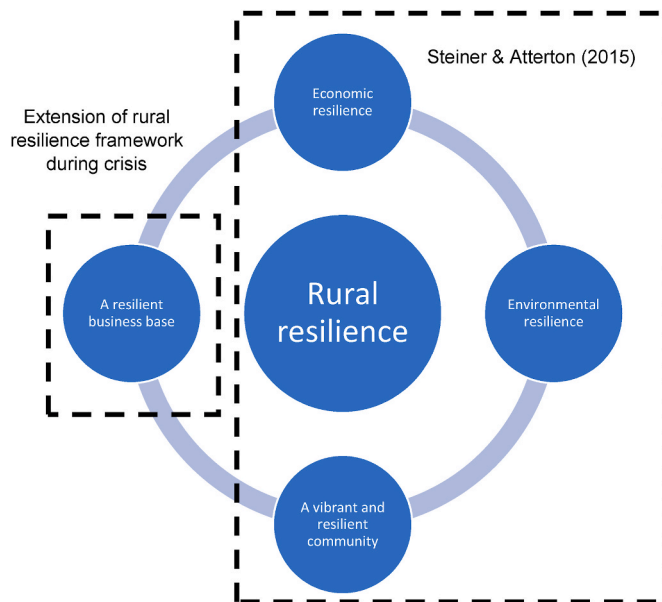
	Reinforcing factors Column (1)	Negating factors Column (2)
Economic	Local economic networks and local knowledge helping to support resilience Local business organisations providing support for rural businesses	Limited diversification in supply chains Impact of loss of one big-supplier/demand within local economy Challenging local labour markets (e.g. skills shortages)
Social	Community support for local businesses through efforts to 'buy local' Regional policy support to grow into new markets	Potential loss of community social capital through stress placed on key leaders Impacts upon local reputation (e.g. in tourism)
Environmental	Awareness of the potentially positive role of private sector in helping to protect environment	Concerns that future development opportunities will face greater community push-back Growing concerns over environmental impacts of key activities – particularly tourism – leading to loss of community support for key sector

literature. The evidence we gathered presented a picture of communities facing real challenges, both crisis related and longer term, but where businesses played an important role in adapting and innovating to seek to address many of these challenges. In this way our findings chime with Currie et al. (2021) who provide evidence of the multi-dimensional challenge of COVID-19. As others, for example Steiner and Atterton (2015), have found, businesses are crucial to supporting local jobs and through the networks that they create, benefits to rural product and service delivery with implications for jobs and economic activity. Our results show that such effects are 'sticky' during a period of crisis, with many rural firms going 'that extra mile'. Some of this, as we have shown, reflects a sense of wider social responsibility amongst businesses, but often arises out of economic necessity. We also identify stickiness in broader social responsibility. Rural businesses can play a crucial role in helping their communities during a crisis. In our case, support for vulnerable groups as well as wider efforts to boost community morale were in clear evidence, demonstrating that businesses display such behaviours not just in 'normal' times. The clear sense is that such support would be available in any crisis, not just during a pandemic.

Secondly, we also must recognise however, tensions between different aspects of rural resilience. Decisions by individual businesses – or groups of businesses – during a point of challenge for them (such as falling demand) could end up having significant detrimental impacts upon the overall rural economy. This can be the case when larger businesses took decisions to shutdown demand, switch from a local supplier or be forced to lay off employees. This is a particular challenge given the lack of diversity in many rural economic structures. But the greatest challenges can arise through social resilience. In our case, this was the lifting of lockdown restrictions. These tensions can be driven – or at least given much greater status – by the rural context, and in particular concerns of access to adequate public services, rurality and the demographic profile of the area. Many of these trade-offs between community priorities and the interests of local businesses are evident in 'normal' times, but crises can expose them to a greater degree.

Thirdly, whilst we have already described the resonance of the framework provided by Steiner and Atterton (2015) in the evidence we collected, in the context of a crisis however, we would argue that it is essential to also highlight the importance of understanding how the resilience of businesses themselves to cope during a crisis can be both supported and challenged by elements of social, economic and environmental resilience. This is reflected in our extension of the Steiner and Atterton (2015) framework in Fig. 5 which highlights the importance of these feedback loops.

Our findings showed that during a crisis, rural businesses can utilise aspects of rural economic resilience to innovate and adapt. This can include the strength of formal and informal business networks. Some of this resilience can also come from factors that reflect the social resilience of rural communities, including rural communities working to support local businesses during the time of crisis, for example through formal and informal buy-local initiatives. It may also reflect community and business efforts to enhance environmental resilience in preparation for future challenges of increased demand. We found all of these in our study.



**Fig. 5.** Key components of rural resilience.

But at the same time there can be negating factors. Long-standing concerns of rural economic resilience – such as labour supply and lack of diversification – may weaken the resilience of businesses during a crisis. These challenges may be over and above the challenges brought about by the nature of the crisis overall, but instead, arise out of how business resilience interacts with different dimensions of rural resilience itself. In the face of a shock some rural businesses might be able to re-invent themselves in new markets, but for many others this may not be possible. Gaps in funding support, that may be amplified by the unique nature of rural economies, could add to the challenges (e.g., the high prevalence of self-employed businesses and the varied roles that many people have in rural communities that may not always qualify them for support).

But the tensions that we identified extend beyond economic resilience. In particular the erosion of social resilience (in our case because of splits within communities about how quickly to lift lockdown restrictions), can be damaging to business resilience. Concerns over external views of particular rural communities was one aspect, as was some businesses choosing not to open at all and harming their long-term sustainability. Most importantly however, our evidence showed that the ability of businesses to thrive could be impacted if community tensions leave a legacy of disagreement, and potentially even mistrust, between business owners and the community.

Finally, a core element that binds these three different elements together is local leadership. Rural leadership is seen as an increasingly critical factor in rural development (Sorensen and Epps, 1996; Davies

et al., 2021). Consistent with the view of the importance of ‘anchor institutions’ in rural economies, it is clear that there are also ‘anchor individuals’. These individuals can be crucial during times of crisis in not just providing leadership to the business community but the wider rural community. These leaders can themselves however, suffer from burnout, loss of confidence or reputational risk during a time of crisis.

**6. Conclusions**

Rural economies face several well recognised economic challenges even in ‘normal’ times. In the context of the COVID-19 pandemic, we have evidenced that not only were these pre-existing structural challenges brought into sharp focus, but that new challenges emerged. Resilience was tested in several ways. The existing literature presents different frameworks to understand the components and relationships between different elements of rural resilience. We focussed upon an analytical framework centred upon economic, social and environmental resilience that helped to frame our understanding of how businesses can contribute to rural resilience during times of a crisis, and not just in normal times. This same framework, however, is also useful to analyse tensions that can emerge during a crisis.

We have documented a series of such tensions, particularly when concerns within a community about issues pertaining to their underlying social resilience (in this case brought on by a public health crisis) can come into conflict with business resilience. This includes instances when the very same businesses are also undertaking significant work to support their community’s resilience more broadly. We conclude that a rich and diverse business base can be crucial to supporting rural resilience through crises. But equally, community attitudes and confidence in the business community can have a significant impact upon the resilience of the businesses themselves.

A careful balance must be struck. Go too far in one direction – for example, businesses not taking into consideration local concerns about social and environmental resilience – and rural businesses could find their own resilience tested. On the other hand, a failure by local communities to appreciate the pressures and challenges faced by their local

business community risks eroding not just that fragile business base, but the resilience of their community itself.

The focus of this paper has been upon the role of business in rural resilience. This has, in turn, shaped the methods used. Our aim of analysing in detail the links between businesses and rural communities as a whole necessitated the focus upon in-depth semi-structured interviews. Assessing the attitudes of the community to broader aspects of rural resilience in a crisis – and not just within the context of the role of business – would be a useful complimentary study to our work. This is likely to require different methods, including a large survey of residents. In addition, whilst a strength of our paper is our ability to conduct the research in ‘real time’ when the pandemic was still at the forefront of rural resilience, it will be important for future research to consider how the subsequent recovery has impacted upon the features of rural resilience identified in our study. Crucial too will be understanding how any scarring effects, or long-term changes in the make-up of rural economies, will impact upon the different dimensions of rural resilience in the years ahead.

We conclude with lessons for policymaking, including the importance of supporting diversification and the growth of a vibrant locally managed business base. But the growing of local capacity in community development and empowerment is perhaps most important. Nurturing and developing local leadership that can work with the local business community to navigate through tensions as they arise is a crucial policy lesson from the COVID-19 pandemic.

**Author statement**

This paper was a joint effort by the two authors. The shared endeavours were as follows; Stuart McIntyre: Conceptualisation, Methodology, Writing – Original Draft and Editing; Graeme Roy: Conceptualisation, Methodology, Writing – Original Draft and Editing.

**Data availability**

The data that has been used is confidential.

**Appendix 1. List of interviewees**

Business owner	1
Business owner	2
Business owner	3
Business organisation/representative body	4
Business organisation/representative body	5
Community Leader	6
Public sector enterprise & skills body	7
Public sector enterprise & skills body	8
Business owner	9
Public sector enterprise & skills body	10
Public sector enterprise & skills body	11
Community Leader	12
Business owner	13
Public sector enterprise & skills body	14
Community Leader	15
Government official	16
Government official	17
Community Leader	18
Community Leader	19
Business organisation/representative body	20
Business owner	21
Business owner	22
Community Leader	23
Community Leader	24

## References

- Ashkenazy, A., Chebach, T.V., Knickel, K., Peter, S., Horowitz, B., Offenbach, R., 2018. Operationalising resilience in farms and rural regions - findings from fourteen case studies. *J. Rural Stud.* 59, 211–221.
- Baldwin, C., Smith, T., Jacobson, C., 2017. Love of the land: social-ecological connectivity of rural landholders. *J. Rural Stud.* 51, 37–52.
- Bennett, K.J., Yeun, M., Blanco-Silva, F., 2018. Geographic differences in recovery after the great recession. *J. Rural Stud.* 59, 111–117.
- Bosworth, G., 2012. Characterising rural businesses – tales from the paperman. *J. Rural Stud.* 28, 499–506.
- Bruce, D., Ellis, K., Delury, N., 2006. The role and impact of community newsletters in fostering social cohesion and community development. *Journal of Rural and Community Development* 1, 176–185.
- Currie, M., McMorrin, R., Hopkins, J., McKee, A.J., Glass, J., Wilson, R., Meador, J.E., Noble, C., Craigie, M.C., Piras, S., Bruce, F., Williams, A.W., Pinker, A., Jones, S.J., Maynard, C.M., Atterton, J., 2021. Understanding the Response to COVID-19 - Exploring Options for a Resilient Social and Economic Recovery in Scotland's Rural and Island Communities. <https://sefari.scot/document/rural-and-island-communities-response-to-covid-19>. last accessed 13th August 2021.
- Davies, A., Lockstone-Binney, L., Holmes, K., 2021. Recognising the value of volunteers in performing and supporting leadership in rural communities. *J. Rural Stud.* 86, 136–144.
- De Guzman, M.R.T., Kim, S., Taylor, S., Padasas, I., 2020. Rural communities as a context for entrepreneurship: exploring perceptions of youth and business owners. *J. Rural Stud.* 80, 45–52.
- Delgado, M., Porter, M., Stern, S., 2010. Clusters and entrepreneurship. *J. Econ. Geogr.* 10 (4), 495–518.
- Glass, J., Shucksmith, M., Chapman, P., Atterton, J., 2021. COVID-19 and Financial Hardship in Rural Areas Insights from the Rural Lives Project. [https://www.rurallives.co.uk/uploads/1/2/7/3/127324359/rural\\_lives\\_-\\_covid-19\\_and\\_financial\\_hardship\\_final\\_05.05.21.pdf](https://www.rurallives.co.uk/uploads/1/2/7/3/127324359/rural_lives_-_covid-19_and_financial_hardship_final_05.05.21.pdf), last accessed 13th August 2021.
- Glover, J., 2012. Rural resilience through continued learning and innovation. *Local Econ.* 27 (4), 355–372.
- Green, A., Owen, D.W., Winnett, C.M., 1994. The changing geography of recession: analyses of local unemployment time series. *Trans. Inst. Br. Geogr.* 19 (2), 142–162.
- Halseth, G., Ryser, L., 2006. Trends in service delivery: examples from rural and small town Canada, 1998 to 2005. *J. Rural and Commun. Dev.* 1 (2), 69–90.
- Hamrick, K.S., 1997. Rural labour markets often lead urban markets in recessions and expansions. *Rural Dev. Perspect.* 12, 11–17.
- Herbert-Cheshire, L., Higgins, V., 2000. Contemporary strategies for rural community development in Australia: a governmentality perspective. *J. Rural Stud.* 16, 203–215.
- Herbert-Cheshire, L., Higgins, V., 2004. From risky to responsible: expert knowledge and the governing of community-led rural development. *J. Rural Stud.* 20, 289–302.
- IMF, 2021. *World Economic Outlook*. IMF, Washington DC. July 2021. <https://www.imf.org/en/Publications/WEO/Issues/2021/07/27/world-economic-outlook-update-july-2021>. last accessed 13th August 2021.
- Jack, S.L., Anderson, A.R., 2002. The effects of embeddedness on the entrepreneurial process. *J. Bus. Ventur.* 17 (1), 467–488.
- Markantoni, M., Steiner, A.A., Meador, J.E., 2019. Can community interventions change resilience? Fostering perceptions of individual and community resilience in rural places. *Commun. Dev.* 50 (2), 238–255.
- Martin, R., Sunley, P., Gardiner, B., Tyler, P., 2016. How regions react to recessions: resilience and the role of economic structure [in special issue: theme Issue: resilience Revisited. *Reg. Stud.* 50 (4), 561–585.
- Martz, D., Sanderson, K., 2006. The economic and social contribution of the public sector to rural Saskatchewan. *J. Rural and Commun. Dev.* 1 (2), 91–113.
- McManus, P., Walmsley, J., Argent, N., Baum, S., Bourke, L., Martin, J., Pritchard, B., Sorensen, T., 2012. Rural Community and Rural Resilience: what is important to farmers in keeping their country towns alive? *J. Rural Stud.* 28 (1), 20–29.
- Mushinski, D., Bernasek, A., Weiler, S., 2015. Job lock in rural versus urban labour markets. *Growth Change* 46 (2), 253–273.
- Murray, M., Dunn, L., 1995. Capacity building for rural development in the United States. *J. Rural Stud.* 11, 89–97.
- OECD, 2020. *Rebuilding Tourism for the Future: COVID-19 Policy Responses and Recovery*. OECD, Paris. December 2020. <https://read.oecd-ilibrary.org/view/?ref=137137392-qsvjt75vnh&title=Rebuilding-tourism-for-the-future-COVID-19-policy-response-and-recovery>. last accessed 13th August 2021.
- Ofcom, 2019. *Connected Nations 2019*. [https://www.ofcom.org.uk/\\_data/assets/pdf\\_file/0023/186413/Connected-Nations-2019-UK-final.pdf](https://www.ofcom.org.uk/_data/assets/pdf_file/0023/186413/Connected-Nations-2019-UK-final.pdf), last accessed 13th August 2021.
- Patterson, H., Anderson, D., 2003. What is really different about rural and urban firms? Some evidence from Northern Ireland. *J. Rural Stud.* 19 (4), 477–490.
- Patton, M., Xia, W., Feng, S., Hewitt, V., 2016. Economic structure and vulnerability to recession in rural areas. *EuroChoices* 15 (3), 47–53.
- Reimer, B., 2006. The rural context of community development in Canada. *J. Rural and Commun. Dev.* 1 (2), 155–175.
- Roberts, E., Beel, D., Philip, L., Townsend, L., 2017. Rural resilience in a digital society. *J. Rural Stud.* 54, 355–359.
- Rodríguez-Pose, A., 2017. The revenge of the places that don't matter (and what to do about it). *Camb. J. Reg. Econ. Soc.* 11 (1), 189–209.
- Rosenthal, S.S., Strange, W.C., 2004. Evidence on the nature and sources of agglomeration economies. In: Vernon Henderson, J., Thisse, J.-F. (Eds.), *Handbook of Regional and Urban Economics*, vol. 4. Elsevier, Amsterdam, pp. 2119–2171.
- Schouten, M.A.H., Martijn van der Heide, C., Heijman, W.J.M., Opdam, P.F.M., 2012. A resilience-based policy evaluation framework: application to European rural development policies. *Ecol. Econ.* 81, 165–175.
- Scottish Government, 2021. *Rural Scotland Key Facts 2021*. <https://www.gov.scot/binaries/content/documents/govscot/publications/statistics/2021/02/rural-scotland-key-facts-2021/documents/rural-scotland-key-facts-2021/rural-scotland-key-facts-2021/govscot%3Adocument/rural-scotland-key-facts-2021.pdf>, last accessed 13 August 2021.
- Skerratt, S., 2013. Enhancing the analysis of rural community resilience: evidence from community land ownership. *J. Rural Stud.* 31, 36–46.
- Sorensen, T., Epps, R., 1996. Dimensions of leadership in four central Queensland towns. *J. Rural Stud.* 12, 113–125.
- Steiner, A., Atterton, J., 2014. Contribution of private sector enterprises to rural resilience. *Local Econ.* 29 (3), 219–235.
- Steiner, A., Atterton, J., 2015. Exploring the contribution of rural enterprises to local resilience. *J. Rural Stud.* 40, 30–45.
- Steiner, A., Farmer, J., Bosworth, G., 2019. Rural social enterprise – evidence to date, and a research agenda. *J. Rural Stud.* 70, 139–143.
- Steiner, A., Teasdale, S., 2019. Unlocking the potential of rural social enterprise. *J. Rural Stud.* 70, 144–154.
- Tomaney, J., Pike, A., Rodríguez-Pose, A., 2010. Local and regional development in times of crisis. *Environ. Plann.* 42 (4), 771–779.
- WHO, 2021. *WHO Coronavirus (COVID-19) Dashboard*, World Health Organisation. <https://covid19.who.int/>. (Accessed 6 August 2021).
- Wright, K., 2016. Resilient communities? Experiences of risk and resilience in a time of austerity. *Int. J. Disaster Risk Reduc.* 18, 154–161.