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The Characteristics, Challenges, and Resilience of Small Rural Farm-Support Agribusiness: A systematic literature review

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Abstract

Small rural farm-support agribusinesses (SRFSAs) support farmers by completing on-farm tasks. These tasks have been outsourced to SRFSAs as they are more efficient at completing the task than the farmer. This efficiency is a key leverage factor that the SRFSA owner-manager can use to ensure their business's survival. The land use in the area surrounding the SRFSA is also a major contributor to business efficiency, structure, service offering and success. SRFSAs face a range of challenges that originate from limitations in labour, markets, infrastructure and business support. Rivalry from within the industry coupled with the need to manage relationships across the community creates further challenges.

To survive and thrive SRFSAs need to manage these challenges and develop resilience. Resilience strategies include the management of labour through training and novel approaches to staff acquisition, relationship building with both farmers and the community, marketing initiatives, pricing strategies, technology adoption, and diversification. The most important factor in the survival and success of SRFSAs is the owner-manager and their skillset. The exploration of the literature via a systematic review has allowed the development of a theoretical framework to model the external (the community) and internal (the business) forces that shape the structure and performance of SRFSAs. The external forces are further grouped into the characteristics of the community, and the characteristics of the market. The internal forces are grouped into the characteristics of the business, and the characteristics of the owner.

Introduction

SRFSAs that provide husbandry products and services directly to farmers are the focus of this systematic literature review. SRFSAs are often overlooked by policy makers and researchers and there has been limited research on the businesses, their owners, and their innovative strategies (Phillipson et al., 2019; Siemens, 2010; Deakins and Bensemann, 2019). Most rural businesses are small and independently owned and continue to face a range of operational challenges (Bel and Fageda, 2011; Fiore et al., 2007; Mura and Ključnikov, 2018; Siemens, 2010).

The lack of focused research and specific policy leads to inefficiencies within, and mischaracterisations about, the rural economy. Some common perceptions and, in cases, misconceptions, of the rural economy include that it is characterised by small firm sizes, low levels of sophistication, weak business relationships, low levels of investment, a local focus and low levels of entrepreneurship (Abdulkadirov et al., 2020; Belay et al., 2017; Prause and Boevsky, 2019; Sycheva et al., 2018).

When it comes to SRFSAs failure rates, Tampien (2016) references the Small Business Administration (2004) and claims a failure rate of 50 per cent in the first five years. Rezaei-Moghaddam et al. (2021) also propose that many small businesses fail in their first years while Agbenyegah (2019, p.1), although discussing developing economies, claims small businesses have experienced “rampant” failures for decades.

The prevalence of rural small business failure is context-, time-, country- and industry-dependent. Every rural town and every land-based sector is different which means the context surrounding SRFSAs varies considerably. There are highly different operational contexts surrounding these businesses so the challenges present, the survival rate and the relative success is highly variable and often idiosyncratic (Escalante and Turvey, 2006).

To date there has been very sparse research of SRFSAs in the New Zealand context. The aim in this review is to explore the literature surrounding SRFSAs, their characteristics and challenges, and the owner-manager.

Methods

To present current knowledge about and provide research insight for SRFSAs, a systematic literature review was carried out. The systematic literature review is a proven method for conducting a sound review with robust findings, limited bias, and repeatability (Fink, 2019).

This research project seeks to answer three key research questions:

1. What are the key industry characteristics that affect small rural farm-support agribusinesses?
2. What are the challenges faced by small rural farm-support agribusinesses?
3. What strategies do small rural farm-support agribusinesses develop to build resilience?

To further define the businesses in this study the terms ‘small’ and ‘rural’ need to be defined. There is a range of ways to define small business such as employee head count, turnover, profit, or asset value and there is also wide acceptance that these are not necessarily correct (Coetzer et al., 2019). Many researchers prefer to use employee head count because of the simplicity of the measure. In New Zealand, the focus of this review, researchers and government agencies consider small businesses as those with fewer than 20 employees (Kieffhaber et al., 2020).

The term ‘rural’ is also difficult to define as rural economies are highly diverse (Phillipson et al., 2019). In describing the location of rural business, some have described their proximity to rural communities (Agbenyegah, 2019) or given distances to nearest urban areas of certain populations (Siemens, 2010). Moreover, rural communities are continually transforming which increases the complexity of defining them (Greenberg et al., 2018). The businesses found in the systematic literature review, however, must fit their authors’ context of ‘rural’. SRFSAs are therefore small businesses with less than 20 employees, that are rural within their own context, and which support farmers by completing on-farm tasks that have been outsourced.

Web of Science and Scopus were used to identify 93 publications relevant to this topic. The same four searches were carried out on each search engine providing a total of eight searches. Both search

engines were used to increase the breadth of captured articles, although tight search criteria were used to achieve a manageable number of final publications.

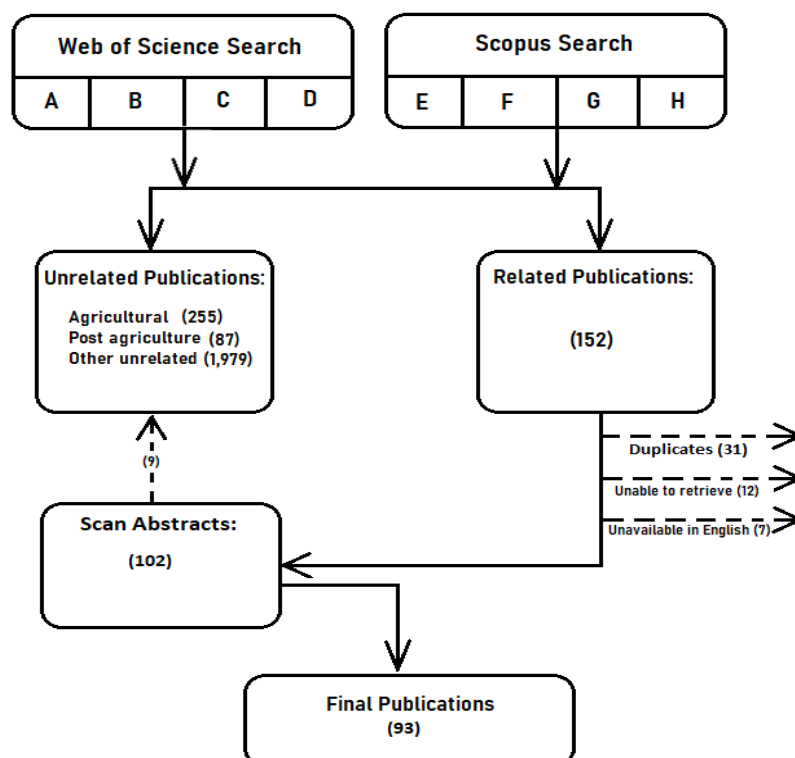
The term 'small rural contract*' was used to capture small rural contractors, contractor and contracting. This term was paired with the term 'small agribusiness' using 'or'. These terms were then linked with the term 'challenges' using the 'and' operator. For the second search, the same search terms were then paired with the term 'resilience'. An additional search was a title search for 'small rural business' and finally the term 'small business owner manager' was searched using title search. In summary the four paired searches were:

- Search A & E: 'small rural contract*' or 'small agribusiness' and challenges (1,287 results)
- Search B & F: 'small rural contract*' or 'small agribusiness' and resilience (1,026 results)
- Search C & G: 'small rural business' (Title Search) (118 results)
- Search D & H: 'small business owner manager' (Title Search) (42 results)

As this literature review explores challenges SRFSA have overcome, a 15-year time frame was chosen. The 15-year time frame ensures the discussion is based on contemporary knowledge and further contributes to a manageable number of publications. This period covers some major events in the New Zealand rural industry such as the Global Financial Crisis in 2008, a bacterial contamination crisis in 2013 (Pang, 2017), booms and busts in the dairy industry, major earthquakes in Canterbury in 2010 and 2011, and the COVID-19 pandemic. A publish date filter of 01 January 2006 to 01 November 2021 was applied and in total there were 2,473 publications identified.

The process of screening the 2,473 findings down to the 93 publications that make up the systematic literature review is outlined in Figure 1.

Figure 1. Flowchart of literature screening



Source: Developed by the authors, based on Spector et al. (2019)

Initial analysis of the publications identified four wider emergent themes and the literature content was able to be distributed amongst these four major categories. The four emergent themes are:

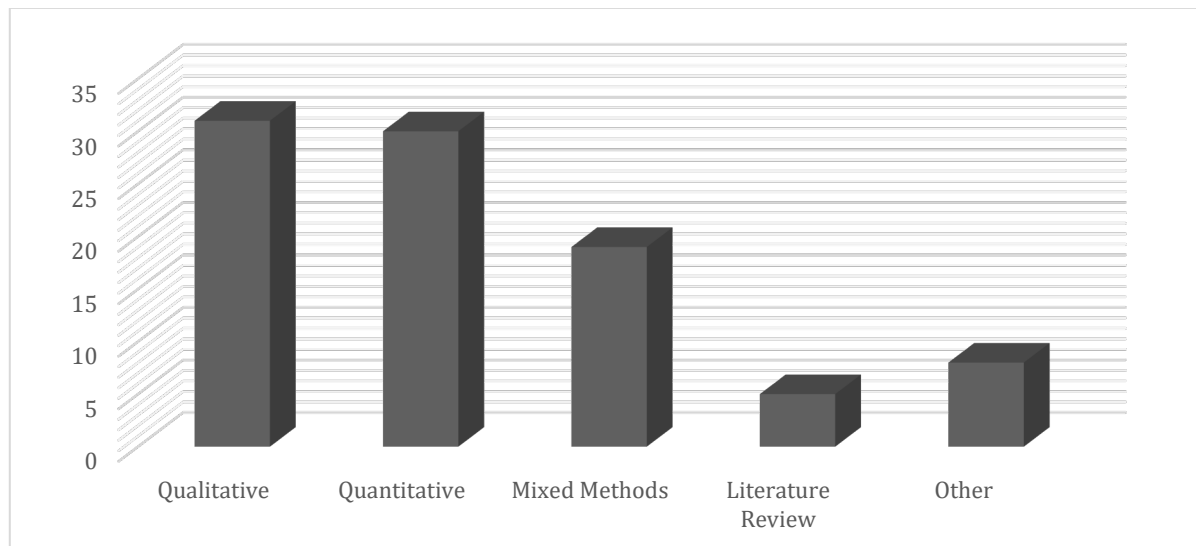
- Community characteristics,
- Market characteristics,
- Business characteristics, and
- Owner characteristics.

The review then explores the challenges faced and resilience strategies used by SRFSA before introducing a theoretical framework. The framework proposes that the resilience strategies employed by SRFSA are a factor of these four categories.

Research methods used in the cited literature

Analysis of the retrieved publications reveals a similar number of studies employed qualitative research methods (n=31) and quantitative methods (n=30) followed by mixed methods (n=19). Few studies conducted a systematic literature review in the area of SRFSA (Figure 2).

Figure 2. Literature research methods

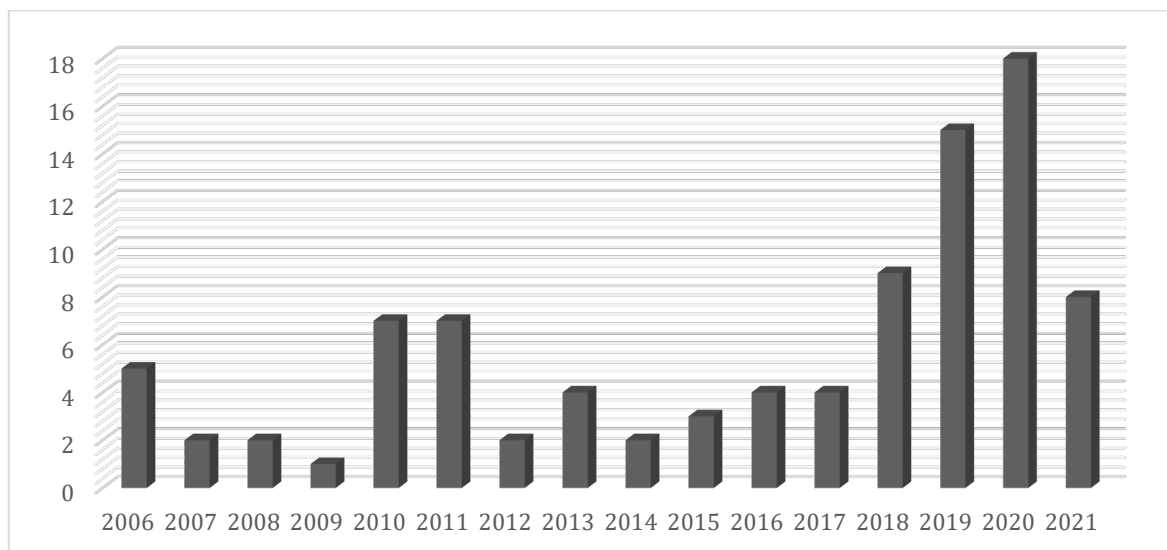
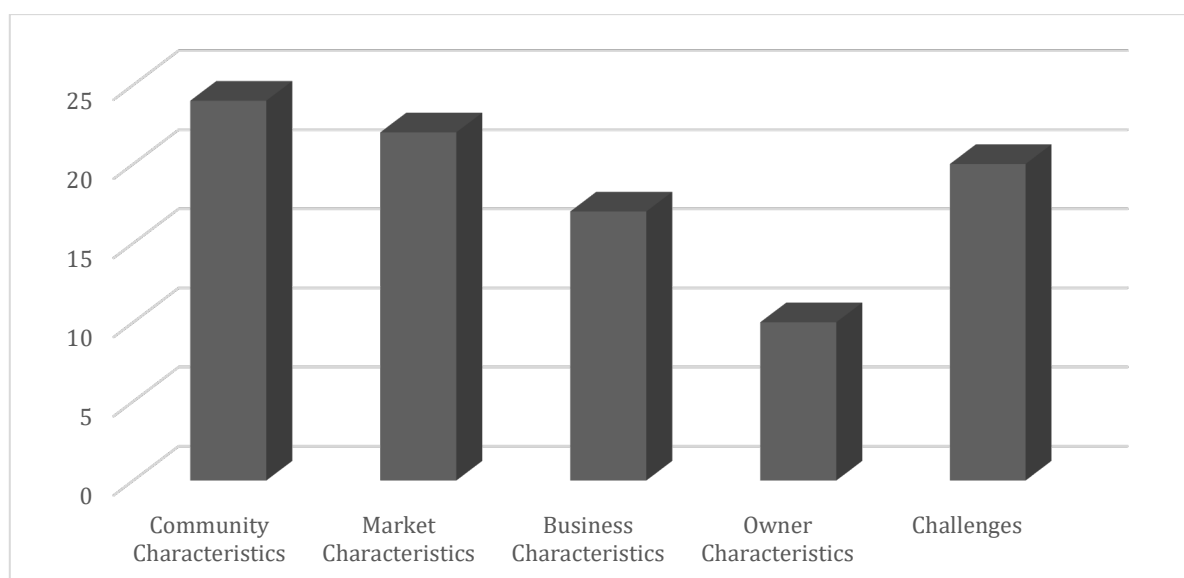


Publication by year

The search provided a spread of literature across the defined time period with the more recent years of 2019 and 2020 returning a higher number of publications. The years of 2010 and 2011 also provide a relatively high number of publications in the topic area (Figure 3).

Publications by topic

Assessment of the literature identified the four major themes discussed above and the challenges faced by SRFSA. Figure 4 demonstrates a division of the literature into the four broad categories of community characteristics (n=24), market characteristics (n=22), business characteristics (n=17), owner characteristics (n=10) and SRFSA challenges (n=20).

Figure 3. Publications by year**Figure 4. Publications by topic area**

Characteristics

Community characteristics

Research a decade ago indicated that many rural areas faced an economic downturn including a declining job market leading to residents leaving to follow opportunities in urban and semi-urban areas (Mohr et al., 2010; Siemens, 2010). Meanwhile, urban and semi-urban areas needed to cope with economic growth and pressures on local service demands (Mohr et al., 2010). More recent research suggests rural areas have become attractive places to do business (Eresia-Eke and Okerue, 2020; Van Hoyweghen et al., 2020).

Small rural communities are shaped by the surrounding industry and land-use and when the communities are surrounded by farmland it follows that a large portion of the town's economy will be based on the support of farm production (Phillipson et al., 2019). The profitability, or otherwise, of

the surrounding farmland can also permeate across the community as profit from private farming enterprise makes its way down from the owners, to the managers, and to workers and supporting firms (Danzer and Grundke, 2020). Rural communities and the surrounding farmland also change over time. These changes happen over both the short term and the long term. The community, the business strategies, business and worker diversification strategies and the service offerings also change and are not static or homogeneous (Wang et al., 2010; Greenberg et al., 2018).

There is a mutually beneficial relationship between small rural business and small rural communities. A welcoming, functioning community creates positive externalities and attracts business and entrepreneurship, while business and entrepreneurship create positive externalities and contribute to a welcoming functioning community (Abdulkadirov et al., 2020; Fiore et al., 2007; Kilpatrick et al., 2011; Sun et al., 2019). Welcoming, functioning communities offer cultural acceptance, sufficient infrastructure, enhanced leisure, social opportunities, accept new business enterprise, and have strong leadership (Abdulkadirov et al., 2020; Kilpatrick et al., 2011; Sycheva et al., 2018).

Rural small businesses and the employment they provide also play a role in improving the social well-being of the community by reducing crime, absorbing labour and reducing rural poverty (Abdulkadirov et al., 2020; Assfaw Wossen and Ayele, 2018; Eresia-Eke and Okerue, 2020; Glaub et al., 2014; Ngwenya and Mashau, 2021; Van der Merwe and De Swardt, 2008; Van Hoyweghen et al., 2020). Furthermore, Kilpatrick et al. (2011) explain that there are many benefits to a community if it can provide welcoming and engaging social interactions for workers. The workers then give back to the community by performing their duties and volunteering in the community and staying in the town longer. Kilpatrick et al. (2011) recounted that the interviewees in their research viewed community involvement as not only a fundamental part of rural life, but a necessity for the survival of rural communities. Conversely, motivation for small business to help the community is the interconnectedness the owner-managers and employees have with the community (Fiore et al., 2007; Martin et al., 2013).

Interpersonal relationships between different owner-managers are particularly important for rural business (Greenberg et al., 2018). In investigating relationships or ties between business owners and the services they purchase, Kautonen et al. (2010) and Greenberg et al. (2018) refer back to Granovetter (1977) and his theory of embeddedness. Embeddedness is the business owners' level of activity in different kinds of business and social networks (Greenberg et al., 2018).

Rural businesses have significantly more continued relationships with other businesses. A higher rate of business-to-business collaboration in rural areas compared to urban areas was found across almost all industries. It was also found that businesses that increased their collaboration with other businesses after their initial start-up experienced a higher rate of growth (Greenberg et al., 2018). In New Zealand, having a sense of responsibility for the rural community is an important factor for creating a sustainable small business (Kieffhaber et al., 2020).

While community embeddedness is helpful, beneficial, and desirable for the business, it is not always a necessity for survival. Research from Sweden found that businesses can have dislike and distrust for the town in which they are located but can still establish, expand, and maintain their business. In these cases, business owners were confident they could rely on their own entrepreneurial and business skills rather than the town (Pierre, 2017).

Market characteristics

Outsourcing occurs when a business turns over a particular process or production stage to a third party that specialises in that process (Promsaka Na Sakolnakorn et al., 2010). The outsourcing of farm

activities has become a more common feature of food production over time. Traditionally, farmers supplied produce only to the local village, but as rural and urban areas developed, and as modern supply chains evolved, farmers became more separated from their customers. In some contexts, this led to a proliferation of the “many hands” of intermediaries along the chain (Reardon, 2015, p. 53). Agribusinesses appear alongside farming and people in a free economy and their presence is an evolutionary process. This can be seen in countries like India and China where some government subsidies and controls were removed and “many hands” of agribusinesses quickly appeared along food supply chains (Koczberski and Curry, 2005; Trebbin and Hassler, 2012).

There is a range of farmer engagement with the degrees of outsourcing but it makes sense for a farmer to outsource any operation where it is more efficient than completing it oneself (Futemma et al., 2020; Trebbin and Hassler, 2012). Maulidah and Muhaimin (2021) add that food production industries will only be sustainable in the long term if they can achieve operational efficiencies.

The most important market determinant for SRFSAs is the nature and profitability of the local farmland as it places an upper limit on the market size, market homogeneity, market type and market profitability (Abu Hatab et al., 2021; Deakins and Bensemann, 2019; Liu, 2022; Siemens, 2010). The surrounding land use also determines the activities SRFSAs can complete and therefore shapes the structure, and service offering, of the supporting SRFSAs (Forsyth, 2005; Phillipson et al., 2019). The land use type and resulting nature of SRFSA activities also influences the level of rivalry and the level of seasonality (Enescu and Belciug, 2018; Escalante and Turvey, 2006).

What is efficient to outsource in one farm type, one community, or one country, may not be in another due to these activities being highly context dependent (Promsaka Na Sakolnakorn et al., 2010). SRFSAs therefore appear across a range of countries, farm types and support activities. For example, SRFSAs captured in this review range from those harvesting soybeans in Paraguay (Wesz Junior, 2021), to providing agronomy services to coffee growers in Brazil (de Almeida and Zylbersztajn, 2017), assisting maize production for farmers in the Limpopo (Anim, 2010), supplying inputs to rice farmers in the Mekong Delta (Ba et al., 2019), and providing technical and mechanical services to state forestry programmes in the United States (McIver et al., 2018).

SRFSAs exist where it is more efficient for the farmer to outsource activities rather than integrate, cooperate, create equipment-sharing arrangements with other farms, or diversify their own farm businesses. When determining efficiency, a farmer must take a range of factors into account and the decision will be based on factors beyond finances. For example, farmers may use SRFSAs to complete a task they are seen to be familiar with, or champions of, and can provide advice that may be of unquantifiable value (Brown et al., 2016).

The use of SRFSAs is often driven by the cost and complexity of the necessary equipment. The cost of specialised equipment and technologies is often so great that one farmer alone cannot justify the purchase for only their tract of land (Ba et al., 2019). Farmers have alternatives to using SRFSAs such as collaboration, which they can achieve through a range of means. Farmers can work together successfully in machinery-sharing syndicates for example. This has been shown to be an effective and efficient strategy for satisfying the expensive, specialised machinery needs for small and medium farms (Papp-Vary et al., 2019).

If it is more efficient, farmers can also integrate, vertically or horizontally, into the arena of SRFSAs (Rosyad et al., 2019). Farmers may also opt to develop an associated business and undertake SRFSA activities themselves as a form of farm diversification (Bowen and Morris, 2019). Farmers are quite likely to be looking for ways to diversify their product, satisfy their capacity, spread their risk, and

utilise their staff. Diversifying outside the farm gate is always an option and astute farmers will do this where it makes sense and where they have an advantage in doing so (De Roest et al., 2018).

Business characteristics

There are a range of characteristics present in SRFSA's and there are differences between these businesses and either larger scale, or urban, businesses (Ali, 2016; Phillipson et al., 2019). SRFSA's typically focus on local markets and their service and product offering varies across locations and this affects firm structure and performance (Phillipson et al., 2019). The requirement for specialised assets is also dictated by the nature of outsourced activities in the local area. The location of the business will also have an impact as the population is sparser in rural areas, so within a physical proximity of the business there are fewer potential customers. It is therefore expected that rural businesses will be smaller than urban businesses and can expect a lower turnover and lower customer base (Forsyth, 2005). Due to lower levels of labour availability, lower customer density and lower turnover, these businesses may also face lower external competition and less encroachment from new entrants. These factors lead to small rural businesses exercising higher levels of innovation as they search out finely-defined niches in which to operate (Phillipson et al., 2019).

Technology plays an increasingly important role in the business environment and can negate some of the historic advantages that urban businesses have had over rural businesses (Shore et al., 2011). Rezaei-Moghaddam et al. (2021) explain that small rural businesses that are unable to keep up with the technological pace of change are more likely to fail. Therefore, a primary requirement for small rural business is basic access to broadband technology and having a competitive website (Agbenyegah, 2019; Jeong et al., 2008; Shore et al., 2011). Technology and the internet also help SRFSA's rapidly spread knowledge of business developments where, historically, they had to rely on demonstration farms, agricultural shows, workshops and industry publications (Bowen and Morris, 2019). Many of the farming clients of SRFSA's are also rapidly adopting advanced technologies. These include the use of big data, drones, robotics, GPS tracking, accounting software and biotechnology (Bowen and Morris, 2019). This requires SRFSA's to acquire assets and innovate, or at least keep pace with technological change by their supply chain partners (Sokolova and Litvinenko, 2020).

SRFSA's must have strong relationships with their customers and suppliers. SRFSA's operating with weak relationships face great risks, particularly when it comes to making significant investments in their business (Steen and Majers, 2014). Businesses that overcome these challenges and build strong relationships in this context do so with the elements of mutual benefits and mutual trust (Xhoxhi et al., 2020). There can also be substantial differences in the size of the companies along an agricultural supply chain, from a peasant smallholder to a lone cultivation contractor to a giant multinational corporation (Wesz Junior, 2021). This further emphasises the need for strong relationships as there is an obvious imbalance in other measures of 'power' such as bargaining power, economies of scale, and pricing power.

SRFSA's typically deal in a much less perishable product than agribusinesses that act after the farmer; therefore, transactions are much less complex (Trebbin and Hassler, 2012; Winters et al., 2010). In this less complex transactional environment, relationships can be even more effective and important. Govereh et al. (2019) emphasise the importance in building a relationship with a farmer. This includes understanding the farmer, how they like to purchase and use a product, and which brands they prefer.

Owner characteristics

The owner of a small business is often the manager and the common encompassing phrase is the 'owner-manager' (Raymond et al., 2013). The owner-manager not only drives the strategy, direction

and goals of the business but also performs a range of duties across the business and is present in the business in multiple ways (Kautonen et al., 2010; Lefebvre, 2021; Mohamad and Chin, 2019; Siemens, 2010). The importance of the owner-manager and their skill and execution abilities is often the most important factor in business strategy, growth, and survival (Escalante and Turvey, 2006; Mohamad and Chin, 2019; Raymond et al., 2013). Further, the ability of the owner-manager to control important business facets like maintaining optimum working capital, setting appropriate payment terms, managing relationships, and managing labour is positively linked to growth and survival (Lefebvre, 2021; Mohamad and Chin, 2019).

Small businesses often lack specialised staff and middle managers, and these become duties of the owner-manager leading to considerable constraints on their time (Kautonen et al., 2010; Lefebvre, 2021; Siemens, 2010). Therefore, the owner-managers of small firms believe they work harder and longer than managers of larger firms (Van der Merwe and De Swardt, 2008).

Owner-managers tend to set goals, direction and strategy for their business based on their own idea of good performance which is based on their own goals, identity, and background. These may or may not be the same as competitors', clients', experts' or researchers' definitions of good performance (Raymond et al., 2013; Greenbank, 2006).

Studies have focused on the endurance of small rural business as this is seen as crucial for economic sustainability (Martin et al., 2013; Raymond et al., 2013; Siemens, 2010; Van der Merwe and De Swardt, 2008). Meanwhile, public economic policy is often targeted to support business growth to assist economic development (Lefebvre, 2021).

In the context of SRFSA establishment, owner-managers have often started SRFSA's to be one's own boss, to create employment, to be satisfied in their work, or to make the most out of an opportunity (Raymond et al., 2013; Siemens, 2010; Van der Merwe and De Swardt, 2008). The owner-manager may also value staying in the community more so than business success, business profits and business growth. Raymond et al. (2013) conclude that small, rural owner-managers value their business enduring more so than increasing the business's economic profits. However, if adopting a growth strategy, SRFSA's can still be successful in achieving this goal (Richbell et al., 2006).

Fassin et al. (2011) show that owner-managers of small business place great value on being socially responsible and running ethical businesses. One area where there is a direct relationship between the owner-manager and the company strategy is in regard to sustainability (Kiefhaber et al., 2020; Martin et al., 2013). Courrent and Spence (2016) found small business owner-managers' sustainability initiatives are driven by their values, ethical beliefs, sense of belonging and their long-term view. Raymond et al. (2013) state that for small business owners-managers, environmental and social objectives are often more important than economic objectives. It follows that researchers, governments and support services should use more than financial and growth measures to evaluate the performance and support needs of SRFSA's (Raymond et al., 2013).

Challenges

Labour challenges

SRFSA's face labour challenges caused by the lack of potential employees in rural areas and the limited skillset of the labour pool (Abu Hatab et al., 2021; Assfaw Wossen and Ayele, 2018; Danzer and Grundke, 2020; Deakins and Bensemman, 2019; Liu, 2022; Murphy, 2015; Phillipson et al., 2019; Siemens, 2010; Sokolova and Litvinenko, 2020). Labour challenges have been exacerbated by COVID-

19 which resulted in closed borders and reduced migration opportunities for foreign and seasonal workers (Parushina et al., 2020).

Aside from the labour challenge simply being related to the limited number of potential employees, and an upper limit on employee skill level (Escalante and Turvey, 2006), there are additional labour challenges present in the rural environment. For one, labour recruited from other rural towns often does not feel the same level of connectedness to the community of the business, an important factor for these businesses (Siemens, 2010). Further, these workers typically need access to private vehicles and fossil fuel for transport to and from work (Phillipson et al., 2019). There are also often misalignments between employee and employer expectations for items like working conditions, training and remuneration (Assfaw Wossen and Ayele, 2018; Murphy, 2015). Additionally, employees may have bargaining power due to the lack of skilled labour or the reduced size of the wider labour pool.

Time constraints

The time constraints of the owner-manager are another important challenge for SRFSA. The small size of the business means the advantages of economies of scale or political influence are absent (Ali, 2016). Moreover, in rural locations there is often a lack of easily accessible business support services to outsource activities (Liu, 2022; Siemens, 2010). Therefore, the owner-manager is often completing a range of tasks within the business (Siemens, 2010; Kautonen et al., 2010; Ali, 2016). The time constraints of the owner-manager are often caused by the stressors mentioned which can cause simple tasks to escalate in complication or involve travel time or third parties. Infrastructure challenges can also extend to the owner-manager's general communication (Deakins and Bensemann, 2019; Liu, 2022; Siemens, 2010; Ali, 2016). This area of interest is referred to as "the digital divide" and explores access to information technology (IT) and IT support in rural and urban areas as discussed by Shore et al. (2011) and Bowen and Morris (2019).

Finance challenges

Access to capital and traditional forms of finance has also been highlighted as a challenge. This is not only due to the range of challenges and risks faced by these businesses and their industry but may also relate to infrastructural gaps. These firms often have a requirement for expensive capital items and therefore have a need for bank finance, so limited access to finance can be a significant impediment to growth and survival. These businesses also have a higher likelihood of being rejected for finance and therefore seeking alternative forms of finance (Abu Hatab et al., 2021; Ali, 2016; Deakins and Bensemann, 2019; Escalante and Turvey, 2006; Lefebvre, 2021; Phillipson et al., 2019; Tampien, 2016).

Additional challenges

SRFSA strategy is shaped by the surrounding land use and the community, and these are both continually changing (Deakins and Bensemann, 2019). This means SRFSA should also change over time. SRFSA need to adjust their direction, aim and structure and adjust organisational resources more frequently than larger urban businesses (Deakins and Bensemann, 2019).

Changes in consumer attitudes, land use policies and other legislation poses challenges to these businesses (Phillipson et al., 2019). SRFSA that apply agrochemicals and synthetic fertilisers for example are in an area of the industry that is a focus for environmental degradation and agricultural pollution (He et al., 2020). Developed countries like Japan, the Netherlands, the United Kingdom and France are already seeing reductions in synthetic fertiliser use. SRFSA tend to have a reliance on fossil

fuels and it can be assumed that in the future, due to their scarcity and their negative environmental impacts, these will become harder to acquire or more expensive (De Roest et al., 2018).

Finally, Sokolova and Litvinenko (2020) add that a risk for businesses all along the supply chain is that innovation and technology changes by other actors can cause significant shocks to businesses.

Challenges to SRFSAAs are not fixed and change with time, caused by factors as simple as advances in technology and innovation (Liu, 2022). Likewise, challenges vary by country, by surrounding land use, by season, by towns, and are different for each business (Escalante and Turvey, 2006).

Resilience

Resilience is a cornerstone of business sustainability and is a business or entrepreneurs' ability to adapt and survive unstable conditions and unforeseen events (Adobor, 2020). Given the range of challenges businesses face, it is imperative for them to be resilient. Business survival and growth strategies will vary greatly. There is no list of strategies a business can follow to survive but, rather, they must deploy appropriate survival strategies for their unique situation (Escalante and Turvey, 2006). Further, it has been suggested that little is known about small firms operating in rural towns and how the owners or managers respond to these challenges and shocks (Siemens, 2010).

The resilience literature uses the term 'shocks', indicating an unforeseen challenge that has a negative impact on a business. Failure of small rural business can affect food security and is disruptive to the economy and social stability (Adobor, 2020). Resilience strategies identified in the literature are limited, particularly when compared to the extensive number of challenges identified.

Resilience to labour challenges

To combat labour challenges, SRFSA owner-managers tend to structure their business around reducing the need for outside labour. These businesses use local resources sourced by the owner-manager, including their own skillset and time, their family and spouse, and their community. The owner-managers also tend to create roles for their family and spouses, who are likely to work longer and harder to reduce the need for outside labour (Siemens, 2010). Owner-managers tend to hire local people whenever possible as locals feel a level of interconnectedness with the community. Successful rural business owner-managers also combat labour challenges by creating strong levels of staff loyalty (Deakins and Bensemann, 2019). In dealing with labour challenges rural businesses are more likely to seek to train local labour in-house while urban businesses are more likely to seek skilled labour to increase their capabilities (Deakins and Bensemann, 2019; Escalante and Turvey, 2006).

Workers who are more involved in organisations, coaching, social activities and volunteering are more likely to stay in the community longer and feel more sense of self with the community (Kilpatrick et al., 2011). Therefore, labour challenges can be tackled by ensuring staff and their families are welcomed, embedded, and intertwined into the community.

Most agricultural skills required today, particularly in the developing world, are manual labour skills (Sokolova and Litvinenko, 2020). By 2030 the skill requirement will be more focused on technical and social skills as it is thought automation and artificial intelligence will be important factors of production (Sokolova and Litvinenko, 2020). It follows that not only is labour productivity important for resilience, but so is the incorporation of technology into the business (Sokolova and Litvinenko, 2020).

Resilience to market challenges

To overcome limitations around the total market size, SRFSAAs diversify or increase their product offering to increase sales from a semi-fixed customer base, although many still attempt to increase the customer base (Siemens, 2010). SRFSAAs may also engage in niche marketing or competitive pricing strategies (Escalante and Turvey, 2006). They also explore other income sources such as employment outside the business.

The community plays a role in business resilience as the community can provide customers, suppliers, growth opportunity, support, and mentors. The owner-managers tend to build relationships and develop cooperation to overcome challenges around supply and movement of inputs and goods (Siemens, 2010; Deakins and Bensemann, 2019). Rural small businesses may attract less competition by the nature of their size and their limited market or they may act in a niche which also dissuades competition (Phillipson et al., 2019).

Additional resilience

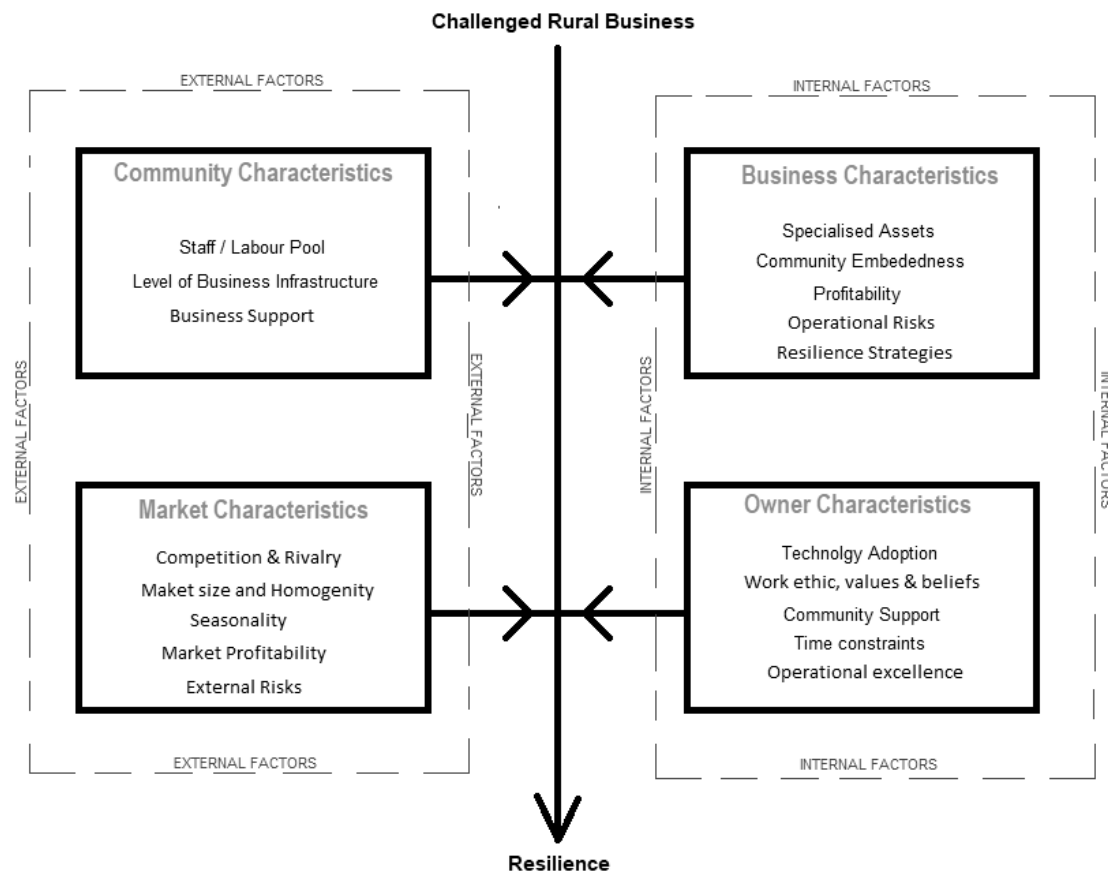
To overcome infrastructure challenges the owner-managers tend to cover these roles themselves by doing such things as self-financing, hiring and training local people to fill business roles, and supporting other businesses in the community (Siemens, 2010). They may also hire consultants to complete a range of these activities (Escalante and Turvey, 2006). In attempting to overcome the challenge of their own time being stretched, the owner-manager needs to be good at delegation (Escalante and Turvey, 2006). To combat high machinery cost, SRFSAAs can lease or buy these assets second hand (Escalante and Turvey, 2006). SRFSAAs may use alternative ownership structures or finance arrangements to overcome the challenge of finance (Escalante and Turvey, 2006).

A strength of small rural businesses is that they are more agile and flexible, in response to market signals, than their larger counterparts. These businesses typically have less bureaucracy, are faster to adapt and respond to opportunities, and are more likely to innovate (Escalante and Turvey, 2006; Ali, 2016; Mura and Ključnikov, 2018). In the COVID-19 pandemic staff layoffs were one of the main strategies used by agriculture and agri-food small rural businesses to reduce costs during these shocks which indicates the high social costs of stressors in these businesses (Abu Hatab et al., 2021).

Proposed Theoretical Framework

The findings from the literature were grouped into four emergent categories and the article has been structured in accordance with these categories. There are two categories external to the business; they describe the setting and the context of the business and were termed: Community Characteristics and Market Characteristics. Further, there are two internal business forces that dictate the structure and function of the specific business; these were termed: Business Characteristics and Owner Characteristics. The systematic literature review leads to the development of a theoretical framework as seen in Figure 5. The framework proposes that industry characteristics can be viewed on one side as those external to the business, with those internal to the business on the opposing side. Further, the framework seeks to identify how these characteristics pose or negate challenges to the business. The total of these characteristics and challenges determines the level of resilience the business possesses.

Figure 5. Theoretical framework of the factors external and internal to the business that drive resilience and survival in SRFSA



Source: Developed by the authors.

Conclusion

This systematic literature review has explored the characteristics that can be expected in SRFSA across service types, communities, and countries. Some characteristics appear to be universal such as the surrounding community and farmland determining the SRFSA service offering, structure, and performance. A further universal characteristic is the time constraints of the owner-manager, due to the small scale and usually exacerbated by a lack of infrastructure and support. Relationships with people, communities and other businesses are also important for SRFSA.

There are phenomena surrounding these businesses that are context specific and unique to each SRFSA. Examples of these are the requirements for different specialised assets, the requirement for, and access to, technology and the skillset and managerial ability of the owner-manager. Further, there are differing challenges faced and varying resilience strategies used across SRFSA.

This systematic literature review has provided significant material to answer the three key research questions outlined in the introduction and provide a basis for more research in this area. The three research questions this systematic literature review set out to answer were:

- What are the key industry characteristics that affect small rural farm-support agribusinesses?
- What are the challenges faced by small rural farm-support agribusinesses?
- What strategies do small rural farm-support agribusinesses develop to build resilience?

The characteristics that affect SRFSA can be divided into the four categories proposed in the theoretical framework. The factors that make up each of the four characteristics can be viewed as

influencing the business. This influence ranges from shaping the very business, to providing significant opportunities and challenges to the business.

SRFSAs are important globally and warrant further exploration. The theoretical framework creates a model that can now be tested through other forms of research. Little evidence has been found that there is an understanding of these businesses in the New Zealand context. The authors will embark on a further qualitative, and a further quantitative study to add to the knowledge of SRFSAs, to further understand these businesses, the resilience strategies they employ, and to test and enhance the theoretical framework presented.

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Appendix. Final Selected Literature from the Systematic Literature Review

Author	Year	Journal	Country	Method	Topic
Abdulkadirov et al.	2020	Revista Inclusiones	Russia	Mixed methods	State support for small business development in rural areas.
Abu Hatan et al.	2021	Agribusiness	Egypt	Quantitative	Investigates differences in, and determinants of, COVID19 business risk perception.
Adobor	2020	Journal of Small Business and Enterprise Development	Ghana	Qualitative	Entrepreneurial failure in agribusiness (aquaculture).
Agbenyegah	2019	Academy of Entrepreneurship Journal	South Africa	Quantitative	Demographic variables vs rural small business success.
Albizua et al.	2019	Ecological Economics	Spain	Qualitative	The effects on socio-cultural values from a large-scale irrigation development in Spain.
Alboiu	2018	Scientific Papers	Romania	Mixed methods	A study on the current development of the Romanian vegetable sector.
Ali	2016	International Food and Agribusiness Management Review	India	Quantitative	Analyses the size of food agribusiness firms in relation to business characteristics.
Anim	2010	African Journal of Agricultural Research	South Africa	Quantitative	Effects of extension services (contract farming).
Assfaw Wossen	2018	IDS Bulletin	Ethiopia	Quantitative	Explores the relationship between agricultural transformation, ownership structure of agribusiness and employment.

Ba et al.	2019	Land Use Policy	Vietnam	Mixed methods	Modelling of contract farming and intensification using four models.
Barczyk et al.	2019	Management Theory and Studies for Rural Business and Infrastructure Development	Poland Lithuania	Qualitative	Presents and analyses barriers and opportunities for small business development in rural areas.
Bel & Fageda	2011	Intl. Public Management Journal	Spain	Quantitative	Firm size and contractual awards.
Belay et al.	2017	Environment, Development and Sustainability	Ethiopia	Quantitative	Demand for land, livelihood options for landless households.
Bellemare and Bloem	2018	World Development	Developing	Literature Review	Contract farming associated with an improvement in welfare.
Bjorkhaug & Kvam	2011	Journal of Depopulation and Rural Development Studies	Norway	Qualitative	Growth ambitions and initiatives for growth among male & female owners.
Bowen & Morris	2019	Journal of Rural Studies	Wales	Mixed methods	The impact of broadband access on rural agribusiness.
Brown et al.	2016	Land Use Policy	New Zealand	Quantitative	Identifying the characteristics of innovators
Coetzer et al.	2019	Human Resource Development International	Sweden	Literature Review	The owner managers role as a learning facilitator.

Courrent Spence	&	2016	Revue Internationale PME	Canada	Mixed methods	OM's participation in sustainable practices.
Danzer Grundke	and	2020	Journal of Development Economics	Tajikistan	Mixed methods	Explores how much of the gains in trade improvements makes its way to workers.
de Almeida Zylbersztajn	and	2017	International Journal on Food System Dynamics	Brazil	Qualitative	Aimed to clarify present and future challenges for the Brazilian coffee Agri chain.
de Roest et al.		2018	Journal of Rural Studies	Europe	Qualitative	Argues that farms should have been more focused on marketing and not just scale, production and technology.
Deakins Bensemann	&	2019	Management Decision	New Zealand	Qualitative	Small rural firms' innovation.
Dongliang		2021	Social Sciences in China	China	Mixed methods	Industrialisation and urbanisation has driven a drastic increase in the large-scale transfer of land.
Dzansi		2011	African Journal of Business Management	S. Africa	Qualitative	Attempts to understand how CSR responsibility has permeated small rural African businesses.
Eresia-Eke Okerue	&	2020	Development Southern Africa	South Africa	Quantitative	Owner manager and business coping ability for immigrants from Africa to Southern Africa.
Escalante Turvey	and	2006	Agricultural Finance Review	Canada	Qualitative	Survival challenges for agribusiness start-ups.
Fassin et al.		2011	Journal of Business Ethics	Belgium	Qualitative	Owner-managers perception of ethics and CSP.
Fiore et al.		2007	Journal of Extension	U.S.A	Quantitative	The 4E's - (Educational, Aesthetic, Entertainment, Experience).
Forsyth		2005	Growth and Change	U.S.A	Quantitative	Small business survival rates in Washington State.

Futemma et al.	2020	Land Use Policy	Brazil	Qualitative	Discuss the diffusion and adoption of agroforestry oil palm among small scale farmers.
Giovannucci	2001	Why Agribusiness Matters	-	Other	Unsuitable panel discussion regarding agribusiness and its importance.
Glaub et al.	2014	Academy of Management Learning and Education	Germany	Other	Increasing personal initiative of small firm OM's leads to success.
Godfrey et al.	2018	International Food and Agribusiness Management Review	Pakistan	Qualitative	Government price setting and large supermarket collusion and limitations to small scale dairy farmers.
Govere et al.	2019	Journal of Stored Products Research	Zimbabwe	Qualitative	The factors affecting the design of synthetic insecticide distribution channels.
Greenbank	2006	Journal of European Industrial Training	England	Qualitative	The way social class influences the relationship between business mentors and small business owner-managers. Concept doesn't exist in NZ.
Greenberg et al.	2018	Journal of Rural Studies	Israel	Mixed methods	Growth and success of small business in rural areas and the impact of the business's level of embeddedness.
He et al.	2020	Sustainability	China	Mixed methods	The zero growth in fertiliser plan.
Jackova	2017	Agrarian Perspectives Conf.	Slovakia	Qualitative	How Slovak women conduct business in the fields of agriculture and rural development.
Jeong et al.	2008	Journal of Extension	U.S.A	Quantitative	Enhancing business strategies for rural firms' website strategies using the 4 E's.

Katamadze	2020	International Multidisciplinary Scientific GeoConference SGEM	Georgia	Other	The economics in the Georgian agrarian sector.
Kautonen et al.	2010	Entrepreneurship and Regional Development	Finland	Quantitative	Investigating strong ties.
Kiefhaber et al.	2020	Journal of Business Ethics	New Zealand	Qualitative	Owner-manager engagement with sustainability.
Kilpatrick et al.	2011	Journal of Rural Studies	Australia	Qualitative	Mobile skilled workers and how they can add value to community / vice versa.
Lefebvre	2021	Growth and Change	France	Quantitative	Do business groups in rural regions grow faster when delays in loan repayments are allowed?
Lin et al.	2020	IEEE Access	China	Quantitative	Blockchain technology in agricultural supply chains.
Liu	2021	Economic Development Quarterly	U.S.A	Quantitative	The effectiveness of the Small Business Innovation Program.
Maatman et al.	2007	Advances in Integrated Soil Fertility Management in Sub-Saharan Africa:	South Africa	Other	Fertiliser use in sub-Saharan Africa.
Mabaya et al.	2009	International Food and Agribusiness Management Review	Kenya	Qualitative	Options for seed company Freshco to increase scale in Kenya.
Martin et al.	2013	Intl. Journal of Entrepreneurial Behavior and Research	England	Qualitative	Business growth and eco innovation in rural small firms.

Maulidah and Muhaimin	2021	IOP Conference Series: Earth & Environmental Science	Indonesia	Qualitative	The sustainability business performance of potato industries and formulating the sustainable business model.
Mclver et al.	2018	Journal of Forestry	U.S.A	Quantitative	National forest procurement contracts to identify characteristics associated with the use of local vs distant contractors.
Mohamad Chin	& 2019	Management Science Letters	Malaysia	Quantitative	Business networking and sustainability of rural small business.
Mohr et al.	2010	Public Administration Review	U.S.A	Quantitative	Privatisation - where a municipality contracts out servicing, often via bids, to a private firm.
Mura Kljucnikov	& 2018	Economics & Sociology	Slovakia	Quantitative	Small businesses in rural and agro tourism.
Murphy	2015	Journal of Peasant Studies	Mongolia	Mixed methods	The re-emergence of herding contracts in Mongolia.
Muthiah et al.	2013	Mountain Research and Development	India	Mixed methods	Extension methods for improving the care of livestock in the lower Himalayas.
Ngwenya Mashau	and 2021	Problems and Perspectives in Management	South Africa	Quantitative	Investigates the support for youth SMEs.
Ojo et al.	2020	Environmental and Sustainability Indicators	Europe	Quantitative	The effect of variable external inputs on dairy farms.
Otsuka and Ali	2020	World Development Perspectives	Developing	Literature Review	Separating agro-based clusters into Agriculture Clusters and agro-Industrial Clusters.
Papp-Vary et al.	2019	Conference: Engineering for Rural Development	Hungary	Quantitative	Machinery sharing arrangements.

Parushina et al.	2020	IOP Conference Series: Earth & Environmental Science	Russia	Qualitative	Budget risks in the management of small businesses.
Phillipson et al.	2019	Journal of Rural Studies	England	Qualitative	A comparison of the performance between urban and rural businesses.
Phonsuwan	2011	Procedia Engineering	Thailand	Quantitative	Uses DES to model supply chains in Thailand for the OTOP project.
Pierre	2017	Journal of Rural and Community Development	Sweden	Qualitative	Synergies between small businesses and the town.
Prause and Boevsky	2019	Bulgarian Journal of Agricultural Science	EU	Other	An analysis of existing and ongoing smart contract programmes.
Promsaka et al.	2010	Research Note: Industry Outsourcing and Regional Development in Northeast Thailand	Thailand	Quantitative	Smaller industrial enterprises that outsource production.
Raymond et al.	2013	Entrepreneurship and Regional Development	Canada	Quantitative	What do owner managers perceive performance to be?
Reardon	2015	Oxford Review of Economic Policy	Developing	Literature Review	The transformation of mid-stream of food value chains in developing countries.
Rezaei-Moghaddam et al.	2021	The Journal of Agricultural Education and Extension	Iran	Quantitative	Entrepreneurial resilience of SME's among rural women.
Richbell et al.	2006	International Small Business Journal	England	Qualitative	Small business OM's and business planning.

Rosyad et al.	2019	IOP Conference Series: Earth & Environmental Science	Indonesia	Qualitative	The satisfaction of dairy coop member farmers.
Shore et al.	2011	Academy of Entrepreneurship Journal	U.S.A	Mixed methods	Exploring US small business access to broadband.
Siemens	2010	Journal of Small Business and Entrepreneurship	Canada	Qualitative	The challenges small business in rural towns face.
Sokolova and Litvinenko	2020	IOP Conference Series: Earth & Environmental Science	Russia	Other	Innovation and rural economic development.
Steen and Majers	2014	International Food and Agribusiness Management Review	Ethiopia	Qualitative	Business growth by purchase and quality-based price premium and -strong supply chains.
Sun et al.	2019	The Annals of Regional Science	China	Quantitative	The relationship between social capital and small business success.
Suyantohadi et al.	2020	Conference: Industrial Engineering and operations Management	Indonesia	Qualitative	A business model for small scale soybean yoghurt.
Sycheva et al.	2018	European Research Studies Journal	Russia	Quantitative	The development of small business and improving life in rural areas.
Tampien	2016	Journal of Extension	U.S.A	Other	An innovative approach to providing capital to small business in Washington.

Thuy et al.	2020	Tropical Animal Health and Production	Vietnam	Other	A comprehensive overview of the pork value chain.
Trebbin and Hassler	2012	Environmental and Planning	India	Qualitative	Functions and organisation structure of collective action for farmer producer companies.
Tudor	2015	Studies in Agricultural Economics	Romania	Literature Review	Small farm been adaption post communism.
van der Merwe & de Swardt	2008	South African Journal of Economic and Management Science	South Africa	Mixed methods	The small business OM's perceptions of entrepreneurship and their motives to start a business.
Van Hoyweghen	2020	Journal of Agricultural Economics	Senegal	Mixed methods	Wage employment and rural development.
Wainwright et al.	2019	Livestock Science	Romania	Qualitative	Conservation programmes for rare animal breeds.
Wang et al.	2010	Land Degradation and Development	China	Mixed methods	Diversification of livelihood strategies and the interaction of farmers livelihoods.
Wesz Junior	2021	Journal of Agrarian Change	Paraguay	Mixed methods	Soybean production in Paraguay.
Winters et al.	2010	The Journal of Development Studies	Indonesia	Mixed methods	A transaction cost approach to analyse contract participation, gross margins, labour and chemical use.
Wiwiek Rabiatul Adawiyah	2020	International Journal of Scientific and Technology Research	Indonesia	Mixed methods	What are SME motives to be in agribusiness.

Xhoxhi et al.	2020	Journal of Agribusiness in Developing and Emerging Economies	Albania	Quantitative	The power of intermediaries and contract farmers.
Xiangping et al.	2012	China Economic Review	China	Mixed methods	Farmer professional cooperatives and their record of food safety compliance.
Yu et al.	2013	Agricultural Systems	China	Qualitative	Analysis of land system change and the relation to farmers attitudes in China.
