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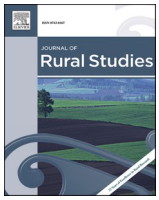

Responding to Greece's constrained agricultural context: Farm diversification strategies used by family farmers

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ABSTRACT

This paper builds on the emerging literature concerning constrained rural entrepreneurship. We explore the context of rural Greece, examining the utility of farm diversification strategies used by farmers to respond to industry constraints. Adopting a multi-method approach, this qualitative study theorises the 'present realities' of Greek farming families. Through a multiple case study exploration of five family farms, which includes twenty-five in-depth semi-structured interviews with members of these farm families, we explore farmers' lived experiences in relation to their constrained institutional contexts. Our qualitative analysis, which identifies four original themes, leads to the theorisation of the exogenous and internal challenges within the sector that continue to constrain rural entrepreneurial potential. Findings highlight how farmers' diversification strategies are crucial in enabling farm family households to respond effectively to the sector's increasing challenges, ensuring business survival. These diversification strategies offer significant benefits to farmers, providing sufficient value-added activities that support rural retention within farm family households. Implications for practice and policy suggest a greater need for the development of entrepreneurial and strategic skill sets. Further research is needed to help establish a conducive—not constraining—environment that supports farm entrepreneurship strategies.

1. Introduction

Greece in recent years has undergone a series of financial, health, and energy-related crises, creating continuous changes in the economic and social environment (Maris et al., 2022). Throughout this work, we examine the exogenous challenges and internal/personal constraints facing Greek farmers. We explore their 'present realities' (Maye et al., 2018), aiming to understand how farming families can utilise farm diversification strategies to respond to their Constrained Institutional Contexts (CIC's).

This work contributes to the emerging literature on 'constrained rural entrepreneurship' (Gittins et al., 2022; Gittins and McElwee, 2023; Refai et al., 2023). Responding to calls for more context-specific entrepreneurship research (Welter, 2011) and stronger theoretical foundations in rural studies (Suess-Reyes and Fuetsch, 2016; Fitz-Koch et al., 2018), we adopt institutional theory (North, 1990; Scott, 2001) as our framework, theorising constraints facing farm entrepreneurs.

We extend Gittins et al. (2022)'s work by offering a nuanced understanding of CICs in rural Greece, theorising entrepreneurial farmers' lived experiences. We develop four original themes to examine how farm diversification strategies help entrepreneurial farmers navigate challenges within their unique institutional environment. Despite the increasing adoption of such strategies in practice, research on how farmers have utilsied farm diversification strategies to navigate their CICs remains limited. By applying the CIC lens to rural Greece—a setting with distinct institutional constraints—we build on CIC literature from the UK uplands (Gittins et al., 2022), Jordan (Refai et al., 2023), and Egypt (Elkafrawi et al., 2022), providing a deeper understanding of the challenges facing rural entrepreneurs.

Empirically, our work builds on previous rural enterprise literature, examining resource-constrained environments. Our findings build on the work of Lokier et al. (2021), expanding on the motives for farm diversification, the utility of the strategy, and its role in the context of the farm family household. Specifically, we find that diversification

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activities, including vertical integration, are of great significance, providing Greek farmers with [entrepreneurial] opportunities to fill gaps in the local and regional rural economy. Family retention is found to be an important motivator for pursuing farm diversification. Diversifying away from conventional farm activities offers in-house opportunities that are attractive enough to give farm family members a greater sense of meaning. Thus, providing an incentive for the farm family to remain on farm and in rural employment-counteracting rural-urban migration. In alignment with De Rosa et al. (2019), although situated in a different geographical context, we find that farm diversification strategies are useful in responding to policy initiatives.

Our central research question guiding this study is.

- 'What value do farm diversification strategies offer family farmers in responding to the constraints and challenges present in Greece's agricultural sector?'

This work is structured as follows: It begins with an overview of Greece's constrained agricultural context. We then situate the research within rural studies and entrepreneurship literature, conceptualizing the 'entrepreneurial farmer' and identifying relevant critiques and research gaps. A qualitative methodology, based on five family farming case studies, is then outlined. We present four original themes from the thematic analysis, supported by interview extracts illustrating farmers' lived experiences. Finally, we summarise the empirical and theoretical contributions, limitations, and future research areas.

2. Greece's constrained agricultural context

2.1. Socio-economic constraints

Most businesses in Greece's rural areas are micro-enterprises, primarily producing agricultural goods (Zaridis et al., 2015). In 2021, agriculture contributed about 3.9% to Greece's GDP, generating €5.7 billion in net income (Pliakoura et al., 2021; ELSTAT, 2022). Of Greece's 530,678 agricultural holdings, 615,520 people are employed in agriculture: 408,620 full-time, 191,232 part-time, and 15,668 who farm alongside other jobs (ELSTAT, 2021). Many farmers supplement income through diversification strategies like agrotourism, direct selling, and recreation, which are increasingly popular (Eurostat, 2023).

Greece is the world's third-largest producer of olive oil, with Messinia in the Peloponnese contributing about 40,000 tonnes annually. Ranking 14th globally in wine production, Greece produces around 2 million hectolitres per year. Sheep farming is significant with over 100,000 farms, while cattle farming is smaller, with around 30,000 farms. Financial sustainability remains a challenge in European farming, with over 5.3 million EU farms (a 40% decrease) failing since 2005, as larger farms increasingly absorb small-scale farms (Eurostat, 2023).

In line with EU policy, the Greek state has introduced various policies supporting agricultural and rural development (Pliakoura et al., 2021), with European and domestic financial instruments acting as critical resources (European Commission, 2017). However, subsidies can sometimes deter entrepreneurial strategies by providing income security, reducing farmers' incentive to pursue riskier ventures (Gittins et al., 2022). The subsidy system, based on land ownership, tends to favour larger farms, leaving smaller Greek farms—averaging 6.6 ha—constrained by limited resources and economies of scale (Pissarides et al., 2020; Anthopoulou et al., 2017).

Greece's agricultural sector struggles with productivity due to low technology adoption and limited R&D spending (€11 per hectare versus €33 in Europe) (Pissarides et al., 2020). Traditional practices, an ageing population, and low education levels further hinder innovation—only 20.6% of the rural population has completed high school, and 5.5% have vocational training, compared to the EU average of 20.2% (Pissarides et al., 2020). Additionally, over 55% of Greek farm managers are above 55, with just 6% under 35, affecting entrepreneurial development (Staboulis et al., 2022).

The above highlights some exogenous constraints. Now, we position our research within the context of rural studies and enterprise research.

2.2. Conceptualizing the entrepreneurial farmer

In academic literature, defining an 'entrepreneur'—especially a rural or farm entrepreneur—is challenging due to a lack of consensus (Shane and Venkataraman, 2000). Conceptualizations vary, from viewing entrepreneurs as self-employed individuals to analysing factors influencing entrepreneurial capacity, including innovation, opportunity recognition, risk management, and value addition (Filion, 2001).

Different disciplines often define terms independently (Filion, 2001). In entrepreneurship, the role of 'context' is gaining attention, illustrating how context shapes entrepreneurs' actions and how they, in turn, shape their contexts (Welter, 2011). Business and enterprise management literature has traditionally emphasised urban settings (Dias et al., 2019; Fitz-Koch et al., 2018). However, some scholars like McElwee (2022) have questioned whether 'rural entrepreneurship' deserves its own distinct classification, arguing it may simply be another setting for entrepreneurship, with their being little difference between urban and rural entrepreneurs.

However, Mayer et al. (2016) argue that rural contexts are distinct from urban ones, presenting unique economic, social, and environmental constraints for entrepreneurs. Rural features like farmland, mountains, low population densities, and wildlife create an environment where businesses rely on resources unique to rural areas.

In rural settings, geography, embeddedness, and regional development are key areas of study. Research shows that rural entrepreneurship benefits both farmers and the local economy (Korsgaard et al., 2015) and supports regional development (Saxena, 2012). Saxena (2012) highlights that farm entrepreneurship drives economic growth and improves rural living standards, while Bannor et al. (2021) emphasise its role in reducing rural poverty.

Multifunctional farm businesses also contribute to sustainability goals, such as the UN's Sustainable Development Goals (Apostolopoulos et al., 2018). Definitions of rural entrepreneurship often include new product creation by both farming and non-farming enterprises. Typology frameworks, like McElwee's (2008a) model, identify four main farmer types: farmer as farmer (non-entrepreneur), entrepreneurial farmer, farmer as contractor, and rural entrepreneur (not farmer). These frameworks are valuable in recognising the diverse nature of farmers, which rural policymakers often overlook. Other typology frameworks, such as Gittins et al. (2022), conceptualise not only 'the farmer' but differentiate between 'the farm' and 'farm business strategy.'

We focus on entrepreneurial farming families, defining entrepreneurs as individuals—owners or tenants—engaging in value-added activities, utilising innovative strategies, and recognising new market opportunities (Filion, 2021). By this definition, not all farmers qualify as entrepreneurial. To identify 'entrepreneurial cases,' we draw on rural enterprise typologies (McElwee, 2008a; Gittins et al., 2022), but also acknowledge the practical limitations of these frameworks. Typology frameworks should not be mistaken for empirical reality. To overcome this limitation, we draw on McElwee and Smith's (2012) Farmer Segmentation Framework (FSF) to assist us in our conceptualisation and later identification of entrepreneurial family farm cases.

2.3. The Farmer Segmentation Framework

The FSF, developed by McElwee and Smith (2012), is an analytical

Table 1
Conceptualisaing the entrepreneurial farmer (adapted from Gittins et al., 2022; McElwee and Smith, 2012).

Personal Characteristics of the Farmer	Business Characteristics	Business Activities and Processes
• Age: Typically younger. • Gender: Either gender, female farmers tend to be very entrepreneurial. • Ownership Status: Most likely will be owner as tenant farmers often face more binding constraints.	• Size: Could be small but very innovative, or large due to success. No hard rule on size. • Contributes to the regional development of the location, often heavily embedded in the local economy. • Focus: Multifunctional, likely has moved away from livestock/cropping as central activity.	• Technology: typically adopts higher levels of technology adoption • Innovation based, constantly alert to new opportunities • Strategy: diversification very likely to be central to the business • Support Networks: engaged in professional business and advice networks

framework designed to conceptualise entrepreneurial farmers and their motives for farm diversification. McElwee argued that traditional strategic management frameworks, such as Porter's Generic Strategies Model and the Ansoff Matrix, are inadequate for farming businesses, necessitating a tailored framework for analysing these business models. The FSF has been applied in prior qualitative research in rural enterprise and studies (De Rosa et al., 2022; Gittins and McElwee, 2023). It has three levels of analysis to conceptualise the entrepreneurial farming unit.

- Personal Characteristics: Understanding the farmer.
- Business Characteristics: Understanding the farm enterprise.
- Business Activities and Processes: Understanding how the farmer behaves.

In this paper, use the FSF to develop our conceptualisation, shifting focus away from solely the personal characteristics of 'farmer' to a focus on the 'farm family household.'- something not presently captured in the original FSF. Specifically, we explore the distinct roles within the farm family (e.g., active farmer, farmer's wife, grandparent, children), the division of labour (i.e., responsibilities for specific activities), decision-making processes (high or low levels of authority), and the development of skillsets (high or low aptitude for learning new skills).

Table 1 presents our conceptualisation of an 'entrepreneurial farmer', drawing on the layers of the FSF in relation to the 'entrepreneurial farmer' type outlined by Gittins et al. (2022).

Traditionalist farmers (Gittins et al., 2022) tend to be older, resistant to change, focused on cropping and livestock, use minimal technology, and depend on close family networks. Conversely, 'entrepreneurial farmers' are typically younger, degree-educated, actively network to build social capital (Putnam, 2000), and frequently adopt farm diversification strategies.

2.4. Farm diversification

Farm diversification is a central theoretical concept explored in this paper. Anderson et al. (2006: 3) define it as "sett[ing] up businesses which can augment their farm income and allow them to continue to live on the land."

Motives for farm diversification vary, from economic necessity to pursuing new income opportunities, often described as push or pull factors (McElwee, 2008a; Lokier et al., 2021). Farmers initiate on-farm activities like feed stores or wineries, as well as off-farm options, such as butchers or wine bars, to diversify income and strengthen household resilience. Many are increasingly pluriactive, relying on both farm-based and external sources, but our focus remains on farm-based diversification, examining how these connected ventures help family farmers respond to their CICs.

In Greece, as in many other countries, diversification away from conventional food and crop production helps rural families enhance income and develop farm business resilience. Daskalopoulou and Petrou (2002) note that alternative income streams can revitalise farms and rural areas, offering a promising path for development. Still in 2024, many farmers continue to farm in conventional ways.

2.5. Theoretical underpinning: responding to constrained institutional contexts

We are interested in exploring CICs in relation to farmers in rural Greece.

Institutions are regarded as the 'rules of the game' (Boettke and Coyne, 2009), they are the human-imposed elements that structure social actions (North, 1990; Scott, 2001). They can be categorised as either formal or informal in nature. They differ depending on country, region, and localities and, we believe, are essential in understanding if one is to truly understand the given context under investigation. Thus, institutions are context (Scott, 2001).

We define the 'constrained' aspect in business as when institutional forces (formal or informal) restrict entrepreneurs from executing their intended strategies, leading to what we term constrained rural entrepreneurship. However, not all institutions are purely restrictive; De Rosa et al. (2022) highlight how institutions can foster 'conducive' environments for rural entrepreneurship. Entrepreneurs, as active agents, influence and reshape both formal and informal institutions—impacting laws, regulations, norms, and cultures. While institutions shape entrepreneurs, entrepreneurs also reciprocally shape institutions. Our focus is on institutional constraints to entrepreneurial behaviour, exploring the under-researched area of constrained rural entrepreneurship.

Formal institutions, such as rules, laws, and regulations, help to establish the 'rules of the game' (North, 1990), shaping the entrepreneurial ecosystem. Other actors, beyond entrepreneurs and rural policymakers (broader stakeholders such as the general public, taxpayers, and lobby groups), also play a role in the co-construction of these institutions. Those entrepreneurs with access to greater resources, skills, and knowledge can often navigate and influence the CIC better than others.

Informal institutions refer to things like cultural norms, social ties and family, likewise influencing the context [farm] entrepreneurs must strategically navigate (Zaridis et al., 2015). Indeed, farming has much tradition, heritage, and cultural aspects that shape the contextual environment (Gittins and McElwee, 2023). Informal institutional aspects like trust, group cohesion (bonding), and weak ties (bridging)—collectively termed social capital (Putnam, 2000)—are crucial in rural contexts.

In farming, networks are essential. Entrepreneurial farmers, like their urban counterparts, build connections beyond family,

Table 2
Constructing our cases via the adapted FSF.

Farm Family Household	Farm Business	Business Activities and Processes
Roles within the family: *What is your role in the farm business?*	Location: *Tell me about your farm? Why have you decided to stay?*	Role of technology adoption: *Do you use technology/software? How does it aid the business?*
Division of labour: *Who often comes up with new ideas for the business?*	Challenges: *How is business going?*	Nature of support networks: *Who do you turn to for advice?*
Decision-making processes: *How is decision-making handled? Who makes the key decisions?*	History: *Tell me about the history of your farm and business development.*	Nature of diversified activities: *Why did you decide to diversify the farm business?*
Development of skillsets: *What skillsets do you bring to the business?*	Produce and size: *What are your main products?*	Level of strategic thinking: *What is your strategy/long-term goals for the farm business?*

incorporating weak ties that enable new ventures and innovation (McElwee, 2008a). Arnott et al. (2021) found that UK farmers in Agricultural Environmental Schemes show higher bridging social capital (connections beyond family), while those outside these schemes display stronger bonding capital within close-knit communities. Traditional farmers often focus on close bonds, shaped by rural factors like proximity, isolation, and farm succession. Limited social capital can restrict rural entrepreneurs, curbing growth and innovation.

Rural Greece is shaped by formal (e.g., policy, regulatory) and informal (e.g., family, culture, network ties) institutional factors that

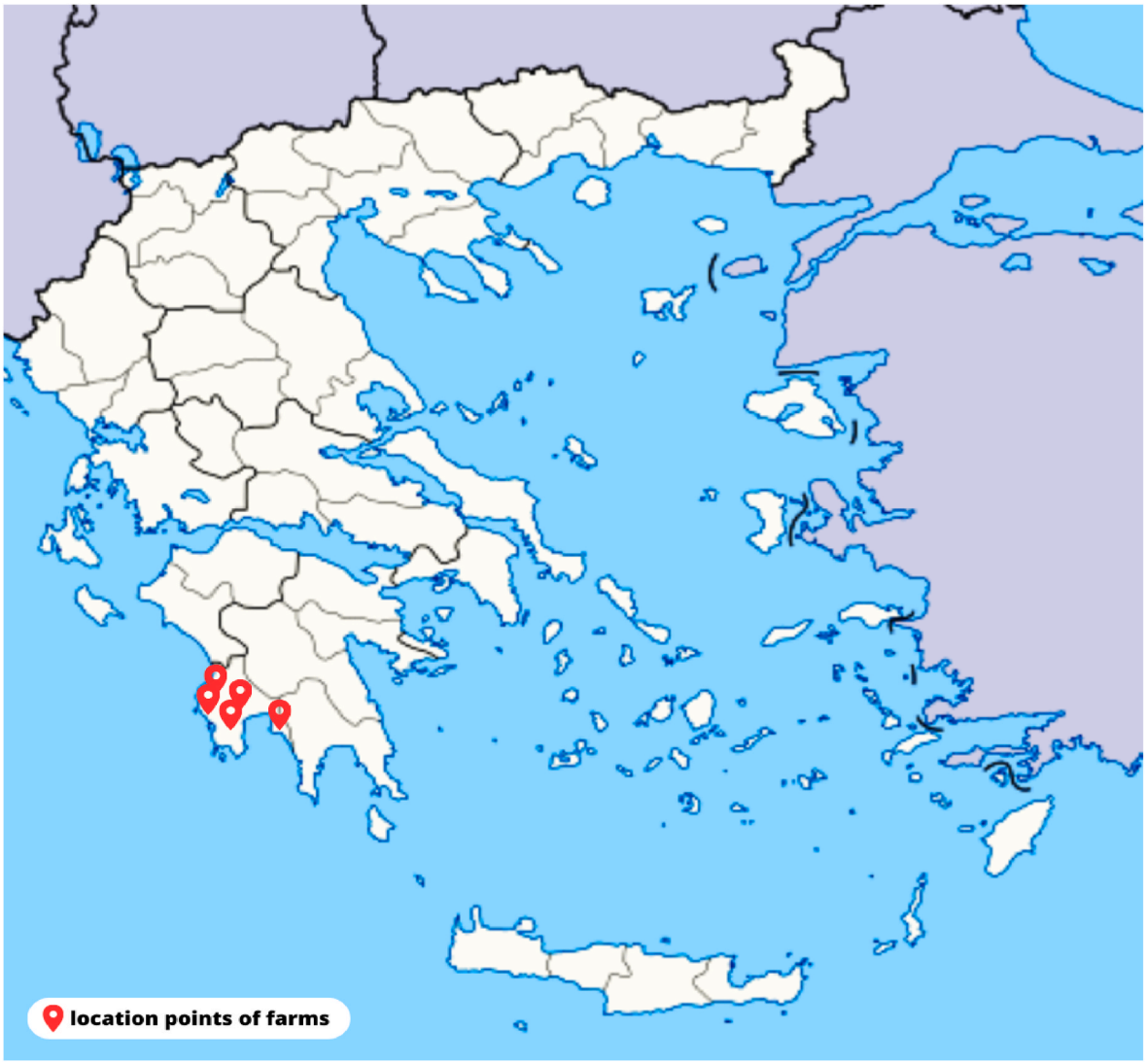

Fig. 1. Map of Greece (showcasing The prefecture of Messenia).
Source: By Lencer, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=4432468, Equirectangular projection, N/S stretching 120 %. Geographic limits of the map: N: 42.0° N S: 34.6° N W: 19.1° E E: 29.9° E

influence entrepreneurship. Familial institutions are particularly significant, with strong social ties to birthplaces and family central to farm business decisions (Anthopoulou, 2017; Kasimis and Papadopoulos, 2013). Our cases reflect this, as families chose entrepreneurship within the CIC over often higher-paid urban employment.

Formal and informal institutions often create CICs for rural actors, yet these contexts remain under-researched in rural entrepreneurship, especially concerning farm diversification (Refai and McElwee, 2023). Gittins et al. (2022) highlight constrained rural entrepreneurship as an area requiring further focus, with CICs not yet examined in rural Greece. Our study addresses this gap, exploring CICs in Greece (Gittins et al., 2022; Refai et al., 2023) and responding to calls for stronger theoretical frameworks in rural entrepreneurship (Suess-Reyes and Fuetsch, 2016; Fitz-Koch et al., 2018). We contribute to discourse on how context shapes entrepreneurship (Welter, 2011), examining the underexplored role of farm diversification within CICs.

3. Methodological approach

Responding to calls for more research to consider the 'present realities' of farmers (Maye et al., 2018), we adopt a qualitative approach based on an analysis of five entrepreneurial farm cases.

An interpretative philosophical approach is used to explore the world through participants' lived experiences, as called for in entrepreneurship literature (Hidegh et al., 2022). This approach is still scarce in rural enterprise research, where scholars often favour more functionalist and quantitative methods (McElwee, 2008b). However, we argue that research must sometimes go beyond quantitative questionnaires and secondary data analysis (McElwee and Gittins, 2024).

Five cases were selected using a non-probability convenience sampling method, informed by McElwee and Smith's (2012) FSF. This multiple case analysis enabled an in-depth exploration and comparison between cases, addressing the generalisability limitations associated with single case studies. A relatively small sample size, contextualized to one region, allowed us to conduct in-depth interviews and not lose focus of the subjective and individualised characteristics of our cases.

Our selection focused on cases where diversification was central to the business strategy, excluding conventional farmers with minimal or no diversification who are exclusively crop and livestock focused. We concentrated on entrepreneurial farmers in Greece who actively pursue diversification, involving both on- and off-farm activities. Although farm diversification is central, the farmers also pursued other business strategies, such as those outlined by Smith et al. (2017), including improving product offerings (i.e., differentiation-based strategy), cost-cutting strategies (i.e., cost leadership), and vertical integration (i.e., owning different parts of the supply chain). The key thing with our case identification was that farm diversification had to be a central part of the business.

Data collection occurred in person on the farms in summer 2023, through 25 semi-structured interviews. This approach offered a broader perspective (Riley, 2014) than focusing on a single 'farmer.' The sample size was deemed adequate based on relevance and sufficiency principles (Moser and Korstjens, 2018). We conducted five interviews per case to ensure data saturation. Interviews with various farm members, including the founding grandfather, the current active farmer, and children who stayed despite considering leaving, provided diverse perspectives.

Ethical standards were followed to protect researchers and participants. Pseudonyms were used to ensure participant anonymity and informed consent.

To understand the family level of analysis, we needed access to the 'farm family.' Low and MacMillan (1988) recommend considering various units of analysis, such as the individual, business, and environment, when researching entrepreneurship. By interviewing different farm members and using the FSF framework, we were able to examine units including the farm family household, the farm business, and farm activities and processes, aligned with the FSF's three aspects. Table 2 below details the considerations that shaped our case understanding and provides examples of interview questions used.

Interviews lasted on average 1 h, resulting in around 25 h of interview data. To interpret this data, we followed Clarke et al. (2015) six-stage Thematic Analysis.

(1) Data familiarisation
(2) Generation of initial codes
(3) Searching of themes
(4) Reviewing of themes
(5) Defining themes
(6) Producing a report

Thematic Analysis allows researchers to systematically identify, analyse, and report themes within data sets. We used NVIVO software for the analysis of interview transcripts. Manual transcription familiarised us with the data (step 1), which led to initial coding (step 2). These codes were then organised into categories (step 3) and refined into themes and sub-themes (step 4). A document summarising the key themes was created (step 5), and, following an abductive approach (Okoli, 2023), we revisited the literature to contextualise findings within research gaps. The final report of themes was then circulated among the research team for review (step 6) We identified four original themes.

An abductive approach (Okoli, 2023) enabled us to integrate deductive and inductive reasoning, beginning with incomplete observations to seek plausible explanations for observed patterns. Unlike inductive reasoning, which develops theory solely from data, or deductive reasoning, which tests existing theories, abduction allowed us to explore emerging themes while revisiting literature to interpret new patterns. This flexibility enabled us to apply established theories, like institutional perspectives and CICs, while remaining open to naturally emerging insights, aligning themes with our research question and supporting each with interview quotes (Clarke et al., 2015) for a more comprehensive analysis.

3.1. Research context

This research site provides a rich and complex setting for exploring rural entrepreneurship. The study was conducted in Messenia, Peloponnese, a region renowned for its extensive olive oil production, which plays a significant role in the local economy and culture (Fig. 1).

This region faces intense socio-economic challenges, heightened by Greece's ongoing financial crises. The area faces climatic adversities, such as high temperatures and dry conditions, which pose significant threats to agricultural yields and sustainability.

The research team identified five relevant enterprises in the Messinia prefecture of the Peloponnisos region, an area noted for high agricultural production and a significant contribution to Greece's GDP growth, particularly compared to other Greek prefectures. Economic development in this area has also increased over recent decades. These cases are particularly unique, as family farm enterprises with an entrepreneurial focus are relatively rare in this part of southern Greece, where most are conventional farmers. The participating farm families included members from different generations, both older (70+) and younger, providing a comprehensive view of the entrepreneurial farming unit.

Specific details of each entrepreneurial family farm case, in relation to the FSF, is outlined below (Table 3).

Table 3
Cases positioned within the adapted farmer segmentation framework.

Farm Cases	Type Of Farm	Region/Area	Family Household Characteristics	Business Characteristics	Business Activities
Case 1	Poultry Farm	Semi-mountainous area with 89 permanent residents	- Father 73: poultry production - Wife 72: poultry production - Son, aged 47: sales - Son's wife, 46: sales - Grandson 22: responsibility for the feed store	−5 people work in the family rural business. - Family members related by family ties. - EU subsidies for poultry farm. - Retailing products through own shop. - Distribution of animal feed.	- Distribution of chickens and ostriches in local supermarkets and smaller shops. - Packing and selling eggs under own brand name. - Retail shop selling poultry products and animal feed.
Case 2	Livestock Farm	Coastal area with 650 inhabitants	- Grandmother 76 - Father 49: production, milking, slaughterhouse, financial management - Woman 47: retailing - Two children 20 and 19: retailing	−5 people engaged in family rural business. - Family members related by family ties. - EU subsidies for livestock farm. - Cooperation with cheese dairies. - Retail meat shop.	- Distribution of milk production in cheese dairies. - Distribution of sheep's wool to textile units. - Distribution of leather to tanneries. - Retailing meat products, sausages, souvlaki.
Case 3	Winery	Semi-mountainous area with 768 permanent residents	- Grandfather 82: vineyard cultivation, supervision, winery operations - Father 55 production, winemaking, management, promotion - Wife 46: winebar - Daughter 24: oenologist, production, marketing	- Family business dating back to 2002. - 4 family members employed. - 5 permanent staff, 15–20 seasonal staff during harvest. - EU subsidies for cultivation. - State-of-the-art winery in 2005.	- Offering products in Greece and 10 foreign countries. - Selling in delicatessen shops, boutiques, restaurants-bars. - Wine tastings in cellar-wine bar.
Case 4	Bio-Livestock Farm	Mountainous area with 102 permanent residents	- Brother 1st, 50: organic calves breeding, processing, sales, marketing - Wife 43: processing, sales, marketing - Two children aged 16 and 17 - Brother 2nd 45: coordinates the breeding of cows and calves.	- Family livestock business since 1950. - Breeding of goat-ewes and calves. - Organic certification in 2001. - State-of-the-art stables and laboratory in 2017.	- Breeding and processing organic calves. - Vacuum-packed meats, organic sausages, burgers. - Wholesale and retail sales in Kalamata and various locations in Greece.
Case 5[a]	Olive Oil Mill & Olive Oil Bottling Plant	Semi-mountainous areas with 362 and 315 inhabitants	- Father 62, coordinator: olive cultivation, oil mills, standardization, accounting, promotion - Son 31: olive cultivation, oil mill, standardization, promotion - Daughter 35: oil mill, standardization, accounting, bureaucratic issues	- Family business since 2012. - 3 employees, 12 seasonal workers. - State-of-the-art olive mill and bottling plant. - Capacity of tanks: 1 million tonnes.	- Olive oil standardization with international awards. - Table olives from Kalamata. - Products sold domestically and abroad. - Formation of a group of olive oil producers cooperating with the business.

[a] All farm names and individual names have been anonymised as part of ethical agreements.

Table 4
Thematic table.

Theme	Sub-themes
1. Critical constraints facing farmers	• Increasing bureaucracy • Environmental regulations • Natural resources • Institutional support • Crisis impacts
2. The value of Farm Diversification as a Business Strategy	• Value-added activities • Family retention • Vertical integration • Differentiation
3. The Role of the Farm Family in Strategic Orientation of the Farm Business	• Educational background • The division of family farm labour • Support networks and skillsets
4. Local/Regional context and rural entrepreneurial opportunities	• Location • Proximity • Conducive, not Constraining Rural • Local rural labour force

4. Findings and discussion

In this section, four original themes identified through the Thematic Analysis are presented and discussed in relation to the literature (Table 4).

4.1. Critical constraints facing farmers

4.1.1. Increasing bureaucracy

A number of institutional (regulatory) constraints are impacting farmers. Notably, tensions arise between grant access and income streams. Case 2 illustrates how their ability to generate income through diversified activities led to disqualification from government farm upgrade programmes.

Case 2 states:

'Unfortunately, I couldn't get into an upgrade programme for my farm. The government agencies rejected me because 51% of the income had to come exclusively from the herd of sheep. The diversification I made into the retail sector provides me with an income of more than 51% of my total income.' (Giannis – Husband, Father)

Conflicts arise between generating income from conventional agricultural practices versus diversified income sources. Indeed, increasing levels of bureaucracy have been highlighted in the rural literature (Gittins et al., 2022; Bonell and Vaccaro, 2022). Our research highlights trade-offs between planned farm diversification strategies and government subsidies and farm infrastructure grants.

Contrary to rural enterprise literature (Gittins et al., 2022), our findings reveal that diversification, often adopted to avoid bureaucracy, can itself impose constraints. Policy incentives favour conventional farming, discouraging entrepreneurial ventures, and grants for traditional farms exclude many entrepreneurial farmers. With 55% of Greek

farm managers over 55, the complexity of bureaucracy poses added challenges for older farmers facing these restrictions.

4.1.2. Environmental issues

Environmental issues influenced by climate change have impacted the ways farmers operate their businesses, creating both constraints and entrepreneurial opportunities for some. Case 2 states:

> 'The impact of climate change on drought is huge. Animals once lived off the grasses of nature alone. Now we have to give them ready-made feeds.' (Giannis – Husband, Father)

Farmers in drought-prone areas like the Peloponnese are facing degraded natural resources due to climate change, leading to higher costs as they increasingly rely on purchased feed. Prolonged drought over the past decade has affected cropping and livestock farming, motivating some, like Case 1, to diversify by opening an animal feed store to support both their farm and local livestock farmers. In areas like Messenia, known for aromatic and medicinal plants, environmental degradation impacts the quality of products like milk and meat, and while certified organic feed can help, it raises operating costs.

Environmental legislation (e.g., formal institutions) is a key motivator for diversification for farmers. Case 5 highlights the importance of staying up-to-date and exceeding legislative requirements. Case 5 states:

> 'Our business, without the State imposing it on me, has been working with a two-phase system since 1997 because this way we reduce the environmental footprint and the processing of the olive fruit is better, resulting in a higher quality of the olive oil produced.' (Giorgos – Husband, Father)

Case 5 showcases strategic thinking capabilities and a commitment to environmental sustainability, having adopted a two-phase system nearly thirty years before legislation came into effect. They find that reducing the environmental footprint, improving product quality, and decreasing production costs are synergistic. Case 5 illustrates a proactive, rather than reactive, approach to compliance with regulation.

Environmental factors, such as the greening of agricultural and rural development policies, are altering the CIC in which farmers navigate. New environmental legislation is forcing farmers to change and adapt. While some are proactive and have developed strategic foresight to navigate, and even prosper under, this regulation, it will likely force others out of business. Despite EU efforts to promote sustainable farming initiatives, farmers in Greece continue to navigate the sudden environmental crises like droughts and wildfires.

4.1.3. Institutional support

All cases noted that while government support is essential for farm viability in Greece, it primarily aids conventional agriculture and offers little incentive for entrepreneurial, income-generating activities. Farmers call for more state support for diversified ventures, highlighting tensions between entrepreneurial and traditionalist farm identities.

> 'Diversification helped us immensely. Combined, the two enterprises make up a puzzle with a great result. If we had more help from the state, then we would have made more progress. When I talk to young people, I urge them to get involved in the primary sector - but linking production to tourism, and helping to improve the local economy. Without this, there can be no development in our own regions.' (Giannis – Husband, Father)

Entrepreneurial farmers are constantly seeking ways to add value and diversify their business models to remain both competitive and sustainable. However, the existing subsidy framework (i.e., formal institutions) often caters more to maintaining traditional farming practices, providing minimal motivation for these farmers to pursue more innovative, and even riskier, business strategies.

This finding highlights a critical gap in institutional support for farm diversification, revealing a pressing need for policies that not only encourage but actively support farmers in exploring new growth avenues—helping to build a conducive rural environment (De Rosa et al., 2022). This might include providing targeted financial incentives, as well as technical assistance and educational resources tailored to the needs of farmers seeking diversification. Bridging this gap could unlock significant potential for rural economies, establishing an environment where entrepreneurial farmers are not just surviving but thriving through opportunity-driven, rather than necessity-driven, entrepreneurship.

4.1.4. Responding to [on-going] crisis

Many participants also speak of how previous and ongoing crisis events are causing constraints to their farm businesses. Case 2 states:

> 'We have been living in an environment of crisis for years. We had the economic crisis and now the health and energy crises … In such difficult times, we cannot proceed with any plans for entrepreneurship … [1] We used to have such big plans.' (Eleni – Wife, Mother)

The above quote illustrates how Greece's ongoing economic crisis continues to constrain farmers' plans to diversify. With a 26% decline in the number of farm businesses in Greece since 2009, dropping from 723,006 to 530,678 (ELSTAT, 2022), many farmers are reluctant to make costly investments in their farm businesses.

Many farmers spoke of waiting for the crisis periods to pass. However, this perspective differs depending on who in the farm business you are speaking to, thus, temporal aspects needed to be considered.

The farm holder or grandparents, for instance, have already invested considerable time into the farm business and want it to continue. There is deeply rooted sentimental value held here, and they have enabled the business to survive and thrive through prior crisis events.

Farm children, on the other hand, might be less willing to commit their careers to a business (and industry) that is facing economic turmoil. It is easier for them to leave if they wish; they have less invested.

Temporally (Welter, 2011), different members of the farm family are at different life stages – while the farm owner/parents may have developed resilience over time and may be waiting for the crisis to pass, members of the farm family might not want to invest the next few years of their lives in the business during this time. They may look for opportunities elsewhere. Case 1 states:

> 'If the crisis continues, I fear that my daughter and son-in-law will also withdraw from the family business. They will look for better conditions abroad.' (Maria – Wife, Mother)

Indeed, diversifying outside of agriculture and into other industries with less market uncertainties and more profitability might be an option for some family farms.

4.2. The value of farm diversification as a business strategy

4.2.1. Adding value to the farm enterprise: new income streams and differentiation

For many, diversification has allowed farmers to respond effectively to the institutional constraints facing their businesses (De Rosa et al., 2019). It has enabled farmers to add value, gain ownership and control over their products, find suitable markets for selling their products, and create innovative businesses in which the farm family wants to actively contribute.

Case 2 highlights the importance of this strategy to their business:

[1] Throughout the paper, ellipses (' … ') are used to indicate non-essential parts of the original text that have been omitted without altering the overall meaning.

'You simply can't survive without diversification. If we only had the livestock unit, we would have a huge problem.' (Tasos, Son)

Likewise, Case 1 states:

'No one can survive in the agricultural, livestock, and poultry sectors without diversification. If we had not opened the second business to supply animal feed to the first, it would have led to bankruptcy.'

This finding, in line with previous literature (Vik and McElwee, 2011), underscores how farm financial sustainability can be achieved through this strategy. Without diversification, survival would have been unlikely.

Our findings highlight linkages between farm diversification and wider social aspects, which have been less studied. Greenberg et al. (2018) emphasise the variety of entrepreneurial activities in rural areas that lead to new products and services, enhancing the quality of life in rural communities.

While external factors like high unemployment rates and rural migration continue to constrain Greece's rural areas, these factors often push rural actors towards entrepreneurship. This, in turn, leads to further regional development. Our participants had diversified their farm activities in remote villages by integrating livestock units vertically, enhancing olive oil production, establishing wine bars, cafés, and guesthouses, packaging products, and creating special dishes. All of which have contributed to the revitalization of a declining rural economy.

4.2.2. Family retention

One of the most interesting findings came from case two, where one of the farm children said:

'If it was only the livestock unit and we did not pursue other activities, I would have left this place long ago.' (Panagiota – Daughter / Case 2)

This is interesting as it highlights some pressing social issues within the agricultural sector - a lack of willing successors and challenges in retaining/attracting new entrants into the industry. Our data indicates that diversification is an important factor in family retention.

Jervell (2011) highlights the need for farm strategies to align with family social values to retain members. Our findings reveal that diversification not only benefits the business but also enhances family bonds, providing roles and purpose beyond traditional farming. This fosters autonomy and agency among younger members, supporting family retention and countering rural depopulation trends in Greece (Jervell, 2011). Rather than leading to land abandonment, non-traditional activities strengthen family involvement and are vital for farm sustainability (López-i-Gelats et al., 2011).

4.2.3. Vertical integration

Case 1 highlights how vertical integration – the acquisition of other supply chain functions in the agri-food chain – was a central component of their growth ambitions.

'The farm probably would have closed if we hadn't opened the animal feed store. The poultry farm unit is enhanced by the animal feed store. Through the creation of animal feed, we control the quality of feed for our own farm and supply feed to the local market. We also have cheaper feed for our own unit than if we bought it from someone else. The operating and production costs are very high, and if we did not diversify, the poultry farm unit would not be viable.' (Dimitris – Husband, Father).

Our findings here build on the work of Smith et al. (2017), providing insight into the value vertical integration has to the farm business. We also build on Gittins and McElwee's (2023) work, highlighting the importance of resource dependence.

In contrast to their work, we illustrate how entrepreneurial, as opposed to traditionalist, farmers generate opportunities to combat constraints – as opposed to merely seeking to cope with them.

Instead of being reliant on others for essential input resources (i.e., animal feed) and coping with the constrained context – probably leading to business failure eventually – they take it upon themselves to create this essential link in their supply chain via vertical integration and diversification strategies.

4.3. The role of the farm family in the strategic orientation of the farm business

4.3.1. Educational backgrounds

Education is found to be an important factor regarding farm diversification, but educational levels varied depending on the role in the farm household. For example, some of the grandparents interviewed had received very limited formal education. Case 2 states:

'I don't have any education. I don't know how to read or write. I had lived in poverty and struggled very hard to raise my six children. My husband died, and I told my husband that I would handle the flock of sheep.' (Olymbia- Grandmother)

Despite not having formal education, they possessed strong technical skills, enabling them to be multi-skilled and support a variety of farming operations. Such skills included livestock husbandry, basic electrical work, plumbing, machinery repair, and construction. These skillsets are largely absent from the younger farmers.

But despite receiving limited education, often not through personal choice, older members of the farm family still perceived value in formal education. Case 2 states:

'When my son didn't want to go to university, I was upset. After he met his wife, he decided to deepen his knowledge in animal husbandry by going to school. I was very happy with that. I didn't go to school because of poverty, so I have a special love for those who carry out any kind of studies. I believe that education changes people for the better and grows their abilities.' (Olymbia- Grandmother)

Younger farmers invested considerable time learning new skills to support diversification, such as butchery and winemaking, through online classes and seminars. Eager to develop competencies beyond conventional agriculture, they sought to apply these skills to their family farms, aligning with McElwee and Gittins's (2024) emphasis on tacit knowledge and skill development in rural areas. Participants called for more rural educational programmes to enhance knowledge for planned diversification. Pursuing these opportunities enabled farmers to build bridging social capital (Putnam, 2000; Granovetter, 1973), connecting them with networks beyond their close community.

Educational programmes are useful (and mentioned by participants) in supporting rural farm enterprises by enhancing and facilitating farmers' knowledge, enabling the adoption of more efficient and productive methods via digital technology adoption, automation, and quality control software. This education plays a key role in entrepreneurial alertness, allowing farm entrepreneurs to pursue new market opportunities, highlighting the importance of continuous learning in agriculture to improve skills in the evolving CIC's.

4.3.2. The division of family farm labour

Members of the farming family also had different skillsets. Younger farmers are more accustomed to dealing with technology, examples included utilising vacuum technology to improve the quality and storage of meat.

Other examples of technology and innovation present are the use of automated systems and transaction software, used in retail (Case 5), quality control software used to assess the quantities and quality of grapes (Case 3), and automated machinery used throughout the winemaking process. This finding supports Morris et al. (2017), indicating that digital technology adoption can add significant value to farm

enterprise operations. Our data supports this finding. Case 4 states:

> 'The hours I spend on the job have been reduced because we have invested in some necessary infrastructure and some automation … We have implemented automation in the feeders and watering of the animals that make our job easier. As I grow older, using my experience, I put less effort into achieving the same result and creatively use the time I gain to further improve the operation of the stables.' (Spiros – brother)

In contrast to Morris et al. (2017) and Gittins et al. (2020), our findings show that older farmers are adopting digital technologies, allowing them to stay active in the farm business and take on less physically demanding tasks. This difference likely stems from our focus on entrepreneurial farmers rather than conventional ones typical of the UK upland context (Gittins et al., 2022). Technologies like automated feeders and watering systems reduce physical labour, enabling even older farmers—some as old as 82—to manage lighter aspects of the business.

4.3.3. Support networks and skillsets

Sociologically speaking, entrepreneurial farmers recognise that their identities are not limited to simply food production identities (McElwee, 2006). Their identities transcend this to support the value added via diversified activities. An entrepreneurial farmer is not simply a food producer but wears many hats: becoming shopkeepers, butchers, wine connoisseurs, poultry farm specialists, owners of animal feed companies – any identity that the diversified activity takes them into.

To do this, many new skills need to be learned, such as expertise in new industries, business and marketing skills for retail management and direct selling, and financial management, to name a few. It is a continuous process of lifelong entrepreneurial learning.

> It is clear that the success of the diversification strategy, and of the farm business in general, is strongly rooted in a division of labour between the farm family, whereby skills are utilised between family members.

Case 4 states:

> 'The family plays a key role in the operation of the business. My brother has taken on the whole burden of organic animal breeding, and my wife mainly runs the fresh meat lab and follows me in the sales and distribution of the products. I have two young children aged 16 and 17 who are not actively involved in the business, but they often help with preparing orders, issuing invoices, and the process of packaging the products. All indications are that they want to be actively involved in the business later on.' (Stavros – husband, father)

As Jervell (2011) notes, the family can be both constraining and supporting of entrepreneurial strategies; our research indicates that a clear organisational structure, management, and divisions of labour (best suited to individual abilities) are key to diversification success.

Case 2 provides further insight into family decision-making:

> 'Everything you do, you do it for yourself and your family members. We love our work. We work many hours though. There are no days off. But it's our business. We work for ourselves. A family business that wants to succeed in the market must know how decisions are made. There is only one way: continuous family dialogue, with

Photo 1
Direct Selling, Case 2, photo supplied by farmer.

Photo 2
Livestock Housing Unit, Case 4, photo supplied by farmer.

substantiated suggestions. The decision must be collective and supported by all.' (Tasos – Son)

The quotes above illustrate the family's role as a core source of resilience, with strong bonds and defined roles crucial to the farm's success. Emphasising 'collective decision-making' highlights the family as the foundation of farm management. Building on Hansson et al. (2013), our research shows that family influence significantly shapes the motivations behind diversification decisions, making family central to strategic decision-making.

4.4. Local/regional contexts and rural entrepreneurial opportunities

4.4.1. Location and proximity

Regional factors are extremely important in rural Greece. Factors such as location and proximity to urban/tourist markets created opportunities and constraints. A lack of opportunities in the regional economy was a prime motivator for one case. Case 2 states:

> 'There was no other butcher shop in the area. There weren't large supermarkets for people to get meat or products made from meat either. For us, it was a business opportunity. That is the gap we have filled. I was also familiar with this field since my father was a long-time butcher in a large urban centre.' (Eleni - Wife, Mother) (See Fig. 2)

Similarly, Case 3 acknowledged something similar:

> 'We discovered that there was no other winery in the village that could be visited, nor a cellar – wine bar and tasting place, and we created them. At the same time, we attracted some of the tourists in the area and in an organised way we gave guided tours and tastings to organised groups.' (Stella – Wife, Mother) (See Fig. 3)

In some cases, the CIC—a challenging environment for conventional farmers—offers opportunities for entrepreneurial farmers. Building on Gittins et al. (2022), our findings suggest that farm diversification not only adds value to individual businesses but also supports rural revitalization by creating jobs, stimulating economic growth, and retaining rural populations. Certain diversification activities contribute to regional development, helping transform constrained regions into more supportive environments.

Other external factors in the wider environment are present, such as labour issues, case one provides insight into this issue:

> 'There is also a problem of workers. We cannot find people to work in poultry farming. Young people don't want to work in such jobs … I occasionally find foreign workers, mostly Pakistanis … but most workers in the area are undocumented. They are illegal, and if you take them to work and an inspection comes, then there are big fines … Many of the immigrants do not want to stay and work in Greece but move to other states' (Maria – Wife, Mother).

Such constraints like the one issue raised by Maria- and indeed some others-is beyond the control of the individual farmer. Here policy attention is needed.

Many of our cases felt constrained by a lack of government support (formal institutions) when pursuing entrepreneurial initiatives. In response to this lack of formalised support, farmers utilised their social networks (informal institutions). Many looked internally, drawing on the strengths of their farm family households (bonding social capital), but also leveraged weaker ties within their communities (bridging social

capital). For instance, to pursue these diversified strategies, farmers had to capitalise on weaker ties (Granovetter, 1973). Indeed, the utilisation of these ties is crucial for introducing innovations that drive business growth and help farmers navigate the complex institutional landscape.

5. Conclusion

The findings of our work provide empirical evidence on the 'present realities' (Maye et al., 2018) of Greek farmers. We find that farm diversification strategies can enable family farmers to better respond to the challenges in the sector.

We extend Gittins et al.'s (2022) conceptual work by providing empirical evidence on the value of diversification strategies for entrepreneurial farmers in rural Greece, focusing specifically on this farmer type rather than others in their typology (e.g., traditionalist, environmentally conscious, hobbyist). Additionally, we build on Bonell and Vaccaro's (2022) findings by highlighting persistent bureaucratic challenges in farming, such as limited grant access when diversified income becomes substantial, highlighting trade-offs between entrepreneurial strategies and conventional farm support. Extending Lokier et al. (2021), we examine both the motivations and utility of diversification in addressing constraints, including family farm retention, while also noting its social benefits, which encourage family members to stay on the farm rather than seeking off-farm employment.

Theoretically, we develop a more nuanced understanding of constrained rural entrepreneurship within the Greek context. By exploring the utility of farm diversification, we provide insights into how farm family households navigate increasing institutional constraints. While previous research has explored CICs in various international contexts (Gittins and McElwee, 2023; Refai et al., 2023; Refai and McElwee, 2023), we focus on sector-specific constraints situated in rural Greece. Indeed, the Greek context presents unique issues at both the exogenous and internal levels. Our findings highlight how farm entrepreneurs navigate these CICs, making use of locational resources and social networks, demonstrating how the strategic use of social capital can help farmers overcome constraints and create opportunities (Putnam, 2000; Granovetter, 1973). Our theorisation of rural Greece's CICs deepens our understanding of the relationships between formal and informal institutional environments (e.g., family dynamics) and how actors (e.g., rural entrepreneurs) navigate these contexts utilising entrepreneurial business strategies.

Greece's CIC presents a complex blend of formal and informal constraints, including high unemployment, rural exodus, and climate challenges, creating a unique context that differs from areas like the UK uplands (Gittins and McElwee, 2023). These challenges can make operating conditions difficult, yet they also motivate entrepreneurship. High local unemployment might push some individuals toward urban centres, while encouraging others to start businesses addressing local challenges. Thus, the Greek CIC presents a paradox: the very factors that constrain its agricultural sector can also inspire innovation and entrepreneurship.

Methodologically, this research shows how the FSF can be adapted through a multiple-methods approach to analyse five entrepreneurial farming families. By shifting the focus from the individual farmer to the farm family household, it offers valuable insights for future research. We extend the generalisability of De Rosa et al.'s (2019) work, which highlights the importance of farm diversification strategies in responding to rural policy. Our multiple case study design, rather than a single case, offers deeper insight into the utilisation of farm diversification strategies initiated by farm family households.

Many participants called for more state support to pursue entrepreneurial initiatives, echoing De Rosa et al. (2022) on the need for a conducive environment for rural entrepreneurs. However, policymakers should exercise caution, as not all agricultural businesses may warrant equal support (McElwee and Annibal, 2010). Targeted funding for innovative, value-adding farms could be more effective. Beyond financial capital, farmers often need entrepreneurial and strategic skills, with our cases highlighting the role of networks in overcoming industry constraints.

In terms of limitations, while this paper examines farm diversification as a business strategy, farmers also pursue other approaches, some of which, such as illegal or illicit activities, respond to constrained institutional contexts and remain under-researched (Smith et al., 2017). Future studies could also investigate other farmer types—such as traditionalist, hobbyist, and environmentally conscious farmers (Gittins et al., 2022).

Another limitation relates to selection bias, as our sample includes only farms that successfully diversified through short-chain, direct-selling methods. While this highlights diversification's benefits, it excludes farms that attempted but failed due to limited resources, giving a partial view. Diversification is not a universal solution; success depends on resources, motivation, and fit with the farm business.

Our study focuses on short-chain diversification, involving direct selling and vertical integration. Some farms, however, diversify within long-chain networks, which may provide economic support. While our cases exited long chains due to economic pressures, we did not examine how these exits impact long-chain viability or farmers' decisions to stay. Future research could explore long-chain dynamics, reasons for continued participation, and the effects of small farms' diversification on long-chain sustainability.

CRediT authorship contribution statement

Peter Gittins: Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Conceptualization. **Sotiris Apostolopoulos:** Writing – review & editing, Methodology, Investigation, Data curation. **Eleni E. Anastasopoulou:** Writing – review & editing, Methodology, Investigation. **Nikolaos Apostolopoulos:** Writing – review & editing, Conceptualization.

Declaration of competing interest

None.

Data availability

Data will be made available on request.

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