



The role of collaborative farming in generational renewal and farm succession

RESEARCH ARTICLE

Mika W. Shin^a, Anne Kinsella^b, Michael T. Hayden^c[Ⓔ] and Bridget McNally^c

^aPostdoctoral Researcher, ^bEconomist, Agricultural Economics & Farms Surveys Department,
Teagasc, Athenry, Co. Galway, Ireland

^cAssistant Professor of Accounting, School of Business, Maynooth University, Ireland

Abstract

An aging farming population and a decline in younger farmers are global issues of concern in the pursuit of sustainable agriculture. A gradual transition to collaborative farming through alternative business structures, which will facilitate generational renewal is underway. However, little is known about the prevalence of such alternative business structures internationally as a dearth of academic research exists in this respect. The objective of this study is to conduct a comprehensive review of the prevalence of alternative farm business structures in Ireland and to compare the Irish case to selected European countries (France, Germany, The Netherlands, Poland and the United Kingdom). A desk-based research approach is adopted to analyse data from various sources including, agricultural bodies, government departments and international agencies. The findings highlight that the prevalence of alternative business structures across case countries is not uniform, and that potential for growth in collaborative farming exists in Ireland to meet the generational renewal challenge. Gathering accurate and comparable data regarding the prevalence of alternative business structures has been challenging. Consequently, a more uniform classification of the various types of alternative business structures and a more accurate and comparable dataset detailing the prevalence of these business structures, across European countries is recommended.

Keywords: alternative farm business structures, collaborative farming, farm partnerships, farm succession, generational renewal

JEL codes: O13, Q15, Q18

[Ⓔ]Corresponding author: Michael.Hayden@mu.ie

1. Introduction

An aging farming population and a decline in the number of younger farmers are issues of significant societal concern in the pursuit of sustainable agriculture. Almost one-third of farm managers in the European Union are aged 65 years or over (Eurostat, 2018) and in this context collaborative farming through alternative business structures has the potential to significantly contribute to generational renewal in the agricultural industry. There are numerous challenges facing the agricultural industry. Conway *et al.* (2016) identify succession planning as an integral part of the generational renewal process and the continuing life cycle of farm businesses, but it poses many challenges. Renwick *et al.* (2014) highlight that some of the strongest barriers to innovation in agriculture are at farm level and relate to farm business structures, the lack of land mobility and the age of farmers. In addition, many farm enterprises across Europe are economically vulnerable. Collaborative farming arrangements may assist in alleviating such challenges and contribute to a more sustainable rural economy. Macken-Walsh and Byrne (2014) note that collaborative farming offers a highly adaptive strategy for family farms to strengthen their resilience.

Historically in Ireland, and in many other European countries, the sole trader ownership structure has been the dominant ownership structure for farm enterprises. However, in recent decades there has been a gradual change to alternative and innovative business structures such as farm partnerships and limited companies. Despite this transition there is a dearth of research on alternative business structures and collaborative farming arrangements. Leonard *et al.* (2017a) report that collaborative farming arrangements are relatively new in agriculture and highlight that a more detailed appraisal of them is called for. This study aims to provide a comprehensive review of the prevalence of alternative business structures in agriculture in Ireland and to compare the Irish case to other European countries (France, Germany, Netherlands, Poland, and the United Kingdom). In addition, the potential of alternative business structures to assist in addressing the generational renewal challenge is explored.

The remainder of this paper is structured as follows. Section 2 discusses salient literature on the area of collaborative farming and generational renewal. Section 3 sets out the methodological approach. Section 4 presents and discusses the study findings, and Section 5 sets out our concluding thoughts.

2. Literature Review

Collaborative farming involves two or more farmers working together, in a formal arrangement for mutual benefit, with the pooling of skills and resources (Teagasc,¹ 2017a). Two of the most prevalent collaborative farming arrangements in agriculture are partnerships and limited companies. Farm partnerships involve two or more farmers conducting a business in common under a partnership agreement, while limited companies in agriculture are separate legal entities where the farm profits belong to the company and the farmer is the shareholder, director, landlord or employee (Connolly, 2018). Partnerships and limited companies have the potential to contribute to generational renewal as farmers can introduce their potential successor to the business and prepare a pathway for succession (IFAC,² 2019). Indeed, partnerships and limited companies are sometimes adopted to support more than one family farm successor.

Collaborative farming requires co-operation, compromise and trust between all parties involved in such arrangements (Agarwal and Dorin, 2019). Given the situation where younger generations may be reluctant to enter farming, and older farmers may have a reluctance to hand over farms due to emotional and identity factors (Conway *et al.*, 2016) or due to a concern over their financial future (Lobley *et al.* 2010; May *et al.*, 2019), alternative farm business structures based on co-operation among partners are considerable options.

¹ National agriculture and food development body in Ireland providing integrated research, advisory and training services to farmers.

² IFAC Accountants are the largest farm accountancy practice in Ireland.

According to Sreih *et al.* (2019) business owners can improve their probability of success across generations by adopting a team-management decision-making approach.

Given the trend of a decreasing number of farms and indeed declining farmer numbers, while the area of farmland per farmer increases, alternative farm business structures have emerged (Conway *et al.*, 2016; Cush and Macken-Walsh, 2016a; Deming *et al.*, 2018; Nuthall and Old, 2017). The promotion of the adoption of innovative business structures, as an alternative to the traditional sole trader structure, is a positive step towards reducing the average age of farm managers (Conway *et al.*, 2016; Leonard *et al.*, 2017a). These business structures also allow an older generation of farmers to continue contributing to farm management and sharing tacit knowledge (Chiswell, 2014; Fischer and Burton, 2014; Mills *et al.*, 2021) and experience (Contzen *et al.*, 2017; Conway *et al.*, 2016; Cush and Macken-Walsh, 2016b) with new entrants. Thus, collaborative farming provides a dual focus; it offers an exit mechanism for older farmers to retire, and a pathway for new entrants to join the agricultural industry. This provides the potential for collaborative farming to contribute to generational renewal in the industry and facilitate farm succession.

Historically, legal farm ownership was transferred to farm successors at a later stage in the life of farmers, which often resulted in a lack of farm investment in the intervening period on-farm (Macken-Walsh and Roche, 2012). This also often caused a decline in the efficiency of farm businesses resulting in lower production and profit, which has been labelled in the literature as the “retirement effect” (Potter and Lobley, 1996). In this context, Teagasc see Registered Farm Partnerships (RFPs) as one of several collaborative farming business arrangements that can play a key role in the improvement of the social and structural demographics of Irish farms (Teagasc, 2020).

Some prior studies have explored the benefits of collaborative farming. Conway *et al.* (2016) recognise that collaborative farming is a viable option to keep two generations (usually parents and children, or the owner and a spouse/partner) in charge of farm management. Both Ingram and Kirwan (2011) and Jack *et al.* (2019) highlight how collaborative farming provides new and creative structures for those wishing to enter or leave farming, and that these benefits could be supported by policy development. Furthermore, farm partnerships (a key collaborative farming arrangement) are associated with wide-ranging economic and social benefits. For instance, it is expected that they improve scale and efficiency of agricultural production by encouraging the consolidation of blocks of land held and operated by farmers, and importantly often not even within the same family but between neighbouring farmers. They also can contribute to a better work life balance, encourage new skills, and specialisation through the required enhanced educational qualifications of the partners (DAFM, 2018). Collaborative farming also creates a farm transfer pathway from one generation to the next, shares workload among more than one person, gives flexibility to work off-farm, and positively impacts on the health and well-being of farmers (Teagasc, 2020).

In Ireland there are several taxation reliefs and financial incentives available for farmers who enter alternative business structures such as farm partnerships and limited companies. However, some deem such reliefs complex, as some of the reliefs may not be available unless properly planned for (IFAC, 2021) and applied for within specific timeframes, or indeed the relief is specific to young trained farmers in some instances. For example, Connolly (2018) explains that sometimes the land and buildings owned by a farmer are leased to a company with the farmer receiving rental income, while in other cases, it may be more tax efficient to transfer some land into a company’s name. These nuances need to be carefully planned for to maximise the financial benefits for farmers.

The literature also highlights that the type of farm system in operation is a key driver for farmers entering alternative business structures. According to IFAC (2019) it is mostly profitable dairy farms that are found to be in the legal form of a company with only some large-scale beef and tillage farms also incorporating. Furthermore, a Ruralisation project funded under an EU Horizon 2020 programme notes that the success of how each farm structure works is dependent on the type of farm system in operation (Sivini *et al.*, 2021).

That study contends that deciding to enter a partnership based solely on an economic rationale is more likely suited to dairy farms, while cattle rearing farms may focus on non-economic benefits such as the gradual transfer of control and increased leisure time afforded to partners (Sivini *et al.*, 2021). Similarly, when Leonard *et al.* (2017a) investigated if farmers have different motivations to enter farm partnerships, they found that if the primary motivation to become involved in a partnership is economic for one party, it may not be for other farmers with smaller and less profitable farms. Farm partnerships can provide some non-financial rather than financial benefits for such less profitable farms, as they facilitate a staged exit of an older farmer and the entry of a young farmer.

While some of the latter studies have focused on the financial (economic) impact of alternative business structures, other studies have focused on non-financial factors. Conway *et al.* (2016) and Mann (2007) indicate that the emotional factors of older farmers need to be considered when dealing with retirement in farming. In this regard, collaborative farming arrangements may facilitate the gradual exit and improved planning for succession. Moreover, collaborative farming arrangements may maintain farmers' emotional attachment and human dignity (Conway *et al.*, 2016; Rech *et al.*, 2021) in the farm succession process. This latter study by Rech *et al.* (2021) comprehensively explores alternative structures for farm business continuity and highlights ways for farmers to plan the succession process to maintain both financial and emotional stability. The alternative structures proposed include business continuity between family and non-family members, a mix of formal and informal arrangements, and some legal and contract arrangements. Essentially, there are a myriad of structures for farm business continuity available for farmers to engage in, with the suitability (or not) of each depending on the individual circumstances within each family and farm enterprise.

Land mobility is another significant challenge facing generational renewal in the agricultural industry and some policy measures have had limited success in addressing this issue (Bika, 2007; Geoghegan *et al.*, 2021). Ireland has been facing low land mobility and observing capital accumulation amongst older farmers who intend to secure their future financial situation with often an unwillingness to transfer their farm assets (Leonard *et al.*, 2017b). Most farm transfers occur within non-market arrangements, usually inheritance, which is attributed to the strong emotional attachment to land in Ireland (Donnellan *et al.*, 2008). However, it is important to highlight that some farmers face a situation where no identified successor exists and in such a situation, collaborative farming provides an opportunity for farmers who wish to step back, lower their workload, and remain farming, to do so (Duesberg *et al.*, 2017).

The concept of collaborative farming has also been studied in the context of facilitating generational renewal internationally. Eistrup *et al.* (2019) outline some opportunities and constraints for generational renewal in agriculture in southern Europe and highlight access to land, and the difficulties in setting up a new agricultural enterprise, as some of the main barriers to generational renewal. Coopmans *et al.* (2021) reinforce this aspect of "access to land" as a key influencing factor of generational renewal across European agriculture. Collaborative farming provides an opportunity to facilitate overcoming barriers to generational renewal as Garcia-Alvares-Coque and Pineiro (2022) contend that collective farming in Spain can improve farm structures and drive generational renewal by providing an excellent point of entry for new entrants to the agricultural sector. Ingram and Kirwan (2011) propose that farming collaboratively through farm partnerships helps to attract new blood into agriculture by overcoming some financial entry barriers. Zmija *et al.* (2020) also identify that co-operation and partnerships between farmers is conducive to greater involvement of younger farmers in agriculture, thereby facilitating generational renewal. In summary, the prior literature acknowledges that alternative farm structures have an important role to play in generational renewal in agriculture and that there are numerous financial and non-financial benefits associated with them. However, given the relatively recent introduction of collaborative farming to Ireland and to other European countries a more detailed appraisal of them is called for. This study answers that call by providing a holistic review of the prevalence of alternative farm structures in operation in Ireland and compares the Irish case to other European countries.

3. Methodology and Data

Taking Ireland as a case country, a comprehensive review of the prevalence of alternative business structures in existence is undertaken. Subsequently, a comparative analysis of the Irish case to other European countries (France, Germany, The Netherlands, Poland and the United Kingdom) is conducted. This investigation of the level of existence of various alternative business structures in operation is performed using a desk-based research approach. Data is gathered and analysed from various sources in each respective country, including: reports from agricultural industry bodies, government departments and international agencies that collect data on the agricultural industry. How the prevalence of such alternative business structures and collaborative farming arrangements are influenced by the system of farming in operation, is also explored. Essentially, by investigating the situations of other European countries an understanding of how the current situation in Ireland differs from (or in some instances mirrors) these countries is developed. The data collected is analysed to produce tables and figures to illuminate the key findings. These findings provide a holistic and comprehensive insight by bringing together data from multiple sources and countries, and thereby will contribute to inform policy development.

Focusing on the Irish case, in the analysis of the prevalence of alternative business structures in Ireland, data from two government authorities are utilised; namely the Department of Agriculture, Food and the Marine (DAFM) and the Irish Taxation Authorities (known as the Revenue Commissioners). Recent data collected by the Teagasc National Farm Survey (NFS) was also made available to the researchers on this project to assist in providing more in-depth data interrogation and analysis. The NFS is part of the EU Farm Accountancy Data Network (FADN) and data regarding collaborative farming has also been collected in addition to the core FADN dataset. The NFS is a survey of approximately 900 farms, which are representative of approximately 85 000 farms in Ireland. To ensure that the sample is representative of the population, farms in the sample are selected at random from strata (categories) in the farm population. These strata ensure that the sample contains an appropriate mix of farm systems and that the economic size (measured in farm output) of the farms selected is also representative of the population (Dillon *et al.*, 2022). Ireland was chosen as the focus of this study as the authors, who have an in-depth knowledge of the Irish agricultural landscape, were cognisant of the generational renewal challenge facing Ireland and were eager to explore if collaborative farming through alternative business structures as undertaken in other European countries could highlight opportunities that may assist in addressing the issue in an Irish context. Consequently, through a 2021 DAFM funded research project titled “*Sustainable Transition of the Rural Economy through Generational Renewal*” the research reported in this study was undertaken.

Regarding the collection of data from the comparative European countries, data is sourced from the relevant government departments in each country. Eurostat data is also utilised to provide a general overview of the agricultural landscape in each country. The selection of each comparative case country was for a multitude of reasons. France was selected owing to the refinement of the French GAEC (Groupement Agricole d’Exploitation en Commun) partnership structure to the Irish case. The French GAEC partnership structure emerged in France in 1962 when a law was passed to authorise their establishment. This was the only country where this applied, and it facilitated the bringing together of small farms for scale. In France partnerships were encouraged in a way that farmers joining them would not lose out, by ensuring that each time a new policy came into effect the GAEC structure had to be referred to and be accommodated within that policy. In the late 1990’s an ad hoc committee broadly representative of the farming industry was established in Ireland to explore the possibility of establishing farm partnerships. It looked at the French system that was in operation as their basis and from this the emergence of farm partnerships in Ireland, broadly based on the GAEC system, ensued. Germany was selected due to its historical significance as a leading agricultural nation in Europe. In East Germany, farms were collectivised under the socialist regime in the 1960s. However, since unification, about three-quarters of the collectives have remained as cooperatives, partnerships, or joint-stock companies. Other East German collectives were broken up, with ownership reverting primarily to individual farmers who had been accorded post-war title to their lands; or

were privately sold. In western Germany and in the newly privatised farms in eastern Germany, family farms predominate. The Netherlands was selected as it is a country often considered to the forefront in agricultural development and policy application as it is the second largest global exporter of agricultural produce in the world, second only to the United States. Innovation, in general, has always been a key part of Dutch culture and society and has really helped in developing more modernised farming methods. This has been achieved by using the world's most efficient agricultural technologies, in a country where only a fraction of the land is available for agricultural production in comparison to other EU countries. In this context, the Netherlands was considered an important case country to include in this study. Poland was selected to include an Eastern European country which has a lot of smaller and larger farms, due to socio-historical factors relating to farm ownership, so that learnings regarding application to divergent farm sizes could be explored. Finally, the United Kingdom (UK) was included due to its many similarities with Ireland regarding farm systems, farm size, and historical background of land use. Brexit has negatively affected Ireland's food and drink export sector, with exports of these products to Britain falling, but despite this and the Brexit EU trade restrictions and tariffs, trade between the two countries has remained strong with close links sustained.

The comparison of the prevalence of alternative farm structures in Ireland with those of the other European case countries allows a deeper understanding of the current situation in Ireland to be delineated. It also allows for recommendations of best practice to assist in policy formulation and enhancement of the policy context for generational renewal programmes. The specific analysis of the various alternative business structures, by farm system, provides the opportunity for links between generational renewal and collaborative farming to be established in Sections 4.1 and 4.2 that follow.

4. Results and Discussion

In this section, a comprehensive analysis of the alternative farm structures in operation in Irish agriculture (Section 4.1) is provided. This is followed by a cross country comparison and commentary of the Irish context with the selected European case countries (Section 4.2). Prior to this, to provide context for the figures and data that are presented in the results, some statistics and a profile of the Irish agricultural industry, and the comparative European countries, is provided.

As evident in Table 1 the number of farms in each case country varies significantly. Poland has the largest number of farms in operation. This is due to the agricultural landscape of Poland consisting of a large number of small farms. As can be seen in Table 1 the average farm size in Poland (11.3 ha) is significantly lower than the average farm size in the other case countries. The need for generational renewal is highlighted by the significant proportion of farmers above the age of 65 years in each country and furthermore the high average age of farmers across countries. Interestingly, Table 1 highlights that both the UK and Ireland have a much higher percentage of farmers over 65 compared to many of the other case countries.

The findings regarding the prevalence of collaborative farming across case countries are explored to establish if it may be a contributing factor to lowering the age profile of farmer in these respective countries. To provide some further insights into the agricultural landscape of each case country Table 2 profiles the percentage of farms in operation in various farm systems.

Table 2 highlights that the prevalence of each farm system within each case country varies significantly. For example, in Ireland, cattle is the most common farm system in operation, while in France and Poland it is mixed field crops. In Germany tillage is the most prominent farm system and, in the Netherlands, dairy farming is the most common farm system. Finally, in the UK the highest proportion of farm enterprises are involved in sheep farming. Throughout Sections 4.1 and 4.2, an analysis of the alternative business structures by farm system is conducted and reference to the prominence of these farm systems is made.

Table 1. Profile of farming in case countries

Country	Number of farms in operation	Average farm size (ha)	Percentage of farmers over 65 years	Average age of farmer
Ireland	130 220	34.6	31%	57
France	393 030	69.6	13%	51
Germany	262 776	63.1	11%	53
The Netherlands	52 640	34.5	21%	55
Poland	1 302 330	11.3	14%	50
United Kingdom (UK)	199 871	84.7	34%	59

Source: Authors compilation from latest available Eurostat Data (<https://ec.europa.eu/eurostat/web/agriculture/data/database>) for each country.

Table 2. Percentage of total farms in operation in each case country by farm system

Country	Cattle	Sheep	Dairy	Mixed field crops	Mixed grazing livestock	Tillage	Mixed crops and livestock	Vineyards/ Fruit	Pigs and poultry	Horticulture	Other
Ireland	55%	13%	11%	9%	6%	4%	1%	0%	0%	0%	1%
France	13%	6%	11%	21%	2%	13%	7%	19%	4%	4%	1%
Germany	12%	5%	19%	14%	2%	27%	7%	6%	6%	2%	0%
The Netherlands	10%	7%	28%	7%	1%	19%	3%	3%	7%	15%	0%
Poland	2%	0%	8%	35%	2%	28%	16%	4%	2%	2%	1%
United Kingdom (UK)	19%	33%	9%	13%	1%	17%	4%	1%	3%	0%	0%

Source: Authors compilation from latest available Eurostat Data (<https://ec.europa.eu/eurostat/web/agriculture/data/database>) for each country.

4.1 Analysis of the Irish context

Two primary farm business structures have emerged in Ireland as an alternative to the traditional sole trader structure; namely farm partnerships and limited companies. Farm partnerships first emerged in Ireland in the late 1990s among dairy farmers through the development of Milk Production Partnerships (MPPs). The introduction of these MPPs was considered necessary to assist farmers to restructure and improve farm viability. At this time France was the only country where a GAEC partnership structure existed to facilitate the bringing together of farmers in a collaborative formal business arrangement. Consequently, Ireland looked to the French GAEC structure when establishing MPPs in the Irish dairy sector. Similar to GAEC's, MPPs involved two or more farmers becoming business partners with one set of farm accounts produced for their business. These MPPs were structured so that land, farm buildings, milk quotas and farm subsidy entitlements of each partner were provided to the partnership by licence, while livestock and machinery were contributed as partnership assets by each respective partner. At the outset, the MPP structure was quite restrictive as it was the intention to start the process conservatively and to loosen the registration requirements as uptake of partnership arrangements evolved.

Overtime, the partnership structure has been developed and extended across other farming systems. According to Teagasc, formal RFP's play a key role in the improvement of the social and structural demographics of Irish farms (Teagasc, 2020). Supported by DAFM, Teagasc has promoted the farm partnership structure by producing some template partnership agreements which farmers can refine and adapt to specific farm situations to facilitate them in entering formal arrangements. Furthermore, in 2017 DAFM, launched Succession Farm Partnerships (SFPs) to address the reluctance of some farmers to transfer their land and other farm assets to the next generation. SFPs provide an option for farmers to consider in the early stages of the farm succession

process, as they facilitate the sharing of managerial responsibilities and farming activities. In this context SFPs reduce the workload of older farmers and enable younger farmers to get involved in farm management while benefiting from the tacit knowledge of older farmers (Teagasc, 2017b). There are various conditions that apply to the formation of SFPs, however, one of the primary benefits is that there are taxation reliefs available to encourage farmer participation.

While collaborative farming is well established in many countries, alternative farm business structures are still relatively new in an Irish context. Subsequent to the introduction of MPPs in the dairy sector, the formal farm partnership structure was expanded to include all sectors of Irish agriculture in 2015. This expansion in the formation structure saw an increase in the number of farm partnerships in operation. For example, in 2012 there were a total of 504 MPPs registered (when they were restricted to dairying system only), and this has since grown substantially to over 3000 RFPs in 2022, a six-fold increase in a 10 year timeframe.

To provide a deeper insight into the number of farm partnerships in existence in Ireland, data from two available sources between 2015 to 2022 has been compiled and displayed in Table 3.

As outlined earlier there are two types of farm partnerships (RFPs and SFPs), and some taxation reliefs exist which are aimed at increasing farmer participation within these partnership structures. RFPs are formally registered with DAFM and as can be seen in Table 3, there has been a considerable increase in the number of registrations between 2015 and 2022, which is a positive sign from a generational renewal perspective. Based on the premise that there are at least two farmers operating in each farm partnership, a conservative estimate of the number of farmers operating in formal partnerships (both RFPs and SFPs) in Ireland for latest 2022 year is circa 7500,³ which represents approximately 6% of the total farming population (Table 1). This level appears quite low and indicates that there is potential for growth in the partnership structure of farm ownership.

If a farmer wishes to claim a taxation relief associated with establishing a farm partnership, they must do so via the Revenue Commissioners. One of the primary taxation reliefs associated with partnerships is known as “stock relief”.⁴ In Table 3, it is evident that, between 2015 to 2018, only a small number of farmers who are registered in a farm partnership claimed stock relief. This is rather surprising, given that the financial incentive of this taxation relief is a key benefit of forming a partnership arrangement. This warrants further investigation and will be followed up with additional research in collaboration with the relevant authorities to ascertain why the uptake of this financial incentive has remained low despite partnership registrations increasing steadily over the same period.

Regarding SFPs (which were launched by DAFM in June 2017 to encourage intergenerational land transfer), Table 3 shows that the number of farmers who have entered this form of partnerships is quite low. Firstly,

Table 3. The number of farm partnerships in operation in Ireland between 2015 and 2022

	2015	2016	2017	2018	2019	2020	2021	2022
RFPs (source: DAFM)	1100	1600	n/a	n/a	2970	3100	3450	3562
Stock relief for RFPs (source: Revenue)	60	360	370	210	n/a	n/a	n/a	n/a
SFP (source: Revenue)	–	–	175	290	n/a	n/a	n/a	n/a
SFP (source: DAFM)	–	–	n/a	n/a	60	70	110	143

³ Figure calculated based on data in Table 3 (3562 plus 143 multiplied by 2).

⁴ As a registered partnership, farmers can enhance stock relief of 50% as opposed to the standard 25%; 100% stock relief for young-trained farmers, available for those who are partners (see <https://www.ifac.ie/news-insights/insights/registered-farm-partnerships-getting-the-right-advice-is-crucial>).

Revenue Commissioner data notes that quite a small number of farmers claimed a SFP tax credit in 2017 and 2018 (Revenue Commissioners, 2020). After 2018, the reporting of SFPs moved from the Revenue Commissioners to DAFM, as the Revenue Commissioners ceased reporting in 2018 and DAFM began reporting from 2019 onwards. While the numbers reported pertaining to SFPs appear to be much less by DAFM, compared to the Revenue Commissioners,⁵ the main point to emphasise in Table 3 is that there is a very low uptake of the partnership structure as a collaborative farming arrangement in Ireland.

To gain further insights into the prevalence of farm partnerships in Ireland, Figure 1 highlights the proportion of RFPs within each farm system.

Figure 1 reveals that RFPs are most common within the dairy farm systems, with 40% of all RFPs established within this system. Referring to previous research undertaken and alluded to earlier in the paper, this is primarily because dairying is the most profitable farming system in operation where profits can support one or more farmers (and their farm families) operating in partnership. Conversely, the system of tillage farming has quite a low level of involvement in farm partnerships (only 16% of RFPs), despite having relatively high farm incomes, highlighting that this is a farm system where policies could possibly be targeted to encourage and thus increase participation. Interestingly, cattle farming is the most common farm system in operation in Ireland (Table 2) yet Figure 1 highlights that a relatively small proportion of all RFPs exist in cattle farming systems. As Lenoard *et al.* (2017b) points out, farm viability is not the only factor considered when making succession and inheritance decisions, however, a non-viable farm is less likely to be capable of supporting two generations who engage in a farm partnership. Therefore, this suggests that while collaborative farming via partnerships has the potential to facilitate generational renewal, it may not make financial sense for all farmers to engage in such an alternative business structure. In this context, to improve generational

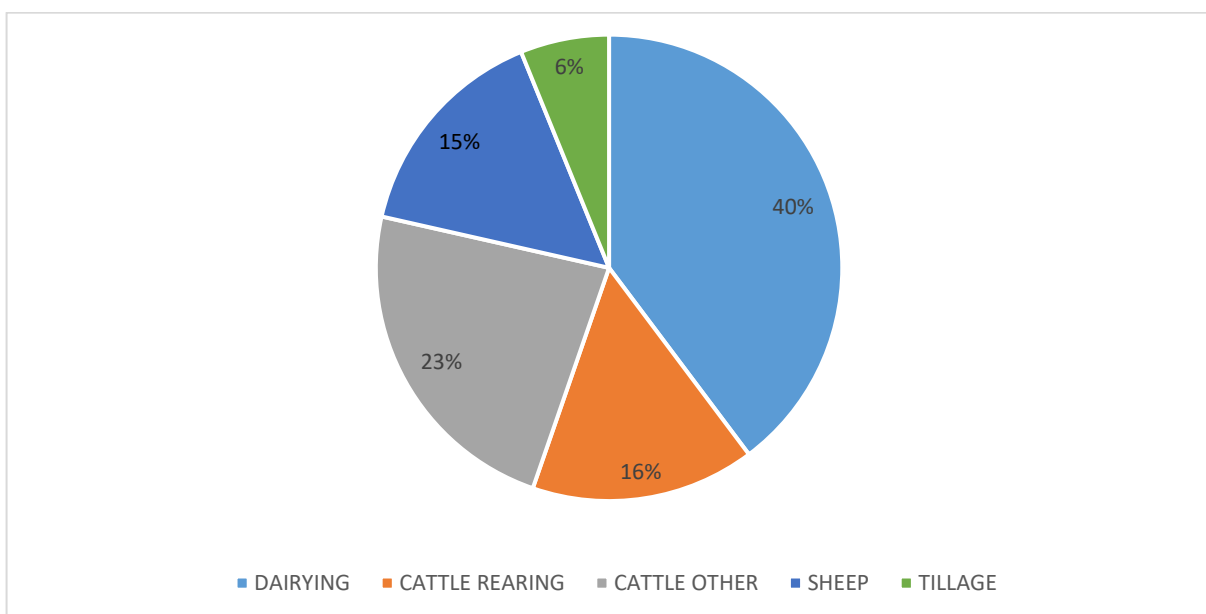


Figure 1. Analysis of registered farm partnerships (RFPs) in Ireland by farm system, 2021. Source: Teagasc 2021 NFS (Dillon *et al.*, 2022).

⁵ The reason for the difference in numbers reported for SFPs between DAFM and the Revenue Commissioners is because DAFM report the number of SFPs in operation, while the Revenue Commissioners report the number of farmers claiming a partnership tax credit. Therefore, as two or more farmers come together to form a partnership the number of individual farmers who claim a tax credit reported by the Revenue Commissioners will always be much greater (at least double) than the number of SFPs in operation reported by DAFM.

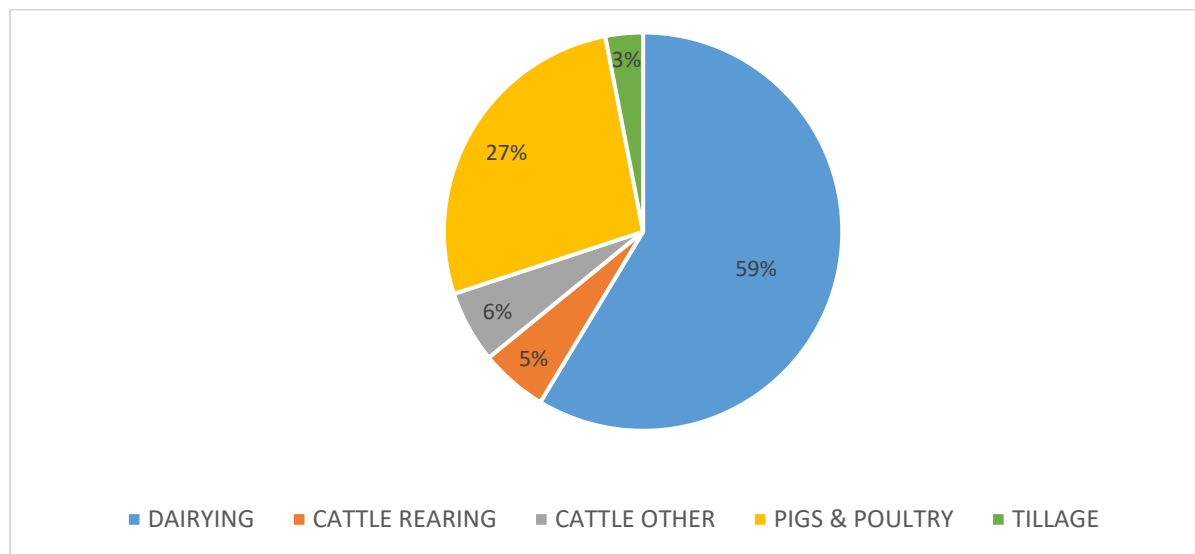


Figure 2. Analysis of farms in Limited Companies in Ireland by farm system, 2021. Source: Teagasc 2021 NFS (Dillon *et al.*, 2022).

renewal in farm systems which are considered economically vulnerable (such as cattle rearing), alternative policy and other support initiatives to attract new entrants need to be considered.

Secondly, the prevalence of limited companies is explored. According to Eurostat Data (see Table 4) only 2% of all Irish farms were operating as limited companies in 2020. This is quite low, considering that there are approximately 130 000 farms in Ireland (Table 1), thereby highlighting the potential for increased farmer participation in this area. Another source of data regarding the prevalence of limited companies in Ireland is the NFS conducted by Teagasc annually. It estimated, the percentage of farms in limited companies as 0.9% in 2018 and that this has grown to approximately 3.0% in 2021, a threefold increase albeit from a low base. The 2021 NFS, the most recent survey data available, provided data for the researchers to analyse the proportion of limited companies in operation by farm system, which is displayed in Figure 2.

As evident in Figure 2, dairy farming is the primary farming system to establish under the limited company structure with 59% of all limited companies classified as dairy farms. Similar to the reason for dairy being the most prominent farming system to adopt the partnership structure, the profitability of dairy farming is a main driver for the incorporation of farms. Pigs and Poultry is also quite a prominent farming system to adopt the limited company structure, at 27%. This is owing to the relatively larger economic size of these farm systems, a system which earns substantial income.

Overall, this analysis of alternative business structures in Irish agriculture highlights that there is a gradual increase in the level of engagement of Irish farmers in these structures. However, they appear to exist at quite a low level. In Section 4.2 that follows, a comparison of the Irish case with other European countries is undertaken.

4.2 Analysis of European countries and comparison to the Irish Case

In this section, the prevalence of alternative business structures and collaborative farming arrangements in the five selected European case countries is explored and compared to the Irish case. At the outset of this review, Eurostat data was retrieved and analysed to create Table 4, to provide a high-level overview of the alternative farm structures in existence across the case countries between 2010 and 2020.

Table 4. The percentage of total farms by legal form in selected case countries in the years 2010, 2016 and 2020

Country	Sole trader			Company			Partnerships		
	2010	2016	2020	2010	2016	2020	2010	2016	2020
Ireland	99.8%	99.7%	92.0%	0.2%	0.3%	2.0%	–	–	6.0%
France	70.8%	65.0%	59.0%	21.7%	25.4%	30.0%	7.5%	9.6%	11.0%
Germany	91.3%	88.6%	87.0%	1.7%	2.0%	2.0%	7.0%	9.4%	11.0%
Netherlands	94.2%	92.7%	91.0%	5.8%	7.3%	9.0%	–	–	–
Poland	99.7%	99.7%	99.0%	0.3%	0.3%	1.0%	–	–	–

It was intended to use 2015 as a mid-point reference year between the period 2010 and 2020, however there is no data available for 2015. Therefore, 2016 data is used to include a point in time during this period to provide a more in-depth review of the movement in each respective business structure over this period. The UK is excluded from this table as it does not provide the data except total farm holdings.

Source: Eurostat. Eurostat Glossary (https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Legal_personality_of_the_holding) defines legal person as a form of company; Group holding as company owned, rented or otherwise managed by more than one natural person.

Based on the data presented in Table 4, in the year 2020 over 40% of farm enterprises in France operated outside of the sole trader structure, making it the country most involved in collaborative farming of the selected countries under review. Germany and the Netherlands have a similar proportion of farms operating under the traditional sole trader structure to Ireland (circa 90%), highlighting that all three countries have significantly less farms operating under collaborative farming arrangements compared to France. While Poland is the case country with the least engagement in collaborative farming as only one percent of Polish farms operate outside of the sole trader structure. When it comes to a choice between the company and partnership structure, it is evident from Table 4 that farmers in France and the Netherlands opt most often for the company structure, while in Ireland and Germany farmers have a preference for partnerships.

When the movement in each of the alternative business structures over time is analysed, a shift from the traditional sole trader structure to either the partnership or limited company structure is evident in all case countries, however in some countries that shift is greater than in others. For example, in Poland between 2010 and 2020 the shift towards alternative business structures has been negligible, while for all other case countries there has been a noticeable movement. For Ireland, in comparison to France, Germany and the Netherlands, the uptake of alternative business structures has occurred to a greater extent in more recent years (between 2016 and 2020 – see Table 4). Interesting, the average age of a farmer in France, Germany, and the Netherlands (see Table 1) is lower than in Ireland. Given that alternative business structures are still relatively new in the Irish context, compared to other case countries, perhaps further growth in collaborative farming structures in the coming years will assist in future land mobility and in lowering the average age of farmers and this will contribute positively to generational renewal.

4.2.1 France

As outlined in Table 1, according to 2020 Eurostat data, 390 030 farms operated in France, and Table 4 highlights that 59% of them operate as a sole trader, 30% company form, and 11% are in partnerships. Partnerships (through the GAEC structure alluded to earlier) have been particularly successful in France according to Agarwal and Dorin (2019). GAECs are formed by 2–10 partners and are recognised as an individual entity and also as a collective identity. This principal enables members to benefit from public incentives as individual farmers, for instance when the Common Agricultural Policy (CAP) introduced direct income support ‘decoupled’ from price support (Agarwal and Dorin, 2019). Social issues on the farm are

central to farming in a collective set-up, and this GAEC structure is closely related to formalisation of farm partnerships in Ireland (Teagasc, 2022).

Another type of legal entity established in France, is called an EARL (Exploitation Agricole à Responsabilité Limitée), equivalent to limited companies in an Irish context. EARLs can be formed by one person as well as by married couples (Le Coin des Entrepreneurs, 2019). Moreover, in EARLs only shareholders who individually or as a group hold the majority capital are required to work on the farm, while minority shareholders need not. GAEC associates, in contrast, cannot take up any significant income-earning activity outside the GAEC (Agarwal and Dorin, 2019). More specific data regarding the legal structure of farms in France is provided in Table 5.

As evident in Table 5, the GRAPH'AGRI 2022 report (Ministry of Agriculture and Food of France, 2022) provides a more detailed categorisation of farm ownership in France compared to the Eurostat Data reported in Table 4. It shows that 58% of farms are individual farms, 19% are formed as limited companies (EARLs), and 11% are formed as GAECs. However, there is a category of 'Other' (11%) in Table 5, which appears to be included in the category of 'Company form' in Table 4 as it totals 30% (EARL 19% + Other 11%). The reason for this difference is not clear and it highlights an inconsistency in reporting from alternative sources. Despite this inconsistency, it is notable that the prevalence of alternative farm structures in France is much greater than in Ireland.

Focusing on the prevalence of these various alternative business structures in operation, categorised by farm system, Figure 3 is presented. Figure 3 reveals that the sole trader farm is the most common type of business structure across most farm systems. GAECs (similar to farm partnerships in Ireland) are most common in both milk cattle (dairy) and mixed cattle farm systems, while EARLs (Limited Companies) appear to be quite common across multiple farm systems. In comparison to Ireland, despite there being a significantly greater number of farmers operating in partnerships and companies in France, dairy and cattle farms appear to be quite common in the partnership structure in both countries (see Figures 1 and 3). However, when the prevalence of the company structure by farming system is compared in Ireland and France, the dairy system seems to have embraced the limited company structure in both countries (see Figures 2 and 3), while cattle farms in Ireland do not appear to have embraced the limited company structure to any meaningful extent when compared to France. A possible explanation for the lower rate of incorporation of cattle farms in Ireland compared to France is the lower average herd size of cattle (average herd size in Ireland 71, average herd size in France 120: Eurostat, 2020) and as a consequence average income disparity between the two countries.

4.2.2 Germany

As outlined in Table 1 earlier, according to 2020 Eurostat data, 262 776 farms operated in Germany, while Table 4 highlights that 87% of these farms operate as a sole trader, 2% company form, and 11% are in partnerships. The figures are mirrored by country-specific data from the Agricultural census of Germany shown in Table 6.

Table 5. The number and percentage of total farms in France by legal form, 2020

Legal structure	Number of farms (×1000)	Percentage of total farms
Individual farms	227.7	59
EARL	74.9	19
GAECs	42.9	11
Other	44.3	11
Total	389.9	100

Source: GRAPH'AGRI 2022 Report (Ministry of Agriculture and Food of France, 2022).

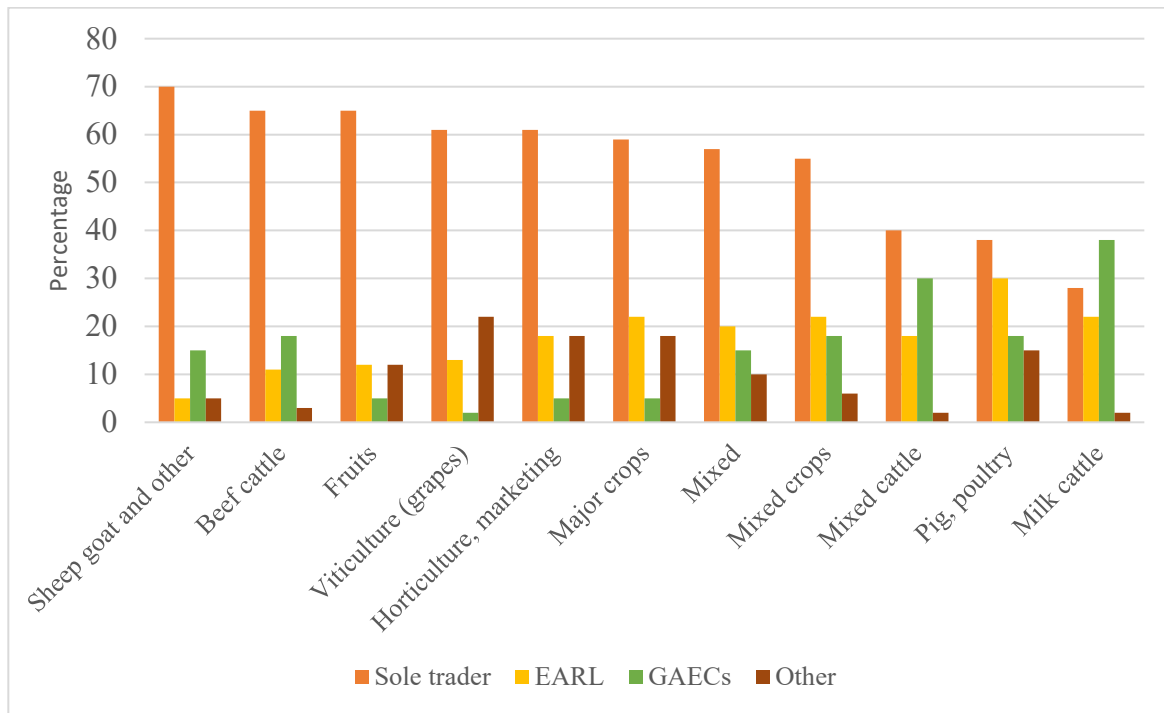


Figure 3. Analysis of farms in alternative business structures in France by farm system, 2022. Source: GRAPH'AGRI 2022 Report (Ministry of Agriculture and Food of France, 2022).

Table 6. The number and percentage total farms in Germany by legal form, 2020

Legal form	Number of Farms (×1000)	Percentage of total farms
Sole trader	228 259	87
Partnerships	28 570	11
Company form	5 947	2
Total	262 776	100

Source: German Federal Statistical Office (<https://www.destatis.de/EN/Themes/Economic-Sectors-Enterprises/Agriculture-Forestry-Fisheries/Agricultural-Holdings/Tables/agricultural-holdings-by-their-legal-form.html>).

Comparing the prevalence of alternative farm structures in Ireland with Germany, there is little difference in the percentage of the total farming populations in each country that have opted for the formation of limited companies. However, regarding partnerships, German farmers have adopted the partnership structure to a greater extent, approximately twofold in comparison to Ireland. Given the larger proportion of farmers in partnerships in Germany compared to Ireland, a review of the prevalence of farm partnership by farm system is conducted and provided in Figure 4.

As evident in Figure 4, the grazing livestock farm system constitutes the largest share of farm partnerships in Germany. Grazing livestock and mixed livestock holdings include both dairy and cattle farm systems thereby highlighting a similar finding to the Irish case (see Figure 1), whereby it is these types of farms that engage most in the partnership structure in both countries. Another notable observation from Figure 4 is that in Germany, 24% of partnerships are within field crops. This is a significantly higher proportion in comparison to the 6% of partnerships that engage in tillage farming in Ireland (see Figure 1). It would be interesting for future research to explore why the uptake of partnerships on tillage farms is quite low in Ireland, while this is not the case in Germany. In terms of generational renewal, specifically in relation to the

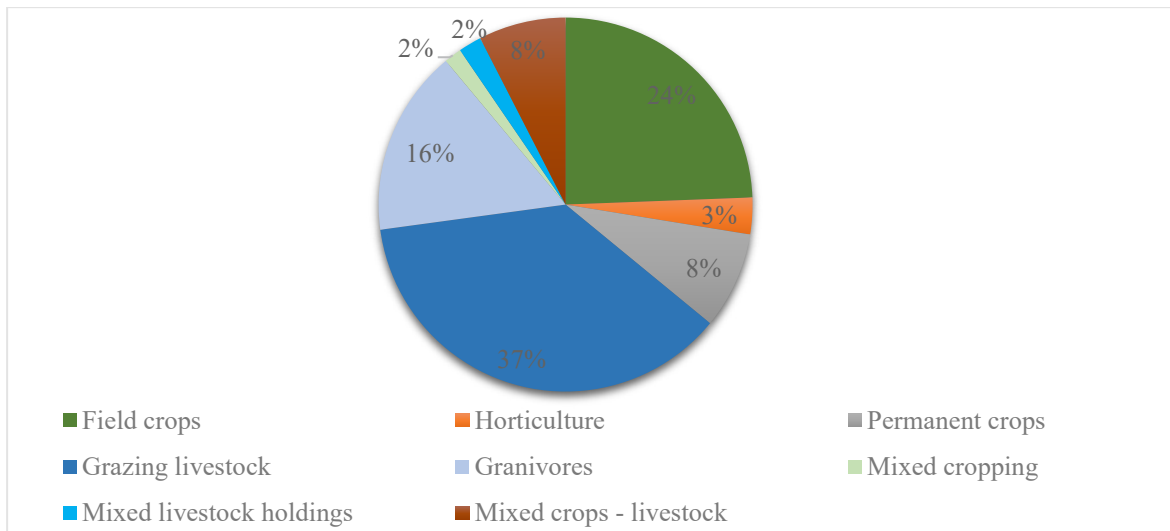


Figure 4. Analysis of farms in partnerships in Germany by farm system, 2020. Source: Agricultural Census of Germany 2020.

tillage sector, perhaps Ireland could learn from Germany on how best to develop policies that will increase the uptake of partnerships in this sector, to achieve this.

4.2.3 The Netherlands

According to the 2020 Eurostat data in Table 1 earlier, 52 640 farms operated in The Netherlands. In Table 4, the data confirms that 91% of all farms operate under the sole trader structure in the Netherlands and the remaining 9% are in company form, with no mention of farm partnerships. When country specific data from the Netherlands is explored and presented in Table 7, despite the actual number of farms being reported is higher than those reports in Table 1 earlier, the split between natural person (sole trader) and company format are similar at 90% and 10% respectively. However, what is interesting is that details regarding farm partnerships (known as ‘Maatschaps⁶’) is uncovered in this country specific data.

Table 7 reveals how the category of “natural person” (sole trader) in the Netherlands includes various types of partnerships, which accounts for approximately 45% of all farms. This analysis highlights that collaborative farming through partnership arrangements is quite prevalent in the Netherlands and that they are at a level much greater compared to the Irish case, and more similar to the levels noted in France. This in-depth review of country specific data highlights a different representation of alternative business structures present in the Netherlands, compared to what was initially evident in Table 4 based on Eurostat Data. This highlights another example of inconsistencies in the classification and reporting of the various types of alternative business structures across countries.

According to Dik *et al.* (2022) the Dutch government announced that only groups of farmers called farmer collectives could be beneficiaries of Agri-Environmental Schemes (AESs) for the period 2016–2022, which led to 40 Dutch farmer collectives being established in 2015 under new AESs. This indicates another trend of employing incentives towards further increasing the level of collaborative farming in the Netherlands.

⁶ The Dutch term *maatschap* is a legal entity in the form of a professional or public partnership. According to governmental information of the Netherlands (Business.gov.nl), characteristics of a *maatschap* are: Partners are equally liable for possible debts of the company; Partners work on a more or less equal standing; Each partner brings equity to the *maatschap* e.g. labour, cash or goods.

Table 7. The number and percentage of total farms in The Netherlands by legal form, 2022

	Number of farms	Percentage of farms
Natural person	69 200	90
Individual farms	35 380	
Partnership, cooperative	18 025	
General partnership (maatschap)	15 035	
Limited partnership	760	
Company form	7 450	10
Total entities	76 640	100

Source: Central Bureau of Statistics (CBS), The Netherlands (2023).

Regarding the type of farming that engages in alternative business structures, the Census of Agriculture of the Netherlands 2016⁷ revealed that mixed cropping farms has the highest share in company form, followed by general field crops. This is in direct contrast to Ireland, however, it is important to note that a large proportion of farms in the Netherlands are involved in horticulture, which is quite different to the situation on Irish farms where the farming environment in which they operate is quite different.

4.2.4 Poland

Eurostat data provided in Table 4, as presented earlier in the paper, highlights that Poland is the EU country analysed in this study which has the least engagement in collaborative farming arrangements via the alternative business structures with 99% of farms operated under the sole trader structure and the remaining 1% designated as limited companies. When more specific Polish data is referred to, published in their Statistical Yearbook of Agriculture (using census data), it also confirms that approximately 99% of farms are operated as sole traders. However, this yearbook alludes to partnerships being in existence and that they account for 0.1% of total agricultural producers in Poland, which is negligible. The small number of limited companies and partnerships in operation in Polish agriculture can be explained by its historical background, where collective activities have been hampered by the post-socialist heritage. According to Czekaj *et al.* (2020) the post-socialist environment influences farmers in terms of developing collaborative strategies as distrust is noted in all formal types of co-operation. Furthermore, as Poland has the largest number of farm enterprises of the case countries under review and considering that the average farm size in Poland (11.3 ha) is considerably lower than the average farm size in the other comparative countries (Table 1), perhaps this low average farm size is a factor as to why the sole trader structure remains as the dominant source of farm ownership in Poland.

While the share of farm holdings in companies and partnerships in Poland is quite low, another collaborative farming structure known as Agricultural Producer Groups, is present. These agricultural producer groups emerged in 2000 and the legal status of them appears to be uncertain. According to Lemanowicz (2018) they do not provide any specific legal form as farmers in these groups can select legal status. Chlebicka (2015) reports that a producer group may have the legal form of a cooperative, but this is not an obligation. Studies by Czekaj *et al.* (2020) and Lemanowicz (2018) highlight that the number of agricultural producer groups in Poland is growing and that they operate in a similar nature to farm partnerships. These latter studies also maintain that producer groups are considered one of the primary strategies to address the challenges towards structural change in the farming sector in Poland. Overall, collaborative farming in Poland is growing, for example, Figure 5 highlights the growth of agricultural producer groups between 2010 and 2018.

⁷ Available at: <https://www.cbs.nl/en-gb/figures/detail/80783eng?q=farm%20type%202016>

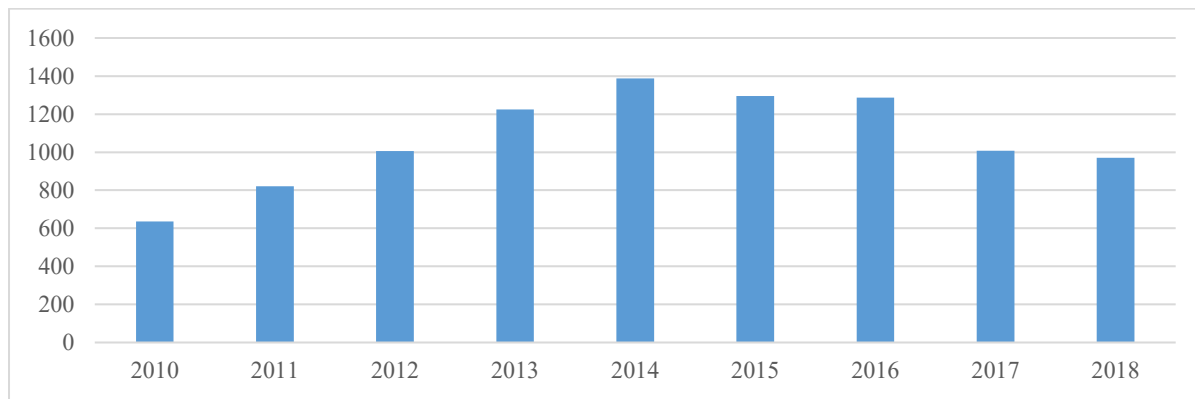


Figure 5. The number of agricultural producer groups in Poland, 2010 to 2018. Source: Lemanowicz (2018).

As evident in Figure 5, the number of agricultural producer groups grew steadily up to 2014 but then declined since 2015, caused by an amendment of the act on agricultural producer groups. Despite this decline in number, the amount of financial aid granted to the agricultural producer groups is increasing (Lemanowicz, 2018) and Malchar-Michalska (2018) underlines the significant role of agricultural producer groups in the vertical coordination of transactions in agricultural markets in Poland. While Poland has lower adoption of alternative business structures compared to Ireland and the other EU countries explored in this study, they are taking steps to address this issue. Interestingly, while agricultural producer groups appear to be quite prominent in Poland, this is not the situation in Ireland as Javornicky *et al.* (2021) highlight that in 2019 Ireland's first two beef producer groups emerged. This stark contrast in the prevalence of agricultural producer groups in both countries appears to be due to differences in how they are structured in each respective country. In Ireland, agricultural producer groups have emerged as quite a distinct means for farmers to come together to achieve increased bargaining power (Javornicky *et al.*, 2021). However, according to Lemanowicz (2018) agricultural producer groups in Poland operate in a similar nature to farm partnerships, this is not the case in Ireland. Agricultural producer groups have not been of primary focus in this study, but they are a form of collaborative farming. Perhaps future studies could examine the prevalence of agricultural producer groups across European countries and explore the similarities and difference in how they operate in respective jurisdictions. As these more informal non-legal arrangements are not the key focus of this paper we have not delved further into peer reviewed or grey literature in this regard.

4.2.5 United Kingdom (UK)

While data on the types of alternative business structures was not included in Table 4 (as the UK is no longer in the EU), it is important to also explore the prevalence of alternative business structures in the UK as both Ireland and the UK have similar farming systems in operation. The UK has just under 200,000 farm holdings (Government of the UK, 2022) and data on the number of farms by legal status in the UK and Northern Ireland is detailed in Table 8.

As evident from Table 8, 58% of all UK (including Northern Ireland) farm holdings are sole trader, while 32% of them are in partnerships, with the remaining 10% formed as limited companies. However, when we focus on Northern Ireland farms, since these farm enterprises operate on the island of Ireland in similar farm systems, but within somewhat different legal and policy frameworks, it gives us some deeper insights. Table 8 reveals that the prevalence of alternative farm structures is significantly less in Northern Ireland compared to the UK overall, as a greater proportion of farms are in the sole trader category (73%). Compared to the Republic of Ireland case (Table 4), we note that the prevalence of alternative business structures is much higher in the UK overall, but when we concentrate on Northern Ireland farms, we note that the prevalence

Table 8. The percentage of total farms in the UK and Northern Ireland by legal form, 2022

	Northern Ireland	United Kingdom
Company (including building society)	3%	10%
Sole proprietor	73%	58%
Partnership	24%	32%
Total number of farm enterprises	24 608	199 871

Source: UK Business Counts (<https://www.nomisweb.co.uk/datasets/idbrent>), National Statistics (ONS) UK, revised for small sole trader farms according to census data.

of collaborative farming is closer to the case in the Republic of Ireland, particularly regarding company structures. However, the prevalence of farm partnerships is higher in Northern Ireland, compared to the Republic of Ireland, highlighting the potential for further development of farm partnerships in the Republic.

5. Conclusion

This study set out to explore the prevalence of alternative business structures in Ireland and to compare the Irish case with other European countries. The findings profiled in Section 4 highlights that the landscape of collaborative farming via alternative business structures is not uniform across European countries. Initially the data analysed from Eurostat indicated that Germany, the Netherlands, and Ireland have similar levels of farmers operating under the traditional sole trader type of business structure, with the remaining 10% (approximately) in each country operating under alternative business structures such as limited companies and partnerships. In contrast, Ireland has many more farms compared to Poland adopting alternative business structures, as only one percent of Polish farms operate outside of the sole trader structure. Conversely, when the farm structure landscape of France is explored, it is observed that Ireland has significantly less farmers operating in collaborative farming arrangements, as almost 40% of farm enterprises in France operate outside of the sole trader structure. However, when further country specific data from the Netherlands is analysed, it emerges that approximately 45% of farms operate under a partnership structure, which portrays a situation similar to France. Finally, the situation in the UK, and to a lesser extent Northern Ireland, shows that the prevalence of alternative business arrangements is greater than in Ireland.

While data was available from various sources in Ireland, and in other European countries, on the prevalence of alternative business structures, the researchers found that obtaining accurate and comparable data proved quite challenging. It was also noted that some collaborative farming arrangements appear to be more formalised across different countries. For example, in Ireland some farmers may be working in partnership together under an informal arrangement and are therefore not captured in any data sources in this area, while a similar situation may, or may not, exist in other countries. This anomaly might also explain some of the inconsistencies between Eurostat data and other country specific data highlighted in our findings. Consequently, a recommendation emerging from this study is a call for a more uniform classification of the various types of alternative business structures in existence, and a more accurate and comparable dataset detailing the prevalence of these business structures, in agriculture across European countries. More comprehensive and accurate data on such alternative business structures would inform policy development and allow for industry stakeholders to obtain a deeper understating of the farming landscape, and changes over time in that landscape, across Europe in this area.

The findings of this study indicate that there is significant potential for growth in collaborative farming via alternative business structures in Ireland to assist in the generational renewal challenge. However, the area where growth in those structures is targeted needs to be carefully considered by policymakers given the economic vulnerability of many farm enterprises. For instance, according to IFAC (2019) limited companies are most common in large profitable farms as a key benefit of this structure is that profits retained in the

company are taxable at a rate of 12.5%, rather than the potential 50% rate of income tax payable by an individual farmer. On the other hand, farmers paying the lower rate of income tax are unlikely to benefit from the incorporation structure. Given the low profitability achieved by many farm enterprises in Ireland (for example, beef enterprises), it is questionable how attractive this taxation benefit would be to farmers considering incorporation. In this context, while incorporation can undoubtedly act as a mechanism to facilitate generational renewal, careful attention to where the focus of policy development is targeted is imperative.

Focusing on the potential role of collaborative farming to assist in generational renewal and farm succession in more detail, some contrasting results are evident from the analysis conducted in this study. Taking into consideration the proportion of farmers over the age of 65 in each country as displayed in Table 1, the relative potential for alternative business structures to create generational renewal in each country is different. Despite Poland having the lowest percentage of farm holders over the age of 65, it has the least engagement in alternative business structures, which highlights that generational renewal via alternative business structures may not be as necessary in some countries as it is in others. However, in the case of France, where collaborative farming is most prevalent, the share of farmers over 65 is also quite low, demonstrating that collaborative farming may be effective in creating generational renewal. In the case of Ireland, the percentage of farmers over 65 is high and its engagement in collaborative farming is modest, thereby signalling that collaborative farming could assist in addressing the generational renewal challenge.

Reflecting further on the profile of farming in the case countries highlighted in Table 1 it is interesting to observe that the UK has the largest average farm size and the highest percentage of farmers over 65 years, while Poland has the lowest farm size and quite a low percentage of farmers over 65 years. This may suggest that across Europe, that older farmers may control the largest farm sizes. If this is the case, it represents a significant challenge for generational renewal in agriculture. Perhaps collaborative farming has the potential to assist in overcoming this challenge by providing a mechanism for older farmers to farm with younger farmers, and gradually allow the management of larger farms to pass from one generation to the next. Future studies could explore the relationship between farm size and collaborative farming arrangements in detail to provide further insights in this regard.

Some prior literature alludes to how the prevalence of alternative business structures is impacted by the type of farm system in operation and the analysis conducted in this study provides further insights in this regard. For example, according to Leonard *et al.* (2017a), farm partnerships in Ireland are mainly common in dairy farms where farm profits are higher than on alternative farming systems. On the other hand, in the case of France, Agarwal and Dorin (2019) acknowledge that group farms are more likely to emerge in types of farming which are less profitable or less possible, for example, mountain areas and in zones with poor-quality land. In this study, comparing the case of France with Ireland, the analysis by farm system reveals that dairy and cattle farms are quite common in the partnership structure in both countries. However, comparing the limited company structure, in Ireland it is the dairy system that has embraced the limited company structure to any meaningful extent, unlike France where both dairy and cattle farms have embraced it. Therefore, it appears Ireland (and other countries who experience a generational renewal challenge in agriculture) need to consider developing policies to promote the adoption of alternative business structures, which have a dual focus. Policies could be specifically targeted at economically viable farms systems and/or at lower income farm systems which are not capable of supporting a family on its own, but through co-operation with other more viable farms and/or other farm systems where additional collaborative opportunities may arise. From an economic sustainability perspective, it could be argued that while alternative business structures may facilitate generational renewal, they may have limited benefit in situations where farm enterprises are economically vulnerable. As generational renewal is one of the key challenges facing the sustainability of agriculture this study calls for further research to consider the dual perspectives of economic and social sustainability, when exploring the adoption of alternative business structures in agriculture.

Policy development in this area is imperative to address the generational renewal challenge and throughout this study it was evident that many of the case countries are developing policies to encourage collaborative

farming. For example, in Ireland, the Land Mobility Service provides a dedicated advisory service which facilitates collaborative farming by allowing farmers to explore their options and, with a particular focus on generational renewal, match farmers interested in entering collaborative arrangements. In Germany Theesfeld and Curtiss (2021) discuss how there is a new type of land ownership to sustain life on land, called Community-supported organisations of land ownership, whereby six different legal organisational forms of how community-supported organisations are recognised; registered cooperative; publicly beneficial limited liability company (LLC); registered association; joint stock company, and foundation. While in the UK the “Fresh Start Initiative” has been created, comprising an agricultural council that develops matchmaking activities to put new entrants in contact with farmers looking for a partnership (Rech *et al.*, 2021). This initiative supports businesses through consultants in building partnerships; mentoring for new farmers; training; financial assistance; and rural housing provision (Ingram and Kirwan, 2011). Moreover, in Poland there are several initiatives underway to promote collaborative farming, including governmental and private programs and Lemanowicz (2018) contends that Poland is in a phase of ‘rebirth of group farmers’ based on new principles under their Rural Development Programme. Countries across Europe could benefit from exploring such policy initiatives in the respective countries to develop and strengthen policies in their own country to increase participation in collaborative farming arrangements and assist in addressing the generational renewal challenge.

Another policy related issue is that the findings of this study highlight that formalised farm partnership arrangements should be encouraged and incentivised, as within loosely formed “informal” collaborative farming arrangements, no commitment to transfer farm assets to assist in generational renewal exists. In this respect policy initiatives could be developed to financially incentivise farmers to engage in succession planning, which could include the consideration of forming formal collaborative farming arrangements such as partnerships and companies. An example of such a policy initiative has recently been launched by DAFM in Ireland known as a Succession Planning Advice Grant⁸ (SPAG). SPAG is a scheme specifically aimed at encouraging best practice in intergenerational land transfer to address significant generational imbalances in farming. The grant is aimed to encourage and support farmers to seek succession planning advice by contributing up to 50% of vouched legal, accounting, and advisory costs, subject to a maximum payment of €1500. Contemplating the findings emerging from this study regarding the opportunities for an increase in the prevalence of alternative business structures we suggest that Ireland’s SPAG offers a framework of best practice for other countries experiencing a generational renewal challenge, to adopt when developing policy in this area.

From a managerial perspective, this study highlights several important issues. For farm managers and farm advisors it highlights that the type of farm system in operation is a key influencing factor on the decision to enter collaborative farming arrangements with specific farm systems more suitable in specific case countries. On a related point, the economic viability of farm enterprises, which is often a function of the farm system in operation (for example: dairy farming in Ireland), may be an important factor when a farmer is contemplating entering a collaborative farming arrangement via an alternative business structure. Perhaps most importantly, farm advisors need to be made aware of the various type of alternative business structures that facilitate collaborative farming with the aim of encouraging new entrant farmers into the industry through the most appropriate routes.

In conclusion, the authors anticipate that the findings within this study will stimulate further studies on this important topic and acts as a catalyst for the development of a comprehensive, accurate and comparable dataset on alternative business structures in European agriculture. Harmonisation of cross-country business structure definitions, as presented and reported in the official databases, would act as an important starting point in providing a more ‘holistic’ structural overview of the industry. Our comprehensive review of the prevalence of alternative farm business structures in Ireland, and our comparison of the Irish case to other

⁸ <https://www.gov.ie/en/service/a2a29-succession-planning-advice-grant/>

European countries, highlights that there is potential for growth in collaborative farming arrangements in Ireland to assist in meeting the generational renewal challenge. Policy makers in other countries can also learn from the findings of this study to assess the potential for growth in collaborative farming in their respective country. We recommend that when policy initiatives are being developed to increase participation in collaborative farming that such initiatives need to be targeted and carefully considered to ensure that they are focused on achieving generational renewal, through the most appropriate means, while also contributing to the development of sustainable farm enterprises.

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