Understanding farm generational renewal and its influencing factors in Europe

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ABSTRACT

Understanding the complex process of generational renewal (GR) in agriculture is essential for supporting the continuation of farming. This paper demonstrates how multiple factors, simultaneously and through their mutual interactions, influence GR and related individual decision-making processes. Results originated from 155 in-depth interviews performed on 85 farms in eleven European regions, and were triangulated with the literature. Our analysis, combining inductive and deductive approaches, revealed three conceptual phases (successor identity formation, farm succession process, and farm development) and fourteen factors important to understand GR. We elaborate how these factors interact, hence exert their impact on (one of) the phases in a complex and variable way. Implications highlight potential pitfalls and opportunities for attracting people into agriculture. Although policy-makers should be aware of their limited ability to affect GR by targeting the first phase, we propose some ideas that would complement current existing measures acting on the third phase.

1. Introduction

The future of farming largely depends on agricultural workers and managers, not just in terms of their numbers and age pattern, but also on, i. a., their entrepreneurial skills, education, knowledge, ambitions, values, and collaborative capacities. Currently there are concerns about how to support such qualitative entry into farming (Pitson et al., 2020a), about the average age of the farming population, and about the tardiness of the generational change in EU agriculture (ENRD, 2020). Although this demographic trend is starting to reverse in some Member States (Coopmans et al., 2020), many of them have to deal with persisting demographic evolutions in agriculture that are considered undesirable –

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often referred to as 'the young farmer problem' (European Commission, 2012; Eurostat, 2018). While there is no consensus on the exact extent of the young farmer problem, and on whether there is a generational renewal (GR) crisis (Burton and Fischer, 2015; Chiswell and Lobley, 2015; Matthews, 2018; Zagata and Sutherland, 2015), it is clear that a combination of social, economic, environmental, and institutional challenges are jeopardizing GR on European farms (Suess-Reyes and Fuetsch, 2016). Indeed, supporting GR in agriculture is one of the nine key objectives proposed by the European Commission to guide legislative proposals for the future Common Agricultural Policy (CAP) (European Commission, 2020a). The Commission will support Member States in defining which interventions should be implemented in their CAP Strategic Plan to effectively support GR in their territory (European Commission, 2020b). This study adds insights needed for designing a policy that supports farm GR in an unambiguous and efficient way, by creating a comprehensive view on the generic factors that influence the GR process in the context of contemporary agricultural and societal trends.

The GR rate at population level is the result of individuals' decisions on, i. a., whether and when to work in agriculture, to take over a farm, or to retire from farming. Individuals' decision-making processes are themselves influenced by contextual factors and (inter)personal processes, as this paper will elaborate on. Because of these multi-layered dynamics of GR processes in agriculture, achieving a profound understanding is a complex task. Metrics expressing the GR rate, such as the share of successful farm transfers, age distributions of farmers, and agricultural demographics, are helpful to assess the state of GR in agriculture, but typically do not provide information on the processes and influencing factors behind these numbers and data. Yet it is crucial to know these processes and factors in order to effectively support the GR process. A brief literature review reveals three major fields that have attempted to address this need, each characterised by their own usual investigative lenses and methods (see also Boehlje, 1992; Morris and Evans, 2004). First, literature on structural change in agriculture analysed aggregate structural evolutions of farming sectors, whereby models, by measuring the effects of a limited set of independent variables, try to uncover the main driving forces of this higher level outcome of GR processes (e.g. Saint-Cyr and Piet, 2017; van der Ploeg, 2018; Weiss, 1999; Zimmermann and Heckelei, 2012). Second, in the field of social sciences, we found detailed descriptions of the psycho- and sociodynamic processes important to understand (non-)retirement decisions, farmer identification processes, or the progressive intergenerational farm management transfer on family farms (Calus, 2009; Cassidy, 2017; Conway et al., 2016; Fischer and Burton, 2014; Potter and Lobley, 1996a; Riley, 2014a). Third, the (isolated) influences of policies on GR have been studied (e.g. Dwyer et al., 2019; Mishra and El-Osta, 2008). Thus, previous research provided rather stand-alone insights in the (marginal) effects of specific factors (e.g. a specific policy measure, family circumstances) on farm GR, through either focussing a particular micro-level sub-process, like retirement decisions, or by considering the macro-level aggregate results of GR processes. It would be relevant to connect the above separate fields to create a more comprehensive understanding of GR processes. Indeed, only when the variety of influencers on GR processes and their probable interactions are known, more targeted inter- and transdisciplinary approaches for studying and affecting GR can be developed. The present study provides a first step towards this need for connection, by considering the GR process in its entirety, by creating a more general and comprehensive understanding of GR summarized in a general framework, and by clarifying how multiple factors influence GR related decisions.

The paper is structured as follows. First, the investigative approach is described. Next, the results section starts with presenting three conceptual phases of the GR process and fourteen factors of influence, after which the complex intermingling of the factors in determining GR decisions and processes is clarified. The discussion then reports how these phases and factors aid determining effective measures for supporting GR in agriculture. Finally, the conclusion summarizes the key messages of this paper.

2. Materials and methods

Previous research on farm GR usually started by identifying a research gap, which typically corresponded with the need to examine how just one or a limited set of factors influence one particular aspect or sub-process of GR (e.g. the succession of the farm). While determining an appropriate method to address the research aim, scholars very often searched the literature for existing theories or axioms to guide their investigation or to validate empirically. Some examples of studies using such deductive approaches were conducted by Chiswell (2016); Conway et al. (2017); and Joosse and Grubbström (2017). Additionally, regarding qualitative inquiries in this field, interviewing techniques have been a widely used method, however, study designs involving multiple respondents from one farm are surprisingly scarce in the literature on farm GR (for notable exceptions, see Fischer and Burton, 2014; and Riley, 2014a). The above two aspects entail that previous GR studies have been limited on focussing on a predefined set of factors and being informed by only one respondent type. While many of these studies have achieved in-depth insights into GR, they were mostly not able to take the wider context and complexity into account, which might imply that current knowledge is underestimating the effects of factors' interplay on GR, or overestimating the isolated effect of one single factor. We used a research design able to address these shortcomings. In what follows, the three types of triangulation (Denzin and Lincoln, 2000) determining the added value of this design are discussed, thereafter each research step undertaken is clarified in great detail.

First, data source triangulation was used by gathering multiple perspectives on GR by interviewing all relevant family members or farm stakeholders from the same farm wherever possible. Second, method triangulation was achieved by a sequential inductive-deductive approach, using both interviewing and literature reviewing to investigate the same phenomenon (GR). The first, inductive step was empirical data collection; which was an iterative process of recruiting interviewees, and conducting and analysing open in-depth interviews. Importantly, the influencing factors of GR were not embedded in the pre-set interview purpose but fully determined by the respondents. This allowed the identification of a broad range of factors, in contrast to previous studies which yielded a limited number of factors due to their initial research scope. The second, deductive step was the confrontation of the inductive findings obtained from the first step with the literature. This step allowed for validating and fine-tuning our results. Third, investigator triangulation was embedded in our research design. Eleven research clusters were selected, whereby each cluster referred to a set of farms grouped geographically and sharing common socio-economic context. This approach allowed comparing GR processes on farms that operate in similar (within-cluster comparisons) or different contexts (between-cluster comparisons). By contexts, we mean the sociographic, economic, environmental, and institutional conditions that define the operating space of the farms. Over twenty researchers were involved in conducting and transcribing interviews in local languages, translating relevant quotes into English, and performing the cluster analyses that fed into a cross-cluster comparison which was performed by the lead researchers. A consistent approach regarding data collection and analysis was facilitated by written protocols, two training sessions, and several face-to-face and skype meetings between the researchers. This resulted in a large sample of 85 farms covering 155 interviews involving 169 respondents (Fig. 1). This sample results from a purposive sampling method, which allowed a broad observation of GR processes and influencing factors in the context of EU farming. The sampling design hereafter described was to cover various regional and operational contexts wherein farm GR processes take place, as well as to gather the perspectives of different generations and type of farm stakeholders involved in the GR processes.

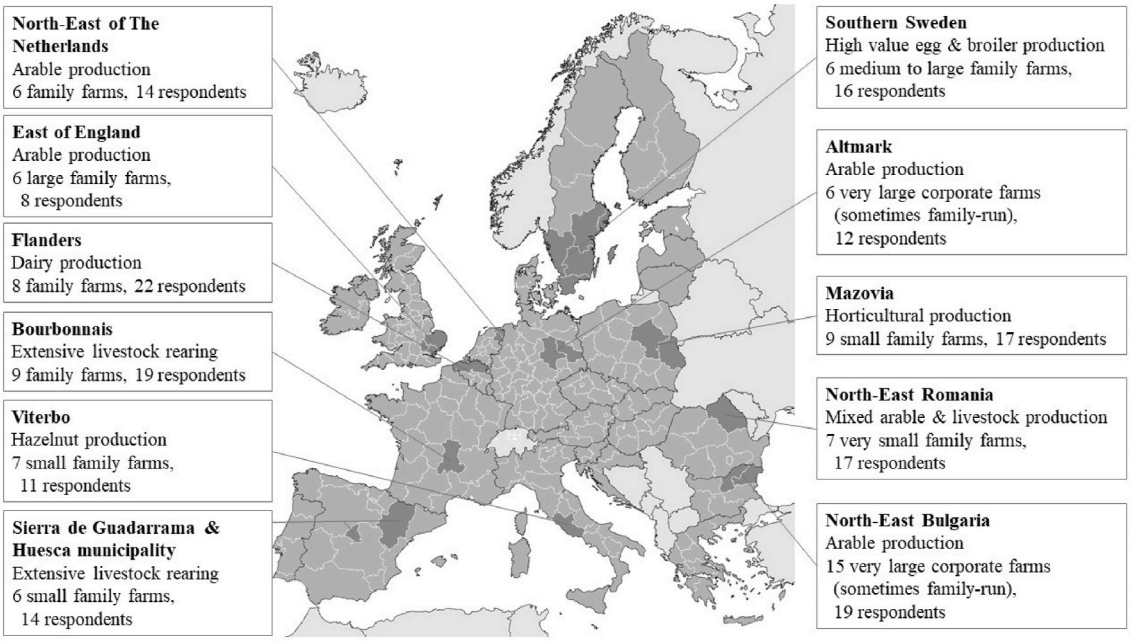

Fig. 1. Description of the samples in the eleven clusters: regions, agricultural sectors, number of farms and respondents.

The selection of farms to be included in a cluster was based on two criteria. First, the farms in a cluster sample needed to be as diverse as possible with regard to their business stages and demographic situations. To achieve this, a general guideline was to start with recruiting one farm before, one during, and one after ownership or managerial transfer from one generation to another, as well as one farm without any succession plan so far. Hereafter, more farms were added to the cluster samples until data saturation occurred. This criterion originated from the assumption that GR is a dynamic, life-transcending process. Thus, for fully understanding the mechanisms behind GR, information must be gathered not solely from farms that are in the middle of succession, since the reasons for (non-)succession vary extensively and can only be captured by including a wide variety of farm demographic situations. Second, the cluster samples needed to be illustrative for the population in the cluster. This means that the first criterion was less strictly followed if the cluster mainly covered agricultural holdings that are in a similar business stage, which was for example the case in the German and Bulgarian clusters. The cluster sample sizes varied from six to fifteen farms (Fig. 1), resulting from a combination of appealing to key gatekeepers and snowball sampling.

Per farm, one or more in-depth interviews were conducted, the number of interviews being dependent on the specific demographic situation. The goal was to gain insight into the perceptions and experiences of those farm members playing a crucial role in the GR process on that farm (which could also be the absence of a GR process). The most common profiles among the respondents were: the current farmers, their predecessors, their (possible) successor(s), and their siblings and/or spouses. For some clusters, also farm employees or (hired) farm managers were relevant profiles. Since information about GR can be delicate and sensitive, the default was to interview respondents separately. However, some respondents preferred being interviewed simultaneously, which was permitted since joint interviews can also add value to insight building (Riley, 2014b). A research design protocol prompted the researchers to perform interviews in a consistent but flexible way, taking the specific farm situation and surrounding context into account. An interviewing guideline mainly stimulated the researchers to keep the conversations as open as possible, while triggering towards discussing aspects relevant to GR. Interviews were conducted between February and September 2018, lasted each 30–120 min, and, with a few exceptions, took place face-to-face on the farms.

Data analysis happened in three steps. First, each cluster was analysed individually. Interviews were transcribed ad verbatim in the original languages and coded manually or using NVIVO or ATLAS software. Initial open codes summarized information present in text fragments that was able to help understanding the GR process or mark an influencing factor. Researchers were triggered to combine open codes into axial codes, which are higher-level categories or themes that capture concepts important to understand the phenomenon of interest, here GR. (Denzin and Lincoln, 2000; Rogge et al., 2011; Srivastava and Hopwood, 2009; Strauss and Corbin, 1998). As such, eleven codebooks were independently constructed, each extracting relevant concepts arising from the data. The research activities (recruiting farms, conducting and transcribing interviews, and identifying open and axial codes) happened iteratively. Hence, the development of the interviewing guideline and codes were prone to mutual influence, i.e., initial codebooks were tested on their applicability and (in)completeness to cover information obtained in new interviews, and interviewing became more structured as the data collection progressed, until data saturation was achieved. Second, the lead researchers compared the cluster-specific findings, based on the eleven cluster reports. Each report consisted of the inductively obtained cluster codebook, a short description of the sample farms' demographic situations, English summaries of the interviews, and a cluster-level discussion of the findings. These eleven reports can be consulted in Coopmans et al. (2019), excluding the confidential interview information that cannot be sufficiently anonymised for publication. This comparative cross-cluster analysis started rather inductively, by restructuring the axial codes into selective cluster-overarching codes (Denzin and Lincoln, 2000; Mortelmans, 2013; Rogge et al., 2011; Rogge and Dessein, 2013). Third, these inductive codes (obtained from analysing interview data) were triangulated with literature on farm GR, allowing to verify whether the identified concepts were in line with previous findings from other research in order to achieve a wide applicability of the concepts, as well as to improve the formulation of the key concepts found. Hence the literature involvement was meant to be informative, not exhaustive, and contributed to 'method triangulation' which is common in qualitative research (Denzin and Lincoln, 2000).

The above sequential analytical approach (individual cluster-level

analysis, comparative analysis and literature triangulation) ensured that the major concepts and patterns emerging from the data were delineated carefully before they were compared and integrated with evidence from the literature. Thus, the results presented in the next section of this paper have been identified through our empirical analysis, but their descriptions are more advanced than the initial ones because the exact definitions have also been informed by literature. The results of this second analytical step structure the results section of this paper.

3. Results

Our data showed that farm GR can be considered a three-phase process, on which fourteen main factors have an influence. This section starts with presenting these phases and factors, along with references to studies that investigated specific topics related to these phases and factors, as output of the literature triangulation during the second analytical step. Thereafter, we explain how the three conceptual phases are influenced by a complex interplay between the identified factors.

3.1. The generational renewal process in three conceptual phases

Three conceptual phases appeared relevant for understanding the GR process: the formation of a successor identity (SIF), the farm succession process (FSP), and the farm development (FD) (Fig. 2). First, the SIF encompassed the trajectory towards a personal (non-)entry decision, i.e., the process during which an individual either gradually identifies or dissociates oneself as the prospective farm manager (or in rare cases a future employee on a farm). During this phase, a successor identity (SI) was being constructed (or not), and the outcome was the expressed (un) willingness to either become a farmer (or work in agriculture) or to pursue another career. Second, the FSP comprised all practical, legal, managerial, and symbolic actions undertaken to transfer a farm from the outgoing party to the successor. Third, the FD, being usually the longest phase, covered the period during which a farm was developed in terms of organisational structure and strategic approach. This phase started when a farmer gained managerial control over the farm and lasted till exit due to retirement or other reasons.

The timespan of each phase highly depended on the specific situations at the investigated farms. The transitions from one phase to another could usually not clearly be delineated in time, often because they entailed an overlap as different generations were involved. This intergenerational overlap was obvious during the FSP, but more important to consider is that the SI of the junior generation was typically created while the incumbent farmer was passing through the FD phase. Even overlaps involving three generations were observed, whereby a predecessor was in the final stage of the FD (reaching retirement) while the successor was entering at the early stage of the FD and his/her offspring was in the SIF. Thus, the interpretation of the phases largely depended on whether the point of view of the old versus new generation was taken. Because of the above, one should think of these phases as conceptual rather than distinct chronological phases.

The above conceptualization of the GR process as consisting of three critical phases resonated with theories about farm GR previously presented by other authors. For example, Mann (2007a) and Dumas et al. (1995) distinguished several successive stages, each with different influencing factors, whereas the cyclical and overlapping character of the GR process has been illustrated by others, such as Calus (2009). Furthermore, our EU-wide research complied with the findings of Fischer and Burton (2014), whose theory on three intertwined processes important for farm succession was based on observations in Scottish agriculture.

3.2. Factors influencing farm generational renewal

The comparative analysis of the codebooks revealed fourteen main factors impacting the GR process. These were assigned to four spheres of influence (SOI) based on their type of effect: the personal, the farm and family, the agricultural resources, and the societal SOI (Fig. 2). Each individual factor, including its triangulation with previous literature, is explained hereafter.

Four factors that emerged from the data belonged to the **personal SOI**, which composed a mix of characteristics that is unique to each individual person. The first factor of this SOI was *personality* and encompassed someone's interests, beliefs, motivations, emotions, norms, values, opinions, and self-identity. Many of these personality traits, and how they influence farm management decisions during the FD phase, have been studied in detail in various farming populations (i.a. Baur et al., 2016; Bergevoet et al., 2004; Burton, 2004; Dessart et al., 2019; Dessein and Nevens, 2007; Gasson, 1973; Knowler and Bradshaw, 2007; Kristensen et al., 2004; Schmitzberger et al., 2005; Willock et al., 1999). Furthermore, the literature largely supported the links we found between different motivational drivers, such as emotional versus economic objectives, and farm continuity and development (Bergfjord et al., 2011; Hansen and Greve, 2014; Hansson and Ferguson, 2011; Inwood et al., 2013; Mann, 2007a; Riley, 2014a). The second factor was *early involvement* in farming, which meant being exposed to the farming life either by growing up or working as a young employee for a significant period on a farm. This factor entailed complex social (gendered)

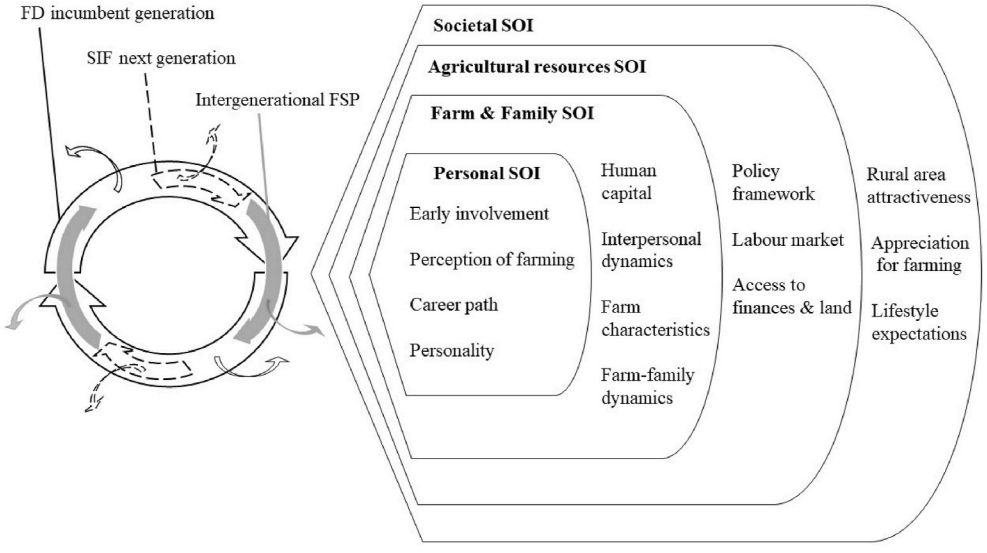

Fig. 2. Left: conceptualization of the GR process in three phases that are repetitive for each new generation and occurring in a cyclical way: dashed, grey, and full arrows represent the successor identity formation (SIF), the farm succession process (FSP), and the farm development (FD), respectively. Outgoing arrows indicate that theoretically, exit or non-entry decisions can occur anytime. Right: fourteen factors found to influence GR processes are categorised into four spheres of influence (SOI).

processes, which typically created a preference for or aversion to farming. Besides, it was frequently interpreted by interviewees as an implicit learning period during which valuable agricultural-related skills and tacit knowledge were developed. This factor was related to a large strand of literature describing socialisation into farming, the progression on the farm ladder, and family farms as 'incubators' for future successors (Bjarnason and Thorlindsson, 2006; Brandth and Overrein, 2013; Carolan, 2018; Chiswell, 2016; Fischer, 2007; Fischer and Burton, 2014; Kuehne, 2013; Laband and Lentz, 1983; Mann, 2007a). The third factor of the personal SOI, *career path*, captured an individual's education and career-related experiences (or the lack of those), which could either push him/her into or away from agriculture. Regarding the impact of (non-)agricultural education on farm GR, we have not observed a clear universal trend, which corroborated the inconsistent conclusions found in the literature (Cassidy, 2017; Glauben et al., 2009; Hennessy and Rehman, 2007; Kimhi and Nachlieli, 2001). Importantly, this factor covered what we called *exploratory behaviour*; a widely observed phenomenon in our data, which specifically referred to professional activities undertaken by a potential successor during the SIF, such as going abroad to study, serving an internship on another farm, or trying out a profession outside the agricultural sector prior to deciding whether to become a farmer. This behaviour was sometimes stimulated by parents, other times it was out of necessity, e.g. as an obligatory part of a formal agricultural training programme. Literature triangulation revealed that it has been discussed under various terminologies, such as 'professional detour' (Errington, 1998), 'short-term diversions' (Chiswell and Lobley, 2018), 'diversion routes' (Uchiyama et al., 2008), and 'migration' (Bergfjord et al., 2011; Cassidy and McGrath, 2015). The fourth factor of the personal SOI captured an individual's *perception of farming*. Autonomy (being your own boss and being able to conjoin work and family life), living and raising children in the countryside, and connection with nature, were frequently mentioned positive associations to the farming life. At the same time respondents described farming as a demanding profession, both physically (e.g. exhaustion, joint pain caused by overburdening) and mentally (e.g. due to financial concerns, lack of leisure time). Literature relating to this factor was abundant: on farming as a particular lifestyle and as a hereditary occupation, and on how people's perceptions of farming are influenced by socio-cultural scripts (e.g. primogeniture, gender bias) and sociological processes (e.g. modernisation, individualisation) (Bjarnason and Thorlindsson, 2006; Carolan, 2018; Cassidy, 2017; Chiswell and Lobley, 2018; Mcmillan Lequieu, 2015; Silvasti, 2003; Stock and Forney, 2014; Villa, 1999).

The **farm and family SOI** contained both the farm production factors and the social context on the farm, as well as the dynamics between those two. First, the *human capital* present at a farm covered the ability to deal with personal, household and entrepreneurial-related challenges which jeopardized farm development and continuity. For successful farm GR, farm members often needed to deal with (inter)personal and agricultural/practical challenges that require learning capacities, an observation that was in accordance with literature on farm succession and retirement challenges (Bourdieu, 1979; Duesberg et al., 2017; Mann, 2007b; Price and Evans, 2009; Riley, 2011; Wójcik et al., 2019). Second, *interpersonal dynamics* were defined as the relations and interactions between people on the farm and the farm's surrounding social network. The latter was observed to frequently contribute to successfully addressing problems during the FD and as such supporting farm continuity. Grubbström and Eriksson (2018) investigated in more detail the role of interpersonal dynamics in impacting farmland transfers between (former) farmers and neighbours and other contacts from the local community. The way farm members (who were typically relatives, but not necessarily) and acquaintances communicated and collaborated with each other seemed dependent on the level of open culture, shared decision-making, and constructive communication between them. Our data mostly confirmed previous findings about communication and cooperation between incumbent farmers and potential successors, as well as the relevance for advisors to address the so-called 'farmer's boy' issue (see i. a. Brandth and Overrein, 2013; Burton and Walford, 2005; Conway et al., 2017; Gasson and Errington, 1993; Joosse and Grubbström, 2017). Our observations on the role of this factor during the SIF were in line with literature on (gendered) division of labour on farms and how this impacts the development of a farmer identity (Benjamin and Kimhi, 2006; Fischer, 2007; Grubbström and Sooväli-Sepping, 2012; Silvasti, 2003; Wallace et al., 1994). However, in contrast to this literature strand, we were not able to ascertain a universal effect of gender roles in determining cooperation and involvement in the farm work as normative standards, since gender was rarely a topic that inductively gained attention during our open interviews. Third, *farm characteristics* refer to the production factors such as management, labour, capital, and land at the farm's disposal. The combination of these production factors with general characteristics like farm location and infrastructure materialised in a farm's production focus and organisational structure, which in turn determined the opportunities for continuation and affected the farm's attractiveness to a potential successor. Our respondents' testimonies largely confirmed findings from previous studies demonstrating the relationship between a farm's potential to be succeeded and factors like, e.g., farm size and economic performance, labour availability, farmer demographics, human and social capital, and investment behaviour (Breustedt and Glauben, 2007; Calus et al., 2008; Glauben et al, 2004, 2009; Kimhi and Nachlieli, 2001; Pietola et al., 2003; Stiglbauer and Weiss, 2000; Zagata and Sutherland, 2015). Fourth, *farm-family dynamics* encompassed all processes that followed from the intermingling of the farm and the family life. On family farms, some practical intermingling was usually inevitable due to the physical overlap of the work and living place, but intermingling could also relate to e.g. finances or materials (see also Wauters and de Mey, 2019). The mutual influences between the family life and the farming activities emphasized how key moments of the family lifecycle typically coincided with transitions from one conceptual phase to another. For example, large infrastructural adaptations often happened when a descendant who expressed interest to succeed parents as main farm head, reached a reasonable age to be considered as the successor. This factor appeared to largely capture the so-called succession, successor and retirement effects, which characterise, respectively, the effect of the presence of a designated successor on the farm strategic decisions made by the current farmer, the effect of a successor gaining decision authority on the FD, and the effect of a farmer winding down for retirement on the FD (e.g. Calus, 2009; Gasson and Errington, 1993; Hansson et al., 2013; Potter and Lobley, 1996a; 1996b; Suess-Reyes and Fuetsch, 2016).

Three factors were assigned to the **agricultural resources SOI**, shaping the agro-entrepreneurial context external yet relevant to a specific farm situation. First, *labour market* conditions described forces that could drive people into and out of the agricultural sector, mainly through competition with other professions (e.g. Aldanondo Ochoa et al., 2007; Cavicchioli et al., 2018; Sroka et al., 2019). This competition was associated with financial (e.g. employee wages, economic returns) and lifestyle-oriented reasons (e.g. amount of leisure time, possibility to go on vacation). Tocco and Davidova (2012) provide a detailed review on evidence from previous studies about various determinants (that can be easily categorised into our SOIs) linked with the choice for the off-farm labour market. Second, *access to finances and land* refers to the amount and availability of finances and agricultural land, as well as the systems for obtaining credit and land. A limited availability of farm production factors is widely known to challenge the FSP. Third, the *policy framework*, besides affecting access to credit, labour and land, could sometimes contain specific policies being mentioned as directly enhancing GR, e.g. tax regulations motivating incumbent farmers to make the successor a shareholder of the farm, thereby facilitating the start of the FSP. In the literature, we found contrasting findings regarding the efficacy of policy instruments on mitigating the GR challenge. Some agricultural policies, particularly Early Retirement Schemes, have been criticised for missing their intended objective, e.g.,

by unintentionally supporting farm outmigration (Berlinschi et al., 2011; Bika, 2007; Gillmor, 1999; Hennessy and Rehman, 2008). Others, such as the start-up aid of the Rural Development Programme, have shown to be effective in supporting young farmers during their early careers (Davis et al., 2013; May et al., 2019a,b; Nordin and Lovén, 2020).

Finally, the **societal SOI** contained three factors that defined the embeddedness of farming, both as a lifestyle and a profession, within the local community and the wider societal context. General societal *appreciation for farming* was by many respondents perceived to be low, and they often indicated to be concerned about negative media coverages about agriculture. This seemed to affect farmers' well-being. Further, our data strongly suggested that shifting societal *lifestyle expectations* on what is considered a valuable and enjoyable lifestyle decreased the attractiveness of the farming profession, especially among younger people. This is reflected by normative beliefs about what determines quality of life and how this is conform or contrasts with general or personal connotations of the farming lifestyle such as inability to go on vacation, undesirable working conditions and a skewed work-life balance. Remarkably, we have not found literature that specifically focussed on this growing inconsistency. Lastly, our data demonstrated that *attractiveness of rural areas* matters for GR because farming is largely associated with living in the countryside (see *perception of farming*). The attractiveness of the farming life was observed to depend on the attractiveness of the farm location, which was determined by proximity to, and accessibility and quality of infrastructures and essential services like education, as well as by perceived feeling of a community life. Studies investigating the role of rural attractiveness on the GR process were also scarce (Aldanondo Ochoa et al., 2007; Lange et al., 2013).

3.3. Factor interactions influence the three conceptual phases of GR in different manners

Decisions relating to GR could happen in any phase, however, certain decisions were more likely to occur during one particular phase. For example, a non-entry decision was usually the outcome of the first phase, if the SIF had not been completed. However, in some cases, non-entry decisions occurred unexpectedly, for instance in the middle of the FSP because of a conflict between the successor and predecessor (*interpersonal dynamics*). Similarly, exit mostly coincided with retirement, although cessation of the farm business earlier in the FD phase could also happen, e.g. due to divorce (*farm-family dynamics*) or health issues (*human capital*). The exact individual effects of factors, as well as the way factors exerted joint effects, i.e., the direction and amount of impacts on the individual decisions and GR outcomes on our sample farms, were not universal but instead depended on the specific situation. In what follows, we clarify this by discussing the mechanisms we observed regarding how the factors interrelated and cumulatively influenced one or more GR phases, supported by quotes from our interview data.

To start, our data showed that the outcome of the **SIF** largely depended on the extent to which someone considered farming as a desirable (full time) career choice. What critically affected this *perception of farming*, and could explain (non-)entry decisions, was someone's *personality*. More precisely, the extent to which someone's motivations for working in agriculture compensated for the perceived negative aspects; as well as the extent to which someone considered other professional pathways to be more interesting or advantageous. This contrast is illustrated by a farmer from England who recalled being at the crossroad of finally deciding to go for it or not, and by a Belgian college student and farmer's daughter who decided not to pursue a career in agriculture:

> "*I love being outdoors, and love the countryside. I knew I would like farming, but I knew liking farming wouldn't be enough, I knew I'd need to love it, that was the real question, am I going to love it?*" (UK, farm 2 - male, settled successor)

> "*For me, these* [perceived disadvantages of farming] *do not outweigh my enjoyment in farming and being proud of it. (…) Everything needs to be organised in function of the farm. From my point of view, you don't get much in return. But that is also because I don't love the cows as much as, I mean, I care about them but I don't really have a connection with them like my brother does. (…) And I'm not saying that I am not proud at all on our family farm but … It is hard to explain.*" (BE, farm 2 – female non-entrant)

Besides personality, *perception of farming* was also influenced by *early involvement*. Particularly on family farms, children were typically exposed to the daily farm work because the farm and family life were interwoven (*farm-family dynamics*). While previous studies have emphasized its facilitating effect on entry decisions, our sample contained both cases wherein early involvement supported or obstructed the SIF. Anyhow, the process of socialisation into farming (e.g. Fischer and Burton, 2014) was frequently disrupted because of potential successors' *explorative behaviour*, which prolonged the SIF, thereby creating uncertainty on farm continuation and jeopardizing GR. However, this factor should not be interpreted as a solely negative trend, as these youth sometimes returned to the farm with valuable skills and knowledge for increasing farm efficiency, profitability and thus sustainability (*human capital*, *farm-family dynamics*). Our data hereby confirm presumptions remarked by e.g. Zagata and Sutherland (2015).

Although *exploratory behaviour* was observed in all our eleven sample clusters, it tended to be more abundant in clusters wherein farms locations were situated in underdeveloped or remote rural areas (*attractiveness of rural areas*), and/or where the outlook on better occupational opportunities (*labour market*) elsewhere reinforced migration intentions among potential farm successors. In many cases, seeking a more promising future elsewhere happened despite their personal desire to continue the family farm. Related to this, the finding that farm entry decisions typically coincided with the deliberate choice for a rural life could explain remarkable contrasts between the farms belonging to different sample clusters. In some clusters, the countryside was associated with a comfortable, quiet and private family life, viewed to be more attractive compared to living in the city. In other clusters, rural outmigration made the farming life being associated with an isolated existence in an area lacking adequate infrastructures and social services. A quote from a Bulgarian farmer illustrates this interplay of the above societal and personal SOI factors:

> *"This process* [rural outmigration] *started (…) when the industry required labour in the cities, and then the people from the small villages moved in the towns. (…) Now we want to return the young people* [to the countryside]*, honestly (…) this is a losing project. The young men and women, with their modern needs, can never make it to come back because our villages are not like the pretty German and Austrian villages."* (BG, farm 1 – male, farm owner and manager)

Apart from the above factor influences that occurred at person-level, factors acting at the farm level could also have explanatory power to the SIF outcome. First, *interpersonal dynamics* intervened with motivations to enter or stay in agriculture. For example, some parents encouraged their children to first gain career-relevant experience elsewhere (*exploratory behaviour*) while children felt responsible for continuing their parents' hard work (*personality*). Other situations in our data concerned 'bad chemistry' between a team of successors who were expected to work together (not necessarily siblings), or between the successor and the aspirant, eventually causing early termination of the SIF of the latter. Further, some prospective successors in our sample only considered themselves to be fully capable of becoming a farm manager after having found a supportive partner or after having their partner agreed on the prospected farming lifestyle, which indicates that perceived *human capital* was susceptible to *farm-family dynamics*. The aforementioned interplays between personal, farm and family, and societal SOI factors are very well illustrated by one UK farmer's answer when asked why he

pursued a career outside of farming before coming back to the family farm:

> *"Probably three reasons. One is, I wasn't hugely interested in farming, when I was in my teens and early twenties.* [At that time] *I used to always work on the farm in the summer, but I now realise that I worked as a labourer, I had no idea about* [tactic and strategic] *decision making. (…) And the second reason, I was probably interested in doing other things, I wanted to get away, to live in different places, to really stretch myself, and I didn't see farming as, because I didn't have much exposure to farming, I didn't see it as an exciting place to be. But, also thirdly dad hasn't given me a huge amount of advice in life, but one of them is, go and do something, even if you're going to (…) come back to the family farm, go and do something else or work elsewhere first, even if it's for a neighbouring farmer." (UK Farm 2 - male settled successor)*

Whenever a SIF resulted in an aspiration to become a farmer, there were still many other factors that could hamper actual entry into farming, or undo it. For example, we had several respondents in our dataset who indicated that higher wages in other sectors ultimately convinced them not to enter or to leave farming, despite their completed SIF. However, economic reasoning was rarely the one and only counter factor. Practical aspects regarding farm assets (*agricultural resources SOI*), as well as on-farm social settings (*farm and family SOI*), were important for proceeding to and through the **FSP**. Farm characteristics are influenced by the factors from the agricultural resources SOI, as these design the broader possibilities for the FD with regard to technology implementation, availability and quality of labour forces, agricultural land, and financial resources. First, labour assets (*labour market*) tended to be more accessible in a family farm context, e.g. family members were often expected to provide unpaid family labour on the farm (*farm-family dynamics*), while corporate farms had to rely on hired labour (*human capital*). Second, *interpersonal dynamics* greatly affected the FSP. Chances of successful farm transfer were much higher if both parties worked to seek consensus in their visions through open and constructive communication, which required coping and problem-solving capacities and mutual trust (*human capital* and *interpersonal dynamics*). This equally applied to non-family farm transfer, thereby adding further evidence to Joosse and Grubbström's (2017) findings on the central role of support and respect between successors and predecessors. Third, *early involvement* sometimes enabled timely retirement planning and a step-by-step farm transfer. In contrast, we observed that family farm settings could equally hinder a smooth FSP (*farm-family dynamics*). For example, a recurring reason for *exploratory behaviour* was the disability of the parental farm to generate an additional income for the incoming generation, who thus needed to find a temporary occupation elsewhere. This was often due to non-investments during the older generation's FD, and extended the SIF of the younger generation, who could therefore come across other opportunities (*career path*). Further, some farms in our sample struggled to equally divide the heritage amongst multiple heirs. There were also cases of successors growing impatient and eventually leaving agriculture anyway because incumbent farmers kept postponing retirement. Such facilitations and obstacles of a smooth and successful FSP have been discussed in more detail by, i. a., Burton and Walford (2005); Gasson and Errington (1993); Lobley (2010); Mann (2007b); Uchiyama et al. (2008).

Many of the abovementioned factor interrelations also affected farmers' well-being, hence the **FD**. Unlike many other occupational choices, choosing to farm was associated with a long-term and nearly irreversible commitment, involving high personal risk bearing, especially in the context of sole proprietorship farms (*perception of farming*). Additionally, low amount of leisure time was a recurring theme over clusters and respondent types when discussing disadvantages of the farming life. Moreover, many farmers we spoke said their decision to farm seemed a bit irrational when considering the time spend on farm work versus the income creation. Indeed, non-monetary factors, such as emotional attachments (*personality*), tended to have more explanatory power for entry or non-exit decisions, an observation that was in line with findings from the literature. As one Italian and one Polish farmer put it:

> "*I took over the land for a sort of vocation I have with agriculture, if one looks at the economics of this, I would be better off doing other things*" (IT, farm 6 – male farmer)

> "*Even if I would not get this* [young farmer payment] *as a young farmer, I would continue to run the farm. Because I like it anyway, because I prefer this rural landscape instead of an urban one.*" (PL farm 8 - male, successor)

Whereas our interviewees rarely mentioned access to finances and land and the policy framework while talking about the SIF, many did talk about these factors, but mainly in the context of the FD phase or when discussing the practical feasibility of the FSP. Access to finances and land, and the prospect of it, determined farm members' perceived future options for both FS and FD (i.e. the farm's growing potential and the possibilities regarding farm strategic decisions). We had some respondents stating that financial aids such as the Young Farmer Payment marginally improved farm income and survivability at the start of farmers' FD phase, however, they were reported not to affect the initial decision of farm entry at all. Other legislation-related interview topics were often about being confused or frustrated due to a perceived lack of coherence between different policy areas affecting agricultural practices, as well as the complex organisation of various institutions. The resulting complexity and abundance of administration was regularly executed by a family member (often female) or by a secretary employee rather than by the farm managers themselves. One additional factor important in this third phase of the GR was the perceived *societal appreciation for farming*, which was observed to highly impact farmers' job satisfaction, as for example indicated by a Dutch farmer:

> "*When I am abroad and I tell [people] that I am a Dutch farmer, you feel a lot of appreciation – 'you are the man' – while in the Netherlands, I sometimes rather do not mention that I am a farmer at all.*" (NL farm 5 – male settled successor)

Following the **intergenerational overlap between the SIF and the FD phase**, such feelings relating to perceived recognition and self-confidence (*personality, human capital*), and other signs of inadequate well-being (such as a skewed work-life balance), were often observed by the junior generation, thereby implicitly interfering with their SIF. This could be reinforced or counteracted by the way this junior's motivations were affected by what was socially considered a comfortable lifestyle (*lifestyle expectations*). Also, strategic decisions made by the senior farmer during his/her FD phase strongly interfered with the SIF of the successor candidate because they impacted the latter's subjective attractiveness of the farm (*farm-family dynamics*). The level of impact of such decisions seemed to depend on personal goals and values (*personality*) of the potential successor: for individuals who were clearly dedicated to create a highly-profitable farm, this effect was more decisive compared to situations where emotional factors were stronger drivers. In any case, if important strategic decisions impacted the farm structure and organisation in a way that mismatched the aspirations of the successor, they put a barrier to the SIF. Another interaction between two factors that appeared important during the overlap of the SIF and FD, was the one of the social network around the farm (*human capital*) unlocking (unexpected or anticipated) opportunities, by increasing a farm's access to land, finances, employees, or machinery (*agricultural resources SOI*). Initial informal collaborations between farmers, like sharing equipment or helping each other with the farm work during peak times, in few cases developed into new cooperative settings and related business model, e.g. wherein different farms were merged into a new legal entity. However, mutual trust (*interpersonal dynamics*) and openness to the new (*personality*) appeared necessary for alternative

farm continuation models, which might be related to cultural differences across the clusters, as was suggested by a quote from a Belgian farmer when talking about how he proposed an alternative governance structure for his farm that would involve a potential new entrant:

> *"It was with an intern who lives in the neighbourhood. I said to him: 'Let us merge our farms. (…) We create a new agricultural joint venture, we conjoin everything, we make a plan about ownership rights and then off we go.' (…) And then you can feel that there is some kind of anxiety for that sort of stuff in agriculture. To actually unite the capital or the farm businesses and to run it together then. But theoretically it could be possible"* (BE, farm 1 – male settled successor)

4. Discussion

Together, the three conceptual phases and fourteen influencing factors form a framework for understanding GR. While all fourteen factors could play a role in each of the three conceptual phases, some appeared more important during one particular phase, and their exact impact depended on interactions occurring with other factors. The personal factors were most important during the SIF. The farm and family factors appeared particularly crucial during the FSP, being equally able to facilitate or to thwart this phase, thereby either realising or negating a completed SIF. The factors from the agricultural resources SOI defined the general conditions relating to availability of and access to assets, which could benefit or hamper the FSP and FD. The societal factors were relevant to the SIF and FD by impacting the experienced attractiveness of farming both as an occupational and a lifestyle choice. Our framework is in accordance with the model of Mann (2007a), who deconstructed the process of making an occupational choice into an introductory and a functional phase, whereby "identity-related factors dominate occupational decision-making during adolescence, while environmental factors dominate occupational choices during young adulthood" (Mann, 2007a, p441).

Both the personal and the farm & family SOIs contain factors that are specific to an individual, a farm, or a family, thereby directly affecting GR processes on farms. These on-farm influences impacted GR-decisions in a similar way across the different clusters. In contrast, the factors belonging to the agricultural resources and societal SOIs describe the institutional and social conditions that indirectly impact GR by complicating or by mitigating the effects already exerted by the on-farm factors. These off-farm factors included the legislative framework, the social community, and the quantity and quality of land, infrastructure, labour, and capital available to the farms. While exerting similar effects on farms belonging to the same cluster, these off-farm influences explained opposite dynamics observed between the clusters. Despite their indirect impact, our findings showed that these factors can strongly influence the GR process at region level, i.e., they are able to explain differences in GR processes at aggregate level.

Our findings suggest that any initiative addressing the perceived low attractiveness of farming could stimulate GR in agriculture. Some general negative connotations to farming appeared relevant during the SIF (pro-arguments for an non-entry decision) and the FD (adversely affecting job satisfaction and well-being). Hence, making farming a real and positive option, as well as creating more positive attitudes towards farming and appreciation for farmers, could encourage young people to consider farming. Framing farming as a valuable occupation could for example start in elementary education. Trying to adjust the job to modern career path and work-life preferences, e.g. by creating opportunities to farmers to go on vacation or mitigate high risk bearing, holds considerable potential in supporting GR in agriculture. This implies that action might be needed from governance domains like policy on employment and social economy. Besides, many GR-related challenges occurring during the FSP relate to policies other than agricultural, such as inheritance and tax regulations, tenure legislation, and rural planning policy, for which the corresponding laws are not solely covered by European authority. As such, national or local policies can form a joint legislative context that is specific to a certain region and is not consequently and constructively supportive for GR. This implication aligns with other researchers' findings, e.g. Leonard et al. (2017a) demonstrated that due to the Irish policy framework it is financially more beneficial for retiring farmers to keep their farm land instead of selling it.

Our data mostly prompted the questioning of policy measures' effectiveness in supporting GR. It seems that policies are not targeting the first two phases (SIF and FS) of the GR process, despite policy goals are often focussed on increasing entry into farming. Governances often want to support young farmers to counteract the skewed age distribution of farmer populations and because younger farmers are more inclined to run efficient farms and engage with innovative production practices than older farmers (Duesberg et al., 2017; Hamilton et al., 2015; Howley et al., 2012; Van Passel et al., 2007; Zagata and Sutherland, 2015). However, current policies envisaging to support GR and farm continuation can only be addressed at the start of the third phase (FD) of the GR process: farmers can only apply for the start-up aid and Young Farmer Payment (YFP) after officially becoming a principal farm manager (end of FSP, start of FD). According to our data, the YFP was not considered an important entry/stay motivator, instead it provides financial support to a farmer after making the entry decision. This confirms findings of Pitson et al. (2020b) who simulated succession rates with and without a YFP surplus and found the two scenarios produced roughly the same amount of successful farm successions. In contrast, May et al. (2019a) argued that this payment scheme to some extent facilitates the SIF. Further research should thus unravel whether the YFP supports GR by encouraging early career farmers' FD start-up, or by already exerting an effect during the SIF. This information is important for policy-makers, as they should know the functioning of payments and assess whether it complies with pre-set policy goals.

Our data showed that even after a SI was constructed, there were still many factors that could determine whether this completed SIF actually resulted in concrete entry into farming. Factors from the farm & family and agricultural resources SOI could demotivate potential successors at the start of the FSP, thereby negating the initial motivations that were built during the SI. Avoiding the dropping out of aspirant-entrants who have completed their SIF can be done by improving the feasibility of the FSP, which is mainly challenged by the increasing capital-intensity of farming and the rising competition for land and labour. Beside fiscal, administrative, juridical and financial aspects, we learnt that farm transfer can also involve multiple emotional and psychosocial challenges. Because the challenges of FS are multidimensional, extensive, complex and context-driven, tailored counselling of successors and predecessors is needed. This could be done by a team of professionals with different expertises who join into a specialised agricultural extension organisation, ideally nationally formed, a suggestion also made by Conway et al. (2019). For example in Belgium there exists a 'farm succession knowledge centre'.

While the presented framework is fairly comprehensive, some aspects relevant for understanding GR in agriculture according to literature, have not gained considerable attention during our interviews. First, apart from some small notices in the descriptions of the axial codes, gender was not a major factor inductively appearing in the clusters' codebooks. This is probably due to the open nature of the interviews, wherein respondents were free to discuss what they thought was relevant to explain the demographic historical and current situation on their farms. Surprisingly, gender did not pop up (a notable exception occurred in the Swedish cluster). Second, our data illustrated that *early involvement* plays a crucial role in the SIF, as it equips successors with tacit knowledge, skills, assets, and the right networks which improve their ability to enter into agriculture. But other researchers have remarked that early involvement as we know it on family farms may not continue to be the main source of farm entry in the future (e.g. Inwood

et al., 2013). To start, some contemporary developments in the agricultural sector, such as digitalisation and automation, entail less opportunities to involve children with the farm work from early age on. However, as Rijswijk et al. (2021) remark, whereas automation may lead to deskilling, digitalisation may also increase attractiveness of the farming profession to youngsters. While most entry decisions investigated in this study mainly related to taking over an existing farm, some cases in our sample illustrated how the involvement of a non-relative, either as an employee or volunteer, was relevant to the GR process. Similarly, creating new farms from scratch could considerably affect GR in the future, and this may be through initiative of individuals who decided to make a career switch rather than young adults who were surrounded by a farm and family SOI during their SIF (Carolan, 2018; Milone and Ventura, 2019). Such newbies experience severe obstacles to start their farming careers (Helms et al., 2019). To prevent farms from being exclusively accessible through inheritance, investigation is needed on how to provide newbies competitive chances when entering the agricultural sector. Some authors have already proposed that alternative financing models, such as specific farm partnerships, could help attracting new blood into agriculture and overcome financial entry barriers particularly relevant for non-family farm transfers (Cush and Macken-Walsh, 2016; Ingram and Kirwan, 2011; Leonard et al., 2017b; Valliant et al., 2019).

The above raises the need for three areas of further research. First, studies should investigate whether the influences and interactions of the factors identified in this paper are similar for new entrants without an agricultural background and for non-family farm transfers. Second, knowledge is needed on how to raise contemporary adolescents' interest into farming and how to stimulate young adults to enter the agricultural sector. This relates to the observed interaction between our factors *lifestyle expectations* and *early involvement*, whereby the first in some cases acted as an opposite force to the latter, and in other cases as an amplifying force. Third, more insight is needed on whether and how early involvement and (gendered) socialisation into farming, including the transfer of tacit knowledge, need substitution through e.g. training and education programmes which not only target technical knowledge-building concerning food production, but also the development of accounting, managerial, entrepreneurial skills.

5. Conclusion

This paper provided an extensive overview of the phases and influencing factors which, according to our large data sample, support a comprehensive and profound understanding of GR in European agriculture. Such understanding is fundamental to properly address the agricultural GR challenge in the future. The conceptual phases of the GR process were: the formation of a successor identity, the farm succession process, and the farm development. We explained in detail how different factors, through their mutual interactions, jointly affect these three phases and therefore the decisions that determine GR. Such decisions are: (non-)entry into, (non-)exit from, or (non-)retirement from agriculture, or (non-)succession of a farm. The factors are not straightforwardly influencing GR in a certain direction and with a certain magnitude, instead, each factor holds potential to affect GR, but the exact impact depends on the presence of and interplay with other factors. As such, we have emphasized how the decision-making processes of individuals are entangled with dynamics that take place at the farming community and the wider society, and that this entanglement involves counteracting forces. Literature triangulation demonstrated that the three phases and fourteen factors identified in this study largely confirm and provide further evidence to the literature about farm GR, however, previous research mostly concerned the role of the personal and farm and family SOI. Future research should thus create more insight in the relation between off-farm factors and GR. Besides, whereas many previous studies have focussed on a limited population, our sampling method supports the broad applicability of the presented framework for understanding GR in EU agriculture. Therefore it can serve as a generic starting point for practitioners, policy-makers, and other farming system stakeholders aiming to understand and support GR processes in agriculture.

Credit author statement

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Data availability statement

Respondents were asked to share personal and sensitive information during the interview, and therefore they were assured raw data would remain confidential and would not be shared. The data that support the findings of this study are thus not publicly available due to privacy and ethical restrictions.

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Declaration of competing interest

None.

Annex 1. Countries, regions and agricultural sectors considered in each cluster; and number of farms, interviews and respondents involved in cluster samples

Country	Region	Agricultural sector	Investigated farms	Conducted interviews	Number of interviews (respondents) per farm[a]
BE	Flanders	Dairy production Small to medium-sized family farms	8	18	2 (3), 3, 1 (2), 3, 2 (3), 2, 2 (3), 3
BG	North-East	Arable production Large-scale corporate and family farms	15	19	1, 1, 1, 1, 2, 1, 2, 1, 1, 1, 1, 2, 2, 1, 1
DE	North-East	Arable production Large-scale corporate and family farms	6	12	3, 1, 2, 2, 2, 2
ES	Central & North-East	Extensive livestock rearing Small family farms	6	11	1(2), 1(2), 4, 2, 2, 2
FR	Bourbonnais	Extensive livestock rearing Small to medium-sized family farms	9	17	2, 1, 2, 2, 2 (3), 2, 2, 2 (3), 2
IT	Viterbo	Hazelnut production Medium-sized family farms	7	11	2, 2, 1, 2, 2, 1, 1
NL	North-East	Arable production Small to medium-sized family farms	6	9	1 (2), 1, 2(4), 1(3), 2, 2
PL	Mazovian	Mixed horticultural and arable production Small family farms	9	17	2, 2, 2, 3, 2, 3, 1, 1, 1
RO	North-East	Mixed arable and livestock production Small semi-subsistence family farms	7	17	4, 2, 3, 2, 2, 2, 2
SE	South	Eggs and broiler production Medium-sized to large family farms	6	16	2, 2, 3, 3, 3, 3
UK	East of England	Arable production Large –scale family to semi-corporate farms	6	8	2,2,1,1,1,1

[a] In some cases, the number of interviews differed from the number of respondents (indicated between brackets) involved in a farm. Researchers strived to divide the focus as equally as possible to all respondents during the interview when participants preferred not to be interviewed separately.

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