Journal of Rural Studies 76 (2020) 131–141

Contents lists available at ScienceDirect

Journal of Rural Studies

journal homepage: www.elsevier.com/locate/jrurstud

Key steps and dynamics of family farm succession in marginal extensive livestock farming

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ARTICLE INFO

Keywords:
Generational renewal
Young farmers
Successors
Family farming
Farm transfer
Content analysis

ABSTRACT

Succession trends in agriculture have been downward in many European regions, especially in the less favoured and mountainous areas of southern Europe. This article aims at understanding family farm succession dynamics in extensive livestock farming of two marginal areas in Spain. We approached the issue applying a qualitative methodology based on inductive content analysis of open interviews with 28 farmers and relatives. The evidence shows that family farm succession is a long-term and multidimensional process during which successors pass through three stages: potential succession, willingness to succeed and effective succession. The factors determining succession can be classed into four dimensions that affect the succession stages differently. Individual and familial dimensions are found to include the most influential factors shaping the potential successor, whereas the influence of familial factors drops in favour of the individual dimension at the willingness stage. The contextual and institutional dimensions mainly influence the willingness and effective succession stages. The scope of policies should be broadened beyond effective succession by enhancing the intention of willing successors to take over the business.

1. Introduction

The decline of farm succession is assumed to be a crucial concern for the future of European farming (Anguaiano et al., 2008; Cavicchioli et al., 2015). The issue is also known as the young farmer problem (YFP), based on the widespread awareness of poor generational renewal. However, Zagata & Sutherland (2015) argue that the YFP is not equal across countries and relates mainly to small-scale farming in eastern and southern regions of the EU.

Family farm succession is often the predominant type of farm transfer as European agriculture is characterized mainly by family farms (Mishra and El-Osta, 2008; Leonard et al., 2017).

In some regions, the low generational renewal is linked to rural depopulation (Cramer et al., 2008; Conway et al., 2017; Levers et al., 2018), especially in marginal and less productive areas where agriculture is central to the maintenance of the rural population (MacDonald et al., 2000; JRC, 2013; Hinojosa et al., 2016).

Extensive livestock farming in this sort of areas plays a key role in land management, mitigating abandonment and maintaining the population in these marginal rural regions (Bernués et al., 2005; Peco et al., 2017).

Succession decline (Keenleyside and Tucker, 2010; Van der Zanden et al., 2017; Perpiña Castillo et al., 2018) has multifarious consequences, which have been identified and proved by several authors (Mann, 2005; Burton and Fischer, 2015; Pinto-Correia et al., 2015; Joosse and Grubbström, 2017), as have the positive effects of smooth farm succession.

Most of the analyses are based on econometric and non-linear models (Mann, 2007), and they generally consider quantitative factors (Morais et al., 2017). This branch of the literature has mainly focused on quantifiable and less idiosyncratic parameters. Besides, econometric and non-linear methods are not completely able to explain succession in all its complexity (Corsi, 2017).

It is worth further exploring the social and human aspects of farm succession (Pindado et al., 2018; Bertoni and Cavicchioli, 2016), especially in the small-scale farming systems of southern Europe, such as the extensive livestock farming, where patterns of succession require further investigation (Zagata and Sutherland, 2015).

Therefore, the research question that we aim to answer in this paper is: what factors influence family farm succession in extensive livestock systems? Specifically, our objective is to explain the factors of social origin involved in the succession process by means of a qualitative

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https://doi.org/10.1016/j.jrurstud.2020.04.030
Received 7 June 2019; Received in revised form 19 March 2020; Accepted 14 April 2020
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analysis. Thus, we aim at understanding farm succession as mainly driven by socially constructed factors, following the perspective defined by Fischer and Burton (2014), and accordingly with Chiswell (2014), to highlight the role of individuals along succession.

The paper contributes to the literature by deconstructing the family farm succession pattern of two marginal extensive livestock systems, highlighting the social aspects of succession related to the individuality of the successor and the farming family and identifying the key stages through which succession takes effect.

2. Methodology and data

By taking a qualitative approach, we can understand the relationships between the social and human factors characterizing the family farm succession process (Tsang, 2014). We followed the methodology of qualitative inductive content analysis (Mayring, 2000; Hsieh and Shannon, 2005; Schreier, 2012). The strength of this approach is that it uncovers new evidence from data and can describe what role social and human factors play in the family farm dynamics. The method involves the collection of data and information by means of open interviews, the elaboration and coding of collected data, and the construction of an explanation of the farm succession process.

In this method, data analysis is based on an interview transcript coding process. This process extrapolates qualitative evidence concerning the research topic and questions. This approach initially leaves out predetermined theories, and paves the way for an in-depth understanding of less-known factors (Konecki, 2018). In fact, other theories and knowledge about the topic come into play after the data are analysed and results emerge (Potter and Levine-Donnerstein, 1999). Thanks to this methodology, therefore, we have been able to gather particular evidence about the social functioning of the farm succession process by integrating our results with evidence from previous studies.

2.1. The case study

The research targets family farm succession in extensive livestock systems in two marginal areas. Extensive livestock farming is likely to be practised in more marginalized and disadvantaged areas where succession is less common (MacDonald et al., 2000; Hinojosa et al., 2016; Kristensen et al., 2016). This threat is more likely to affect the regions of southern Europe (Keenleyside and Tucker, 2010; Zagata and Sutherland, 2015; Joosse and Grubbström, 2017; Perpiña Castillo et al., 2018). This is the case of some regions of northern Spain where such negative trends have been identified (Aldanondo-Ochoa et al., 2007; Regos et al., 2016).

We have taken into consideration extensive livestock farms from the Sierra de Guadarrama (Autonomous Community of Madrid) and Hoya de Huesca (Aragón), central and north-eastern Spain, respectively (see Fig. 1).

The Hoya de Huesca extensive sheep farming system is mainly characterized by semi-extensive, mixed farms with livestock, cereals, almonds and olive trees. In 2016, about 50% of farms had a herd size of between 200 and 1000 heads. However, there has been a drop in the total number of heads and the number of farms by 50% over the last 20 years and 60% over the last 25 years, respectively (Fau, 2016).

The Sierra de Guadarrama extensive cattle farming system includes (semi-) extensive, mixed farms. Generally, farms have more than 70 heads. The number of heads and the number of farms in the region have decreased by 15% and 12% over the last 15 years, respectively (INE, 2019).

In both specializations, farms are typically family-based and the employment rate of non-family members is low, basically due to depopulation trends and because extensive livestock farming is not an attractive activity. These two systems have in common their marginality, which is more pronounced in the case of Huesca. In fact, the marginality of Sierra de Guadarrama is somewhat lower due to its proximity to the urban area of Madrid. Marginality-induced poor services, together with the heavy work commitments required by the extensive livestock farming, lead to a poor quality of life that has a profound effect on both systems. In addition, economic challenges such as the increasing cost of production and low sales prices threaten farm profitability, especially in Huesca due to the drop in lamb meat consumption.

2.2. Data collection

The raw data were collected from 23 thorough one-to 2-h interviews conducted between June and October 2018 with 28 farmers and their relatives. The interviews were held in three phases, identified by colours in Table 1. The optimal number of interviews depends on the theoretical saturation point: the theoretical saturation is reached when further interviews fail to show up new data with respect to the concepts revealed by the iterative process (Gehrels, 2013). Participants were selected according to a purposive sampling approach, as the research goal is to uncover all useful evidence to gain an in-depth understanding rather than to output statistically generalizable results. In addition, this enhances the internal validity of the method. Sampling criteria were gender, alternative specialization, farm size in terms of hectares and herds, young/old farmers, new entrants and experienced farmers. Interviews were not all confined to the farm head, as some farmers' sons/daughters/wives were also interviewed, and respondents were interviewed together in other cases. Such interviews have a proven potential for collecting deeper information (Riley, 2014), although there is a risk of responses obeying social expectation.

We chose open interviews to gather hidden information and build a fully explained context of study in which to better embed further quantitative and qualitative data. Open interviews are characterized by interviewees expressing themselves in their own way during a conversation with the interviewer. Nevertheless, later interviews could become more structured as a result of the interviewer's growing understanding of the topic to guarantee greater consistency. For this reason, they can also be referred to as in-depth interviews (Denzin and Lincoln, 2008).

Farm succession was the central topic of the interview framework. Therefore, plenty of specific data were gathered about this issue. The conversations were conducted in order to try to understand farm succession processes and contextual farm demography and focus attention on the specific characteristics of each story with respect to the evolution of farm succession. All the interviews were recorded and transcribed ad verbatim. Table 1 provides a brief description of the family members who were interviewed.

2.3. Data analysis

Interview recording, transcription, and data analysis were carried out iteratively. This facilitates a sharper focus on the issues of most concern and improves the quality of the interviews. It is known as constant comparative analysis and is also needed to get more accurate evidence and establish the generality of facts (Cho and Lee, 2014). Nvivo software facilitates the coding process, enabling us to easily select and classify key sentences that help to answer the research questions. Following Corbin and Strauss (1990), the coding phase consists of three steps: open coding, axial coding and selective coding (see Fig. 2).

Open coding consists of reading transcriptions line by line and gathering fragments of text constituting possible responses to the research questions. These fragments are then listed with short and meaningful labels (open codes). Open codes identify incidents that can indicate concepts. A single fragment can be linked to more than one code, and it is possible to build a 'coding tree'.

Axial coding should be regarded as the data analysis of the output of open coding. During this phase, we explore the relationships between codes and test against data (Corbin and Strauss, 1990). Axial coding

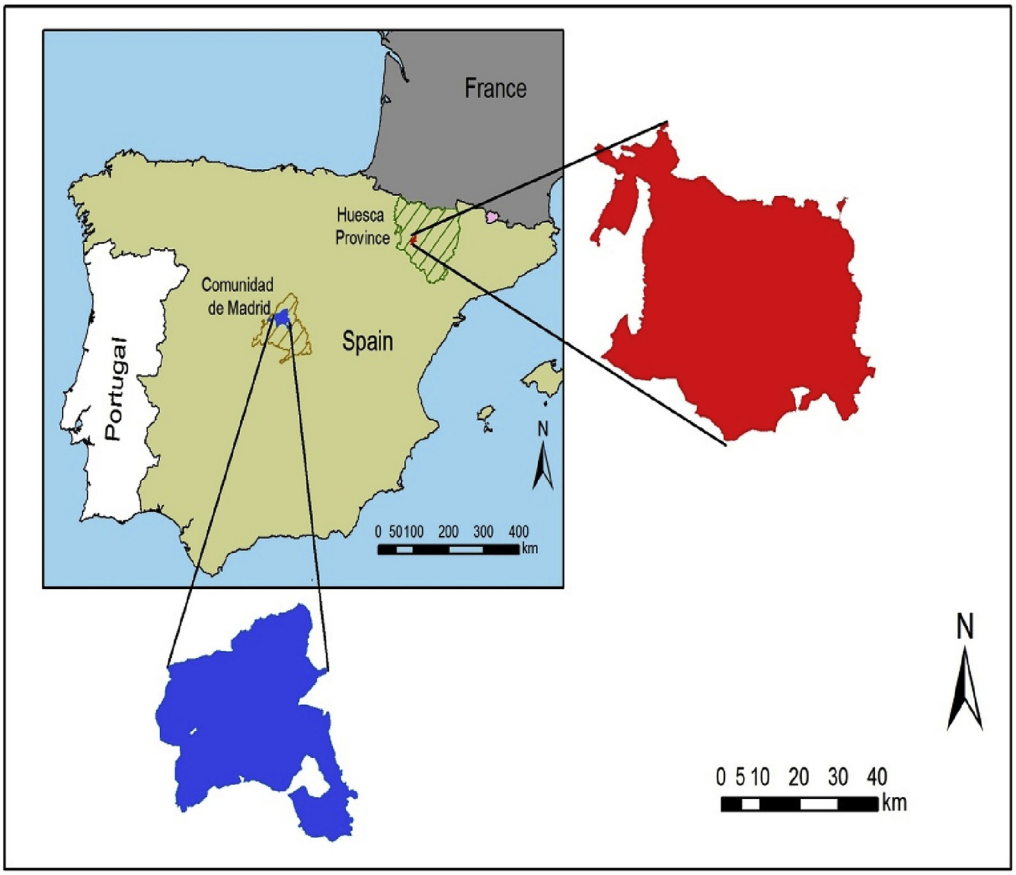

Fig. 1. Localization of the case studies. Own elaboration.

Table 1
Interview information. The colours indicate three consecutive interview phases.

Nº	Reference	Date	Specialization	Interviewees	Status
1	I1	05.6.18	Sheep	Farmer himself	Age: 41–65; Family business; with offspring involved in farming
2	I2	05.6.18	Sheep	Farmer himself	Age: 41–65; Cooperative; without offspring
3	I3 & I4	06.6.18	Sheep	Farmer and his son	[I3] Age: 41–65; Family business; [I4] Age: 18–40; Succession occurring
4	I5	06.6.18	Sheep	Farmer himself	Age: 18–40; Family business; with offspring
5	I6	06.6.18	Sheep	Farmer himself	Age: 41–65; Family business
6	I7 & I8	12.6.18	Sheep	Farmer and his son	[I3] Age: 41–65; Family business; [I4] Age: < 18; involved in farming
7	I9	12.6.18	Sheep	Farmer himself	Age: 41–65; Family business;
8	I10	12.6.18	Sheep	Farmer's wife	Age: 41–65; Family business; involved in the farm
9	I11 & I12	12.6.18	Sheep	Farmer's daughters	[I11] & [I12] < 18; involved in farming; currently studying
10	I13	13.6.18	Sheep	Farmer himself	Age: 41–65; Family business; with offspring
11	I14	13.6.18	Sheep	Farmer himself	Age: 41–65; Family business;
12	I15	15.6.18	Cattle	Farmer herself	Age: 18–40; Individual entrepreneur; new entrant
13	I16	20.6.18	Cattle	Farmer herself	Age: 41–65; Individual entrepreneur; mother of [I15]
14	I17	15.6.18	Cattle	Farmer himself	Age: 41–65; Individual entrepreneur; few years long farmer
15	I18	27.6.18	Cattle	Farmer's daughter	Age: 18–40; Off-farm employment
16	I19	18.6.18	Cattle	Farmer himself	Age: 41–65; Family business; with offspring
17	I20	20.6.18	Cattle	Farmer herself	Age: 18–40; family business; previous experience in farming; succession occurring
18	I21 & I22	22.6.18	Cattle	Farmer and his son	[I21]: Age: 18–40; previous experience in farming; new entrant; family business; [I22]: Age: > 65; Retired
19	I23	25.10.18	Sheep	Farmer himself	Age: 41–65; Family business; with offspring
20	I24 & I25	25.10.18	Sheep	Farmer and his son	[I24] Age: 41–65; Family business; [I25] Age: 18–40; previous experience in farming; succession occurring
21	I26	26.10.18	Sheep	Farmer himself	Age: 41–65; Family business; with offspring
22	I27	26.10.18	Sheep	Farmer himself	Age: 41–65; Family business; with offspring
23	I28	26.10.18	Sheep	Farmer himself	Age: 18–40; Family business; new entrant

involves deleting, refining and integrating open codes into more comprehensive and meaningful axial codes, which are organized in axial categories by finding interrelations. This process identified three axial categories. The first category was potentiality, where axial codes identify the recognition of a potential successor by the family as a central concept in family farm succession. The second category was willingness, where axial codes point to the central concept of the successor's willingness to take over the farm. The third category was effectiveness, which describes the concept of taking over the farm business. Table 2 reports the axial categories, and the related codes uncovered during this second stage.

Selective coding is a process of organizing the results of axial coding

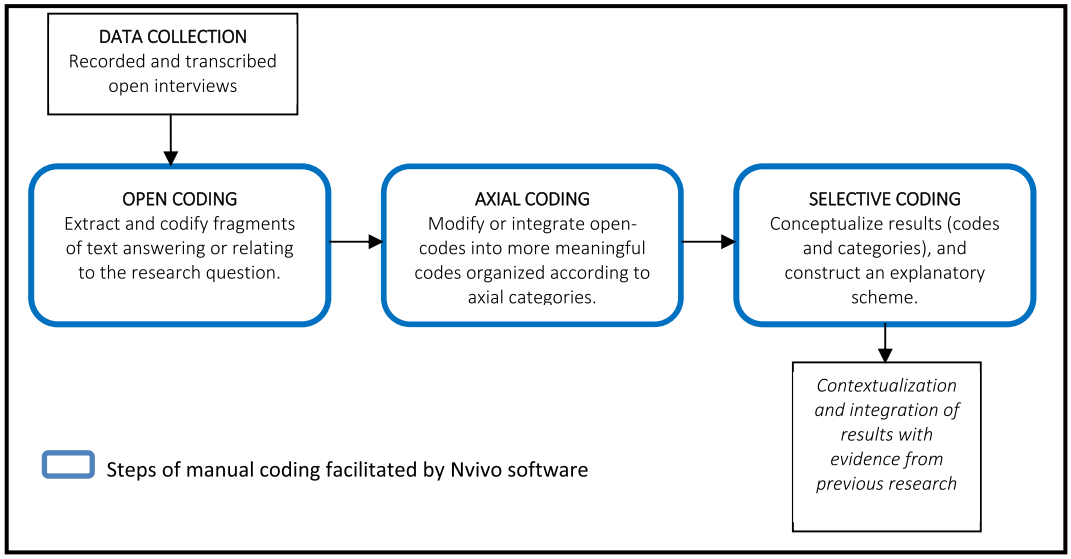

Fig. 2. Methodological scheme of the analysis. Own elaboration.

Table 2
Code output by the axial coding (step 2 of the analysis). Own elaboration.

Axial categories	Axial codes	Content description of codes
POTENTIALITY (Children are recognized by the family as potential successors)	Involvement of children in non-farming activities	*Children develop an interest in activities other than farming. This affects the recognition of potentiality on the side of the farming family before a decision has been made.*
	Involvement of children in farming activities	*Children are involved in farming, taking on different degrees of responsibility. This facilitates recognition of potentiality by the farming family, as well as attribute growth.*
	Farmer and family recognition	*Farmers and farming families recognize their children as the potential farm successors. Even though they envision a different future for their children, children are rationally assumed to be potential successors.*
	Farmer ambitions for their children's future	*Farmers and families have aspirations for their children, sometimes with respect to careers outside farming; this could either boost or slow down, but not necessarily trigger or stop, the recognition of potentiality.*
	Building up of experience	*Involvement in farming and a gradual acquisition of responsibility lead to an increase in farmers' children's farming experience, knowledge, skills.*
	Shaping of personal identity	*Involvement in farming shapes the identity of the farmers' children. This is related to feelings about farming, awareness of what farming means, emotional attachment to the farm and the rural community.*
WILLINGNESS (Successor is willing to move towards succession)	Individual vocational attributes	*Individual attributes of experience and personal identity determine the willingness to take over the farm.*
	Successor's expectations of policies	*Policies could marginally influence the successor's willingness to take over the farm.*
	Contextual factors	*Some socioeconomic or environmental factors (such as low profitability, poor quality of life, shortage of workers) could stifle willingness to take over the farm.*
	Opportunities trade-off	*The trade-off of different opportunities is a factor shaping the willingness to take over the farm. Better off-farm opportunities stifle willingness to succeed, whereas the shortage of other opportunities boosts willingness to take over the farm.*
	Effect of successor on farm changes	*Farmers' recognition of there being a successor willing to take over the farm influences the farm trajectory. This improves succession by making the farm a more attractive and functional business to take over.*
	Successor's independent decision	*The farmer's child decides to take over the farm. This is an individual decision made by the successor.*
EFFECTIVENESS (Farm effectively transferred to successor)	Family support for succession	*The family provides aids and support to overcome the barriers to succession.*
	Individual vocational Attributes	*Individual attributes of experience and personal identity can influence effectiveness.*
	Policy influences effective succession	*Policy aids can have a negative influence on, but do not determine, the effectiveness of succession.*
	Farm adjustments for succession	*When succession is effectively taking place, the successor implements change to facilitate the process, and to adjust the farm business to his/her needs.*

in a conceptually coherent manner in order to comprehensively answer the research question and explain the main aspects of the phenomenon (Konecki, 2018; Cho and Lee, 2014).

We concluded the analysis by comparing our results with the findings reported in the farm succession literature. The topic has been studied in other research, albeit using different approaches. Therefore, other works report relevant evidence that may explain, clarify, modify or enrich our understanding of succession. This sort of triangulation is part of the theoretical framework, as it provides for further development and a deeper understanding of the processes under study (Petty et al., 2012).

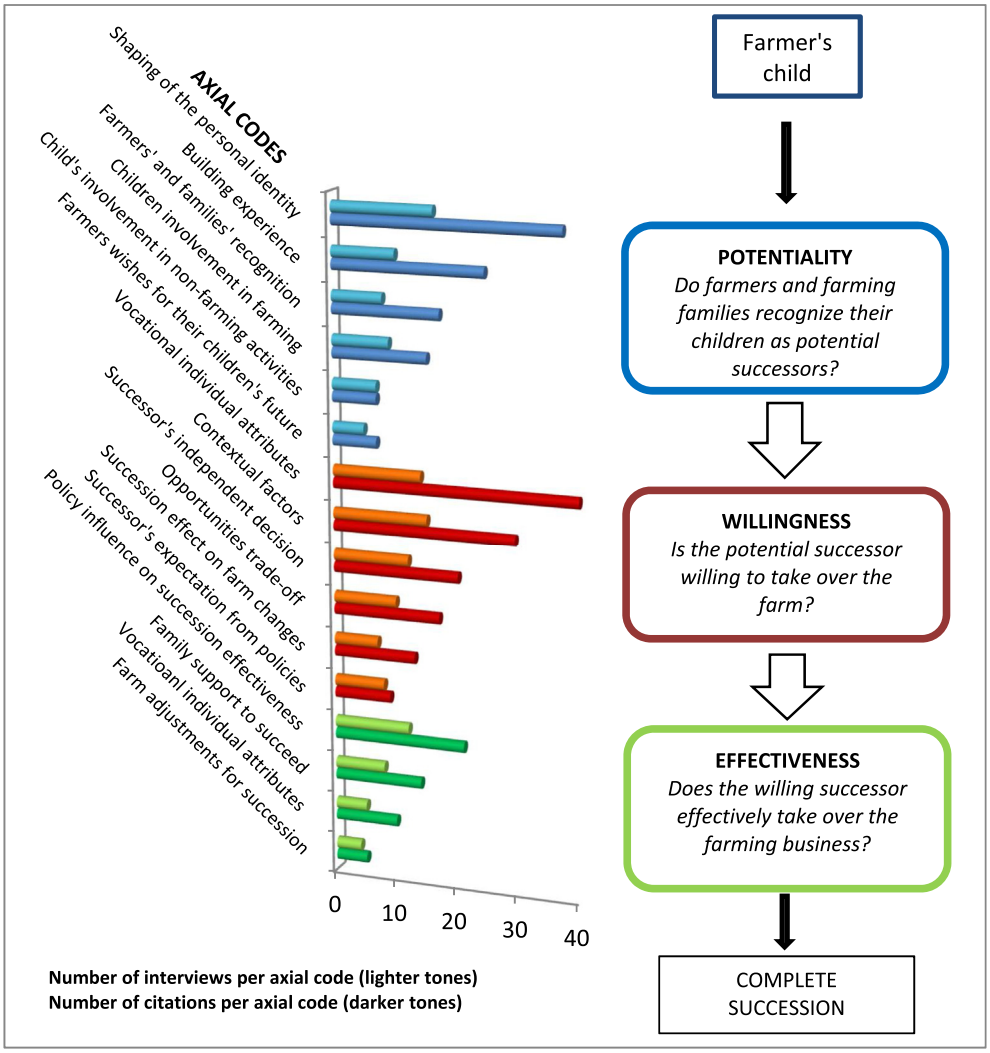

Fig. 3. Representation of the three steps of succession and related axial codes. On the left, the vertical bar chart shows axial codes according to the number of supporting interviews (lighter tones) and references (darker tones). On the right, the flowchart represents the three steps of succession. The steps and related axial codes are highlighted using the same colours (blue, red and green). Own elaboration. (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)

3. Results

3.1. Succession as a long-term, three-step process

Farm succession develops over many years, generally aligned with the family life cycle, beginning at the birth of a child to a farmer, going through a series of transitions, and ending with full transfer of managerial control from the farmer to this child (Lobley et al., 2010). Thus, it is correct to refer to succession as a process. The first result of the analysis is the identification of three typical steps that are likely to take place consecutively throughout succession. Therefore, the broadest definition is that family farm succession is a long-term, three-step process involving individual evolution. The characteristics of the successor as an individual are central to, and evolve throughout, the three-step process. The first step is recognition by the farmer and the farming family as the future potential successor; the second step refers to future potential successor's willingness to take over the farm, and the third step is effective succession.

Fig. 3 shows the three steps of the family farm succession process and the corresponding axial codes that emerged during the analysis. The axial codes represent the main topics that became clear from the interviews. These codes contain references (fragments of text) from a varying number of interviews. The number of references shows how many times the topic was referenced in all the interviews, whereas the number of interviews indicates in how many interviews the topic was mentioned. With respect to the succession process, a high number of references are a possible indicator of the relevance of a topic under some circumstances, whereas a high number of interviews possibly suggest that the topic is of widespread relevance.

The bar chart in Fig. 3 indicates which issues are put forward during the interviews. There are more references for the willingness, potentiality, and effectiveness steps, respectively. Regarding the potentiality step, we found several references describing the growing experience of children and the shaping of their individual attributes ('shaping personal identity' and 'building up experience'). We also found that potentiality is recognized by the farmers and families ('farmer's and family's recognition'). Interviewees underlined the importance of children's involvement in farming (rather than other activities) for shaping attributes and favouring the family recognition.

Regarding the willingness step, there was general concern about the successor's individual vocational attributes, which are crucial for this step. Interviewees described the development of willingness as an evaluation of the trade-off between socioeconomic contextual factors stifling willingness, and individual attributes that are likely to be the real reason behind a successor's willingness to take over the farm.

With regard to the effective succession step, interviewees were

particularly concerned about policies which are perceived to have only a marginal potential for influencing effectiveness, whereas the only real prospect for entering the sector was through family. There is also evidence about the process of farm adjustments undertaken by the actual successor in order to pave the way for effectively taking over management. Importantly, as emerged from the interviews, adjustments brought in by successors may be preceded by or complementary to investments made by current farmers before retirement when they know that there will be a successor.

Surprisingly, successor gender did not appear to have an influence on the three-step process. This could mean that the gender difference is irrelevant. Nevertheless, we prudently suggest that the gender effect requires further investigation. Unlike other cases (Wang, 2010), however, there is no evidence of a phenomenon whereby daughters are systematically excluded.

3.2. Dimensions influencing farm succession

The factors that emerged from the analysis have been further analysed. The emerging factors involved in farm succession belong to four different dimensions, covering individual, familial, institutional, and contextual factors. By reorganizing the references contained in codes according to this multidimensional framework, it is possible to explain the role of different actors or influencers in encouraging or discouraging succession in the different steps (Fig. 4).

Fig. 4 shows references from the analysis re-organized into four dimensions. The individual sphere is the most relevant to the potentiality and willingness steps, mainly because the successor's individuality is shaped within potentiality, and individual development determines willingness. We recognize some fundamental attributes that can shape the successor's individuality throughout the succession process, such as a feeling for farming, awareness about farming difficulties and importance, and emotional attachment to the farm on the one hand, and farming knowledge, experience, skills and ability on the other.

The relevance of the familial dimension is alternate: it is significant in the potentiality and effectiveness steps, but has less influence on willingness as the willingness decision is made by the successor.

The institutional dimension could be included in the contextual dimension. However, we have identified an institutional issue in farm succession as attested to by the specific attention attached to this question by interviewees. The role of the institutional dimension and related policies is totally irrelevant in potentiality, while its impact on farm succession increases throughout the process: it is present in the willingness step and even more so in the effectiveness step. The main policy measures that were mentioned are direct payments from the first pillar, and measures for new young farmers and investments from the second pillar, of the CAP.

Finally, the farming context has a particular influence on the willingness step, when the successor takes all contextual factors into consideration to make his final decision. In this step, farm succession is affected by economic, social and environmental contextual factors. Many constraining factors were cited in our case, which can, however, be primarily synthesized as low profitability and poor quality of life.

4. Discussion

4.1. Three steps of succession

Succession comes out of the analysis as a three-step process involving an individual recognized to be a potential future successor, an individual willing to take over the farm, and an individual effectively taking over the farm.

Other authors have focused on the successor's evolving individuality. In particular, Chiswell (2014) underlines the importance of focusing in farm succession research on the different individuals resulting from the developmental dynamics of succession, as they result in diverse aspects evolving throughout the process. Chiswell introduces the figures of successor and potential successor. In Chiswell's scheme, the successor is defined as the individual who is in full managerial control of the farm. In our scheme, this figure is equivalent to the effective successor, which shares the same definition.

The figure of the potential successor is more structured. It is described as “someone who could, potentially, in the future, gain managerial control of the farm” (Chiswell, 2014). Nevertheless, Chiswell divides this figure into two different potential successors: the possible successor and the prospective successor. The possible successor is assumed by him- or herself or by the farmer to be the future successor. The prospective successor is actively moving towards managerial control of the farm as a consequence of a collective recognition by the current farmer, the family and the potential successor. The threshold that separates these two actors is known as the possible-prospective transition (Chiswell, 2014).

Our analysis uncovered individuals both assumed to be the future successor and actively moving towards succession, which is consistent with Chiswell's discourse. Based on evidence from our case study, we suggest a slightly different conceptual framework to define the

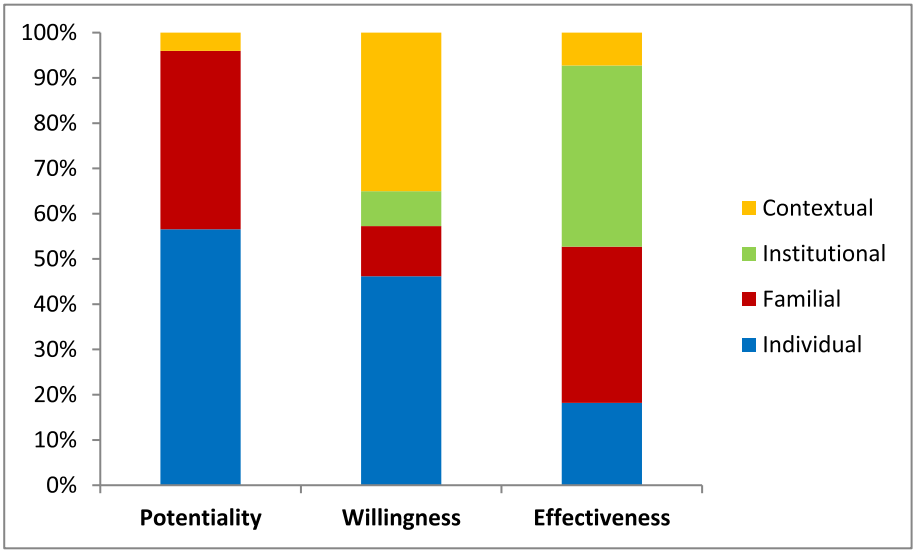

Fig. 4. Bar chart representing the distribution of references in the four dimensions of influence throughout the three steps of succession. Own elaboration.

successor. First, we identify the potential successor as a young individual that is recognized by the farmer and his family as the potential future successor. From the interviews, we found that such recognition is commonplace and due, in part at least, to the successor's involvement in farming or, by contrast, in other non-farming activities. This could encourage or discourage the farmer to recognize potentiality. Recognition can be influenced by the attributes and experience gained by the successor that tip the scales towards or against farming. In the following case, for instance, the farmer recognizes his child's potentiality, encouraged by the child's emotional attachment to and feelings about farming:

> The child likes the farm a great deal; I don't know whether or not it is down to how we educated him. He decided to study close by, in Zaragoza, and come home to the farm every weekend; he likes hunting and he likes to help me on the farm, he says that he really likes working with livestock. [I26]

Therefore, we found that it was the current farmer and farming family, and not necessarily the successor, that decided on the child being a potential successor. At this point, the successor does not yet have a clear idea about his/her future, and therefore about his/her willingness to take over the farm. Consequently, potentiality does not imply an active movement or willingness of the potential successor to take over the farm, as in the following case:

> My daughter is a talented girl, and I believe that she would be quite happy to stay at home. She is a hard worker and has good manners. Anyway, she decided to study a course in Huesca about … to take care of drug addicts or something like that, and so now she is practising in a centre.[I27]

Second, we also found that the possible-prospective transition is mainly determined by the individual development of the successor's willingness to take over the farm rather than a collective recognition by the current farmer and farming family. Usually, farmers and farming families recognize the successor when he or she is just potential successor: this recognition determines the potentiality of a successor. Thus, the real threshold between 'be assumed to become the future successor' and 'actively moving towards managerial control of the farm' is basically due to the successor's willingness to go ahead with the succession process, whereas it is a wish worth pursuing for the farming family.

In fact, moving on in the analysis, we found that there was evident concern among interviewees about the willingness of the successor. In the interviews, the successor appears to develop this willingness individually through a trade-off process in which vocational attributes play a significant role. Despite there being a risk of bias when interviewees refer to vocational attributes, they are consistent with respect to the description of how vocation is socially constructed within the farming family (especially knowledge and skills) and the rural environment (focusing mainly on emotional attachment).

In the following example, the farmer explains the development of willingness as an individual process:

> When my son wanted to enter farming, I said, "Let's see, why don't you move away instead of staying at home?" But he didn't want to move away, and I couldn't chase him away. I neither forced him to stay nor to go away. [I3–I4]

In another example, the farmer's daughter is very much involved in farming. Therefore, she is recognized as a potential successor by her family, but the farmer is hanging on for her willingness to take over the farm business:

> (…) of course, they (daughters) could always surprise me, by God! They might (the farm transfer) … my younger daughter comes to help me, even at night … Currently they (daughters) are studying. They are good students, and if they were to say to me in six years' time, "Daddy, I want to own the sheep and take over the farm", it would make me the happiest man in the world. [I9]

4.1.1. The individual dimension

In the analysis, the interviewees' concerns within the individual dimension appear to be central to the process. The individual dimension influences the potentiality and willingness steps more than the effectiveness step. Potentiality refers to the development of children's attributes and experience and to their involvement in farming. In the willingness step, the role of the successor could be explained by the relevance of individual vocational attributes, such as skills, experience, attachment and feelings, in determining the development of willingness. This is the main concern of interviewees in this step (see Fig. 3). For instance, a young farmer speaks about his attachment to farming below:

> I did it (took over the farm) because I wanted to … People, even the bank employee, kept telling me to 'find a girl and settle down'; but I said 'no, this is my life; this is what I want to do'. [I28]

Previous research underlines how important a successor's emotional attachment and perception of his or her capabilities are to the decision to take over the farm (Morais et al., 2018). This also has a bearing on to the process of successor identification (Jenkins, 2008). The individual dimension is decisive: if individual attributes have not matured, the key steps of succession are less likely to be achieved.

When deciding whether or not to go ahead with succession and take over the farm, the successor weighs up other socioeconomic and institutional factors, such as low profitability and poor quality of life. In the example below, the interviewee describes this trade-off between vocation and contextual factors:

> Sheep farming is not profitable, and that is all there is to it. Farming is vocational, if you like it, you like it, of course, but there comes a time when it is not just about whether or not you like it, because you have to be able to make a living … and, if you have other opportunities, you get out of farming and you look for another career. [I7–I8]

4.1.2. The familial dimension

The family is a core institution in agriculture (Stiglbauer and Weiss, 2000; Leonard et al., 2017). The findings of our study are no exception. Not only is the family a collective actor, but it is also a dimension in which successors develop. Within this space, family relationships contribute to the development of successors (Brandth and Overrein, 2013), shaping teenagers' emotions and knowledge (Cassidy and McGrath, 2015). The family is at the heart of recognition and provides potential successors with attributes, such as knowledge, experience and attachment. This evidence is referred to in the literature as the transfer of intangible assets (Grubbström and Sooväli-Sepping, 2012). The familial dimension is important, as explained by the two references below:

> Farming is very special because nobody teaches you how to farm. There is no vocational training … you inherit it, you live it and either your predecessors show you or else you start farming very young and you learn. [I19]

> But it (farming) is not a classroom. It is like teaching and educating children, which is the most important thing. Children get a formal education and so on at school, but I believe they learn the basics at home. [I21–I22]

The influence of family drops in the willingness step, as it is the actual successor that has to cross this threshold. This contrasts with previous research (Morais et al., 2017), which suggests that the family has an influence on the succession decision. On the one hand, it could be due to interviewees underestimating the role of the family; on the other, factors like low profitability and poor quality of life could discourage families from trying to influence successors about such a tricky

decision. Note, however, that the family plays a crucial role, even though it is mainly limited to the potentiality step when a successor is recognized and his or her attributes are developed. These attributes play a role in decision making by the individual successor.

At a later stage, when the successor is willing and effective takeover is approaching, familial support for acquiring physical and economic assets comes back into play. In this case, the farmer refers to succession as being smooth because the family farm was already running:

> (…) we didn't have much trouble (with the takeover), because the business was already ticking over nicely, you know? I was about to take over the farm and continue to operate the business that originally was my father's … so, actually, I didn't have any problems at all. [I20]

4.1.3. The farming context

The socioeconomic context influences the succession process. The biggest barriers to farm succession are often access to land and credit (Eistrup et al., 2019). These are minor issues in our context, as we are exploring family farm succession. Increasing cost trends, steady low sale prices, and a drop in consumption, have led to a generally low profitability in both our cases, but especially in Huesca. Poor quality of life, which is linked to the work commitments of extensive livestock farming, is often mentioned in both cases. Isolation due to remoteness affects liveability, above all in Huesca. A farmer's daughter explains her concerns about such factors below:

> It is hard work and lately there have been significant drops in livestock farming profitability. Thus, business (extensive livestock farming) prospects do not look good … …Besides, you have to work all day round and have no time for yourself. You have to spend all your time tending the animals, calling the vet, feeding, and so on. [I11–I12]

Contextual factors affect mainly the second step of succession, when a potential successor evolves into a successor willing to take over the farm. As the successor approaches the threshold of willingness to succeed, his or her decision is affected by a pragmatic evaluation of the potential business prospects of farming with respect to other opportunities (Cavicchioli et al., 2018). Here contextual factors appear to have a significant negative impact, although they apparently do not have a prominent bearing on the importance of the individual vocational attributes of the successor.

New generations could weigh up new opportunities and potential for innovation (Milone and Ventura, 2019). In our case, the prospects cited by successors were based mainly on new pasture management and feeding system techniques, and improved technology in the stables. In some cases, the possibility of converting extensive into intensive management was vaguely mentioned.

4.1.4. The institutional influence

In both specializations, the interviewees focused almost exclusively on CAP subsidies, especially the direct payments of the first pillar, and the support for investments and new entrants of the second pillar of the CAP (measures 4 and 6, respectively). Nonetheless, some regulatory issues emerged, such as conflicts with nature reserve regulations, access to public pastures (mainly in Sierra de Guadarrama), and animal health legislation. An early retirement policy does not appear to be a critical issue, unlike other cases (Hamilton et al., 2015). Interestingly, no mention was made of non-monetary policy to support young farmers and successors.

Institutions and their policies have a more pronounced impact on the last step of effectiveness to support the acquisition of production factors and initial investments. Policies also have an impact on the willingness step when successors take into account favourable policies in the opportunity trade-off. As Fig. 4 shows, there is no mention of the institutional dimension in the potentiality step, and policies do not seem to have a decisive influence on either willingness or effectiveness. In the willingness phase, the individual attributes of successors appear to have a greater bearing than policy, whereas the farming family is the key factor in family farm succession in the effectiveness phase, as it provides the main production factors to start up the business: policy measures may be an additional factor, but not a trigger, in this respect.

For example, this farmer explains that farm ownership is inherited from a relative, and policies come into play at a later stage of effective succession:

> So it's clear … subsidies for young farmers … what subsidies? I own (the farm) because my uncle left it to me, and there was no help from institution to prosper. And, then, once you are in (into the farm), institution say that you can ask for subsidies. [I15]

As in previous studies (Eistrup et al., 2019), policies are not perceived as able to resolve the complexity of generational renewal. The absence of non-monetary support might suggest that other types of policies are required and could play a role with respect to 'untouched' aspects of succession. However, it could also mean that the farmers are not fully aware of available policies or that farmers' concern about profitability is uppermost.

4.2. Implications for the endogenous succession cycle

The information captured in the interviews uncovered evidence about the processes of the successors' individuality construction, the successor's involvement in farming, and the reciprocal influence between succession progress and farm changes. The integration of our findings with knowledge concerning these dynamics may improve our understanding of family farm succession. These processes have been studied and conceptualized under the notion of the socially constructed endogenous succession cycle (Fischer and Burton, 2014). The endogenous succession cycle is described as playing a key role in the understanding of farm succession (Chiswell and Lobley, 2015). The cycle is determined by the intertwined dynamics of three processes: the construction of successor identities (Glover, 2013; Fischer and Burton, 2014; Bertoni and Cavicchioli, 2016), the progression of the successor on the farm ladder (Commins and Kelleher, 1973; Errington, 1998), and the development of farm business trajectories (Potter and Lobley, 1992; Uchiyama et al., 2008; Lobley et al., 2010).

The endogenous succession cycle involves the individual and familial dimensions and considers their relationship, even though the extent to which they influence succession is not easily definable. Instead, the influence of contextual and institutional dimensions is incorporated into individual and familial dimensions, due to the subjective elaboration of exogenous factors within the family farm (Fischer and Burton, 2014). However, the three dynamics of the endogenous succession cycle evolve differently across the three steps.

The construction of a successor identity is a process of building the potential and willing successors, and it is likely to be more important in the earlier stages. Specifically the potential successor has to be constructed with the individual attributes that will make the successor willing to take over the farm. This emerges in axial codes such as 'building up experience' and 'shaping individual identity', and also explains the individual dimension to which the successor's individual identity is evidently central. Beyond the willingness threshold, the successor's identity is already more or less formed and influences succession in terms of individual vocational attributes.

The progression on the farm ladder is a process of growing involvement in farming, which increases as the successor moves from potentiality to willingness, and finally peaks with effective succession. It is a fundamental process for shaping successor attributes, such as knowledge, awareness, feelings, emotional attachment, skills and ability. Therefore, it significantly contributes to the construction of potential and willing successors. This evidence is contained in axial codes like 'children's involvement in farming' in the potentiality step,

while involvement should increase in subsequent steps. The farmer below explains the process with respect to potentiality:

> Now that she (daughter) has grown up she is better able to help me …. We no longer have to call the vet like we used to … (for example) when there is a difficult birth, I call her because she has more agile hands … if we need to sew up a sheep, she does it. [I9]

The farm business trajectory changes as a result of farm succession development (Inwood and Sharp, 2012); it is connected to the key stages of the process. The farm trajectory comprises the well-studied dynamics of the succession effect and the successor effect (Calus and Van Huylenbroeck, 2008; Chiswell, 2018). The succession effect explains the attitude of the current farmer towards making improvements and innovations to the farm structure and production if there is a potential successor, whereas the successor effect refers to the capacity of new farmers to introduce new technologies and innovation into the farm business (Potter and Lobley, 1996). The succession effect is bigger when the successor moves from potentiality to willingness, and it is particularly relevant from willingness onwards: in practice, the willingness of a successor works as a trigger for farm development. Also other works have identified the influence of identifying a successor on farm management (Wheeler et al., 2012). It is patent from the following farmer's story:

> I don't know, anything I do to expand the business is because I know that someone will follow in my footsteps and carry on the operation (in the future). You do not do this if you think you are going to have to sell tomorrow what you buy today … the same applies to land. Why should I buy land or plant almond trees if I am going to sell within two years because my sons decide not take over the farm? [I10]

While the relevance of the succession effect gradually increases, the successor effect does not occur until succession is effective. In fact, the successor effect is down to the new skills, abilities and knowledge that a new successor is likely to bring into the farm activity. The experience gained by the successor through involvement in farming and familial support plays an important role here. The process of farm adjustment is usually carried out by the current farmer and the successor jointly until the farmer retires and the successor takes over. The interviews did not show up any evidence about particular conflicts during this process.

In the example below, a farmer and a son who is a willing successor explain how they worked together to change the farm in the light of an effective succession, even though it is not clear which one most influenced the process:

> Father: “When my son got involved in the farm (with the prospect of taking over), we said ‘OK, let's make a go of this business' …”

> Son: “… and we bought land and animals, we built a stable, and we bought the seeding machine and the electric fence. We made a quite big investment.” [I3–I4]

The succession and successor effects, which are dynamics embedded in the succession process, improve the likelihood of an effective succession by ‘adjusting’ the farm to the successor's expectations.

Overall, both effects (succession and successor) can lead to innovation and changes on farms. However, the above effects are not limited to effective succession. Instead, they start as early as in the willingness step. Therefore, concerns about the effects of young farming entrepreneurs on farm viability and innovations (Hamilton et al., 2015) could be extended to the whole process of succession, including the potential entrepreneurial attitude of a willing successor. This constitutes a proven benefit of a planned succession process for family farms (Harris et al., 2012).

5. Conclusions

This qualitative research provides a conceptual explanation of the family farm succession process, with its multiple dynamics and steps with respect to extensive livestock farming in two marginal areas. New evidence and findings emerge through a content analysis of open interviews.

The succession process develops over three steps: potentiality, willingness and effectiveness. Successor willingness is a key step in succession and, according to our case study, is likely to be the weakest, meaning that less attention is paid to this step by policy makers, and most potential successors do not complete it. Although pragmatic opportunity trade-off evaluation influences the evolution of willingness, our research casts light on the importance of individual and vocational attributes developed during the previous potentiality step.

Furthermore, this investigation highlights that the factors involved in succession belong to four —individual, familial, institutional, and contextual— dimensions. While the individual dimension is central to the process, the other factors contribute in differing degrees to the three steps. Specifically, the familial dimension is crucial to the recognition of the potentiality of succession and to developing the successor's individual attributes that contribute to the succession process, whereas the contextual and individual dimensions are likely to determine the willingness step. Interestingly, it has been found that while it is crucial to the potentiality step, the familial dimension has less influence on the willingness step where the individual dimension is central. As regards institutions, the main policies provided are related to the last step —effective succession—, whereas apparently no measure has been undertaken to help shape potential successors, and their influence on the willingness step is limited.

The three-step, multidimensional, long-term process of family farm succession is aligned with the understanding of socially constructed endogenous succession cycles and can explain such dynamics across the succession steps. This is particularly evident when analysing the importance of the successor's identity and involvement in farming for the potentiality and willingness steps. The farm trajectory emerges as a positive feedback loop in which the dynamics of succession and farm business influence each other positively, mainly as of willingness towards and beyond effectiveness.

We suggest that future research should focus more on the figure of the willing successor and the attributes that make a potential successor become willing to take over. Besides, the role of the familial dimension throughout the potentiality and willingness steps should be investigated in-depth.

Our findings account for the role that policies could (or should) play in the earlier steps of succession, when a potential successor needs to be shaped. A hypothesis to be tested in future research is whether more wide-ranging types of support for young farmers might condition the succession process, strengthening the weakest links. However, further research is required to draw sounder policy conclusions. The farm succession issue should be higher on the political agenda in the debate about the future of the CAP, as this issue is regarded as posing a real threat to the development of European agriculture and rural areas.

CRediT authorship contribution statement

Daniele Bertolozzi-Caredio: Writing - original draft, Investigation, Visualization, Formal analysis, Conceptualization. **Isabel Bardaji:** Investigation, Writing - review & editing. **Isabeau Coopmans:** Methodology, Writing - review & editing. **Barbara Soriano:** Investigation, Visualization, Writing - review & editing. **Alberto Garrido:** Supervision, Writing - review & editing.

Declaration of competing interest

None.

Acknowledgment

This research has been carried out within the framework of the SURE-Farm Project - Towards SUstainable and REsilient EU FARMing systems, a project funded by the European Commission (project no. 727520). The authors thank ILVO (Flanders Research Institute for Agriculture, Fisheries, and Food) as the partner who led the related project task under SURE-Farm.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jrurstud.2020.04.030.

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