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Retirement farming or sustainable growth – land transfer choices for farmers without a successor

Abstract

Ireland's agriculture is characterised by an ageing farmer population and small average farm sizes. These structural issues are shared by a number of European countries and have been identified as barriers to sustainable growth in the sector. While farms with an identified successor usually enter a path of expansion and growth, farms without a successor at some point follow a route of winding down and extensification. Such retirement farming could potentially become an issue for food security and sustainable land use. Understanding the retirement decisions of farmers without a successor is key to address this issue. To this end a survey was conducted with Irish farmers including questions surrounding succession and retirement. About half of the surveyed farmers did not have a successor and two thirds of those did not intend to fully retire from active farming in the future. A logistic regression analysis of the collected data showed that placing a high value on family tradition in farming and only receiving a state pension had a negative effect on the intention to retire, while being aware of changing pension ages had a positive effect. A follow up qualitative study explored the perceptions of farmers without a successor regarding various land transfer options. The participants mainly anticipated negative consequences arising from selling the farm and full retirement such as the loss of land and the end of the farming activity. Other options such as the long-term leasing of part of the land or entering into a partnership with a younger farmer were regarded as having more positive consequences. These included a lowering of the workload, allowing a continuing involvement in farm work, and the ability to be able to stay on the farm.

Keywords: landowner; decision-making; multi-method; logistic regression; focus group; reasoned action approach; partnerships

1. Causes and consequences of retirement farming

Structural problems in the agricultural sector such as small and fragmented farms or an ageing farmer population are experienced by a number of European countries (Bika, 2007; CSO, 2012; European Commission, 2012, 2013b; Mazorra, 2000). These issues are considered as barriers to a more efficient and sustainable land use (Davis et al., 2009; Giannakis and Bruggeman, 2015; Laepple and Hennessy, 2012) and are even more significant in times

1 where global food security is under pressure from a range of factors including a growing
2 world population and climate change. In Ireland the government has outlined ambitious
3 targets to grow the agri-food sector in its *Food Wise 2025* program. While it is argued that an
4 increase in average farm sizes would generally lead to a greater resource efficiency through
5 economies of scale (Davis et al., 2009), younger, well-educated farmers have also been shown
6 to be more open to adopting more recent, advanced technology as well as environmentally
7 friendly farming practices (Daberkow and McBride, 2003; Diederer et al., 2003; Jones, 1963;
8 Karali et al., 2014; Padel, 2001; Paudel et al., 2012; Sanchez et al., 2014; Slee et al., 2006;
9 Vanslebrouck et al., 2002).

10 It has been shown that farm productivity increases over the lifetime of a farmer up until their
11 mid- to late forties and then decreases afterwards (O'Neill et al., 2001; Symes, 1973; Tauer,
12 1995; Zhengfei and Oude Lansink, 2006). This slowdown in productivity and innovation is
13 reversed on farms where succession occurs as such farms are more likely to follow a path of
14 growth and expansion (Calus et al., 2008; Harris et al., 2012; Lobley, 2010a; Potter and
15 Lobley, 1992a; Sottomayor et al., 2011). However, where no successor can be designated,
16 farmers tend to continue to gradually wind down their business rather than selling up or
17 leasing the land out to younger farmers outside the family (Inwood and Sharp, 2012; Lobley
18 and Potter, 2004; O'Neill et al., 2001; Potter and Lobley, 1992a, b; Sottomayor et al., 2011;
19 Tauer, 1995; Zhengfei and Oude Lansink, 2006) – a phenomenon termed the ‘retirement
20 effect’ by Lobley and Potter (2004). While on some farms such extensification can result in a
21 lower environmental impact of farming (Potter and Lobley, 1992b), older farmers are – as
22 stated above – less likely to actively engage in agri-environmental schemes. Thus, farmers
23 without a successor in place are less likely to develop into innovative, productive and
24 sustainable businesses. Encouraging these farmers to transfer land or managerial control to
25 younger farmers could be crucial in achieving the outlined Irish growth objectives for the
26 agricultural sector within the limits of environmental sustainability. Transferring land to
27 already active younger farmers could also contribute to increasing the average farm size and
28 the overall viability of farming in Ireland.

29 In the UK the scale of the issue is highlighted in a 2010 study that found that 40 per cent of
30 farmers over the age of 60 did not have a prospective successor identified (Lobley, 2010b). In
31 Ireland there is a lack of information as to the number of farmers close to or past retirement
32 age that do not have a designated successor. However, from other European and Irish studies
33 we know that the economic viability of a farm is central to the question of whether a
34 successor is interested in taking over the farm. The more profitable a farm the more likely it is

1 to attract a successor (Davis et al., 2009; Glauben et al., 2009; Glauben et al., 2002; Hennessy
2 and Rehman, 2007; Kennedy, 1991; Stiglbauer and Weiss, 2000; Zagata and Sutherland,
3 2015). About 40 per cent of Irish farms produce a Family Farm Income (FFI) of less than
4 10,000 Euros per year (Hennessy and Moran, 2014). This is well below the overall average
5 income in Ireland of 36,000 Euros (CSO, 2015). Other factors such as the potential
6 successor's education have also been shown to be relevant (Aldanondo Ochoa et al., 2007;
7 Corsi, 2004), although interactions with the economic viability are apparent. For example
8 successors of more profitable farms are more likely to have agricultural training (Gillmor,
9 1999; Hennessy and Rehman, 2007; NN, 1992), and potential successors from small farms are
10 more likely to seek higher education and occupation outside agriculture (Aldanondo Ochoa et
11 al., 2007; Corsi, 2004). Low FFI's can thus indicate that not attracting a successor could
12 potentially be a widespread issue and as a consequence lead to low intensity retirement
13 farming.

14 In order to address this issue we need to gain a better understanding of the prevalence of
15 succession in Ireland and the factors that influence the retirement and land transfer decisions
16 of those farmers without a successor. The literature shows that intrinsic values with regard to
17 the farm work, the farm and the animals can play an important role in farmer decision-making
18 in general (Barcley et al., 2005; Burton, 2004; Duesberg et al., 2013; Gasson, 1973; Gillmor,
19 1999; Grubbstroem and Soovaelli-Sepping, 2012; Kuehne, 2013; Mann, 2007; Riley, 2011,
20 2015). However, little is known about the *relative* importance of economic as well as socio-
21 demographic factors and intrinsic values in the process of making a decision with regard to
22 retirement – in particular where no successor is present. Furthermore, in policy terms it is
23 important to understand which retirement options may be attractive to those who do not have
24 a successor so that a generational change and general increase in land transfers can be
25 supported.

26 Thus, there were three objectives to this study: The first objective was to establish how many
27 Irish farmers close to retirement age are affected by not having a designated successor. The
28 second objective was to assess the relative importance of various structural and socio-
29 demographic factors as well as intrinsic values in the decision-making process of Irish
30 farmers without a successor when it comes to retirement. The third objective was to explore
31 the preferences of Irish farmers' without a successor regarding various land transfer and thus
32 retirement options available that would promote a generation change and sustainable growth
33 in the sector.

1

2 **2. Family farming, land transfer and retirement**

3 In Ireland, as well as in many other European countries, agriculture is dominated by family
4 farming. While in some families land transfers occur during earlier stages of life, most face
5 this situation when the current generation comes to an age where they can not or do not want
6 to continue farming as intensively as they used to and are looking for some form of
7 retirement. At this point the family needs to make a decision about the future of the farm
8 business and the ownership of the land. This could be transferring to the next family
9 generation, selling of the farm, short- or long-term leasing and gradually winding down, or
10 some form of partnership. Whatever the choice, the time of retirement is a crucial period for
11 many farms when it comes to land transfers and transactions. On an aggregate level the
12 options chosen have a fundamental impact on average farm sizes and average farmer age.

13 Succession and retirement are closely linked issues on family farms (Kimhi and Lopez, 1999),
14 where the current generation is able to designate a successor from within the family, the
15 family farm can continue and the older generation potentially faces less disruption to their
16 way of life as when compared to the situation where they have no one to take over and may
17 have to sell the farm (Riley, 2015).

18 The literature gives some indication as to why farmers without a successor continue farming
19 past their retirement age. First of all it needs to be recognized that retirement is not as clear a
20 concept in farming as it is for example in the civil service or industry sector (Gasson and
21 Errington, 1993; Riley, 2015). This is due to farmers being self-employed but also to the
22 special nature of the farm as a workplace that is closely intertwined with the place of living
23 (Riley, 2015). Furthermore farmers identify themselves strongly with the farm work, the work
24 place, the land and the animals, making it difficult to disentangle themselves from the farm
25 and relinquish the reins (Barcley et al., 2005; Burton, 2004; Duesberg et al., 2013; Gasson,
26 1973; Gillmor, 1999; Grubbstroem and Soovaelli-Sepping, 2012; Kuehne, 2013; Mann, 2007;
27 Riley, 2011, 2015). In general strong views exist among farmers on continuing the family
28 tradition in farming, with a sense of duty and custody to keep the farm together and
29 operational for future generations (Crockett, 2004; Fischer and Burton, 2014). Farming has
30 also been described as providing the farmer with identity, occupation, control, and status in
31 the community as well as social and cultural capital (Bika, 2007; Burton, 2004; Burton et al.,
32 2008; Errington, 2002; Gillmor, 1999; Ingram and Kirwan, 2011; Kuehne, 2013; Riley,
33 2012). As a consequence the abandonment of farming activities can be associated with a loss

of these values. If the farm is succeeded by a family member, a process that usually allows the older generation to stay on the farm and gradually wind down their farming involvement, these values tend not to be violated. However, where no successor is present, the potential violation of these values could be a powerful barrier to transferring land to a non-family member.

Another factor that could influence the decision to keep farming past retirement age and delay succession are pension levels and ages (Ingram and Kirwan, 2011; Pietola et al., 2003). Low pension expectations can delay succession as the current holder might be in need of income for an extended period and the farm may not be capable of supporting two incomes. In Ireland a so-called ‘flat-rate’ pension system is operated paying pensioners at around 800 Euros per month, a level indicating that for those receiving only a state pension the additional farm income could be an essential part of their financial security. Furthermore, a change in the pension age could affect farmers’ retirement plans. In Ireland, the minimum pension age is 66, but it will be increased stepwise to 68 by 2028.

3. Material and Methods

In order to address the outlined objectives a mixed-method approach was employed. First, a quantitative study was conducted to establish the proportion of farmers affected by not having a successor and to identify the factors influencing the decision of farmers without a successor to retire from farming. Second, a qualitative study was used in order to conduct an in-depth exploration of the preferences of farmers without a successor at or around retirement age regarding various land-transfer options that would promote a generation change and sustainable growth in the sector.

3.1. Methodology Quantitative Study

A survey on Irish farmers’ perceptions on succession, retirement and land transfer options was conducted in 2012. Semi-structured interviews were carried out by telephone with a randomly drawn sample from all members of the Irish Farmers Association (IFA) aged 50 or older. This age group was chosen based on a German case study, where the likelihood of designating a successor first increased up until the current managers’ age of 53, and then decreased, with succession becoming more and more unlikely to happen (Glauben et al. 2002).

The IFA represents about 60% of the Irish farming population and its membership is considered as broadly representative of the national average. The sample consisted of 421

farmers from all over Ireland who had identified themselves as active in farming. The questionnaire covered areas such as farm type and size; socio-demographic factors; knowledge about and actions taken regarding retirement options; pensions; intentions regarding retirement; and values and attitudes with regard to family farming and land ownership. After establishing the number of farmers without a successor a subgroup of the sample was analysed consisting of farmers without an identified successor, resulting in a sample size of N=201 participants.

The participants' intention to totally retire from active farming in the future was analysed using a logistic regression, as this is a decision of binary nature taking on either the value '1' for '*Yes I do intend to totally retire from active farming in the future*' or '0' for '*No, I do not intend to totally retire from active farming in the future*'. Under a logit specification the probability of a binary outcome is identified as:

$$P_i = \frac{e^{\beta x_i}}{1 + e^{\beta x_i}}$$

Where P_i is the probability of outcome i , x_i represents the independent variables or characteristics related to outcome i , including a constant, and β represents the model coefficients. The model can be estimated using maximum likelihood estimation. Given the nature of the model, the coefficients are not directly interpretable. Thus, in this study, odds ratios are also reported, which identify the change in the probability of choice at the sample means given a unit increase in the variable. For dummy variables, the reported odds ratio describes the change in probability due to the inclusion of the variable versus its omission.

3.2. Methodology Qualitative Study

The qualitative study was conducted in order to allow an in-depth exploration of farmers' preferences regarding land transfer options available to them once they come to an age where full-time farming is no longer feasible. For this purpose farmers close to or at retirement age, who did not have a successor were chosen as participants. In qualitative research a sampling approach to selecting participants based on such predefined criteria central to the studied topic is generally known as purposive or theoretical sampling (Curtis et al., 2000; Huberman and Miles, 2002). The participants were then asked to discuss in a focus group the three land transfer options that can be regarded as promoting generation change and sustainable growth in the sector: selling, long-term leasing and entering a partnership. Partnerships are a relatively new phenomenon in Ireland and are mainly set up on dairy farms. Typically, the

1 two partners merge their enterprises into one legal and financial entity and negotiate a
2 contract setting down the responsibilities, contributions and rights of each partner in terms of
3 work type and load, land, machinery, and income. The data was collected in June 2015 in
4 Portlaoise – a town in the Irish midlands – in a focus group session with seven participants, all
5 of which were local farmers and aged between 56 and 70. Two participants were active full-
6 time farmers, one was still farming but on a reduced scale, one had entered a partnership with
7 a neighbour and one with a son, one had long-term leased half of his farm and farmed the rest
8 on a reduced scale, one had leased the whole farm. The participants' farms were either
9 managed as dairy, tillage or suckler farm or a mixture of them. Farm sizes ranged from 14 ha
10 to 123 ha.

11 The focus group discussion was structured based on the *Reasoned Action Approach* (RAA,
12 also known under the name of its predecessor the *Theory of Planned Behaviour*, TPB)
13 (Fishbein and Ajzen 2010) (Figure 1). The RAA has been widely employed in the field of
14 farmer decision-making (e.g. by Beedell and Rehman, 2000; Bieling, 2004; Fielding et al.,
15 2003; Fielding et al., 2008; Hansson et al., 2013; Poppenborg and Koellner, 2013; Sutherland,
16 2010; Wauters et al., 2010; Zubair and Garforth, 2006). It assumes that people's behaviour
17 originates from their intentions to perform a specific action. This intention is built upon three
18 constructs: the attitude towards a behaviour; the perceived norm and the perceived
19 behavioural control (Figure 1). All of these constructs are a summary evaluation of an
20 individual's beliefs towards a behaviour, which in turn can be influenced by background
21 factors such as moral values as well as socio-demographic factors and farm structure variables
22 (Fishbein and Ajzen, 2010). Although the RAA is typically used in quantitative studies,
23 Sutherland (2010) showed that it can be employed in qualitative studies as well to structure
24 data collection and analysis.

Figure 1: Conceptual model of factors influencing the decision with regard to land transfer options; based on the RAA (Fishbein and Ajzen 2010)

The focus group discussion was broadly structured by themes developed based both on the RAA and the three options of land transfer: selling, long-term leasing and entering a partnership. While options such as selling, long-term leasing and partnerships provide a farmer with long-term planning security and allow for expansion and growth, short-term letting agreements are considered as a barrier for these objectives (Geoghegan et al., 2015). Short-term letting land for 11 months under so-called ‘conacre’ agreements, however, is currently the most frequently employed land transfer option in Ireland and has a historic tradition (ibid). Hence, the participants were asked to discuss the following topics:

- What are positive and/or negative consequences of selling, long-term leasing and entering a partnership? (Behavioural beliefs, attitudes)
- What do important others think of selling, long-term leasing and entering a partnership? (Normative beliefs, perceived norms)
- How easy is it to perform selling, long-term leasing and entering a partnership (control beliefs, perceived behavioural control)

The focus group discussion lasted approximately two and a half hours. The recording was fully transcribed and analysed using Nvivo©. A coding strategy was developed based on the discussion topics (‘Selling’, ‘Long-term Leasing’ and ‘Partnerships’) and the three constructs of the RAA (attitude, perceived norm, perceived behavioural control).

4. Results

4.1. Results Quantitative Study

From the overall sample of 421 participants 48% stated to not have a designated successor. A sub-sample of farmers without successor (n=201) was used for further analysis (Table 1). In the sample 39% (77) of respondents answered that they intend to totally retire from active farming in the future and 61% (122) responded that they do not intend to do so. Of the overall sample that would be 29% of farmers not intending to retire from farming in the future.

An overview of the variables surveyed and their univariate significance with regard to the intention of farmers without successor to totally retire from active farming in the future is given in Table 1. Dairy farming, the most profitable farming enterprise in Ireland, was overrepresented in the sample (32% vs. 11% nationally), and mixed farming underrepresented (2% vs. 20% nationally) (CSO, 2012); this might be explained by farmers applying different criteria when classifying themselves as compared to the criteria applied by the Central Statistics Office (e.g. farmers having mixed farms but their main enterprise is dairy farming and thus categorise themselves as dairy rather than mixed farmers). The proportion of all other farming enterprises in the sample were close to the national averages.

1

2 **Table 1: Farmers not having a successor – variables associated with their intention to**
 3 **totally retire from active farming in the future**

Variable	Category	Yes (n=77)	No (n=122)	p-value
Area owned (hectares) (n=199)	Median (Range) ^c	36 (3-283)	32 (2-161)	ns ^a
		N (%)	N (%)	
Farm Enterprise (n=196)	Dairy	27 (35)	36 (30)	ns ^b
	Tillage	3 (4)	1 (1)	
	Beef	35 (46)	62 (51)	
	Sheep	4 (5)	13 (11)	
	Mixed and other	5 (7)	10 (8)	
Age Group (n=199)	< 60	57 (74)	85 (70)	ns ^b
	≥ 60	20 (26)	37 (30)	
Married (n=199)	Yes	63 (82)	94 (77)	ns ^b
	No	14 (18)	28 (23)	
Children (n=199)	No children	21 (27)	37 (30)	ns ^b
	Have children	56 (73)	85 (70)	
Do you or your spouse/partner have an off-farm income? (n=198)	Either	23 (30)	49 (41)	ns ^b
	Both	11 (15)	9 (7)	
	None	42 (55)	64 (53)	
Are you aware of the changes in the minimum pension age? (n=198)	Yes or vaguely	41 (53)	42 (35)	0.01^b
	No	36 (47)	79 (65)	
Have you made a will? (n=199)	Yes	41 (53)	36 (47)	ns ^b
How important is it for you that the farm stays in family ownership? (n=198)	Important	44 (57)	83 (70)	0.07^b
	Not important or neither	33 (43)	36 (30)	
How important is it to you that your farm stays farmed by the family? (n=199)	Important	27 (35)	52 (43)	ns ^b
	Not important or neither	50 (65)	70 (57)	
When you can no longer farm yourself, do you need to continue to earn an income from the farm? (n=199)	Yes or possibly	36 (47)	61 (50)	n.s. ^b
	No	41 (53)	61 (50)	

Provinces (n=199)	Leinster Munster Ulster Connaught	14 (18) 11 (14) 31 (40) 21 (28)	28 (23) 20 (17) 37 (30) 37 (30)	ns ^b
Have you encouraged your children to take over the farm? (n=139)	Encouraged Neither Discouraged	18 (33) 34 (62) 3 (5)	26 (31) 54 (64) 4 (5)	ns ^b
Have you got advice/information on succession/inheritance? (n=195)	Yes No	10 (13) 67 (87)	23 (19) 95 (81)	ns ^b
What sources of income will you have after retirement?				
State Pension (n=195)	Yes	56 (74)	104 (87)	0.02^b
	No	20 (26)	15 (13)	
Private Pension (n=194)	Yes	51 (67)	64 (54)	0.07^b
	No	25 (33)	54 (46)	
Savings/Investment (n=195)	Yes	19 (25)	27 (23)	ns ^b
	No	57 (75)	92 (77)	
Farm rental income (n=195)	Yes	8 (11)	5 (4)	0.08^b
	No	68 (89)	114 (96)	
How many sources of pensions will you have? (n=195)	1 2 or more	31 (41) 45 (59)	47 (39) 72 (61)	ns ^b
Are you aware of the tax exemptions for long-term leasing? (n=193)	Yes or vaguely No	41 (54) 35 (46)	51 (44) 66 (56)	ns ^b
Have you explored or would you be interested in tax exemptions for long term leasing? (n=193)	Yes or possibly No	48 (63) 28 (37)	58 (50) 59 (50)	0.06^b

1
2
3
4
5

^a Mann-Whitney-U-Test

^b Pearson's chi-square

^c Average national farm size in Ireland is 33 ha (CSO, 2012)

All significant variables have been entered into the logistic regression analysis. The farm size was entered, too, as it usually is an important background factor in farmer-decision making. The results from the logistic regression on these farmers' intention to totally retire from active farming in the future are presented in Table 2.

Table 2: Multivariate analysis of factors influencing the intention of farmers without successor to totally retire from active farming in the future using logistic regression

Variables	B	S.E.	Sig.	OR	90% CI
Are you aware of the changes in the minimum pension age? (Yes/No)	0.811	0.306	0.008	2.250	(1.360, 3.724)
How important is it for you that the farm stays in family ownership? (Important/Not important or neither)	-0.513	0.299	0.086	0.599	(0.366, 0.979)
Will you receive a state pension? (Yes/No)	-0.604	0.279	0.031	0.547	(0.345, 0.865)

Hosmer-Lemeshow-Test 0.542
Model chi-square < 0.000

The results of the data analysis presented in Table 2 indicate that two factors are negatively related to the intention to totally retire from active farming in the future: the receipt of a state pension and the importance of the family farm staying in family ownership decrease the likelihood of intending to totally retire from active farming in the future. Only one factor had a positive relationship with the likelihood to retire: The farmer being aware of changing minimum pension ages made the intention to totally retire from active farming in the future more than twice as likely. The Hosmer-Lemeshow-Test was not significant ($p=0.542$) indicating a good fit of the model.

4.2. Results Qualitative Study – Focus Group

From the analysis of the focus group sessions a number of background factors emerged as influencing the land transfer decisions of participants in general and all three options of land-transfer discussed (selling, long-term leasing and partnerships). First we present the background factors; second, farmers' attitudes, perceived norms and perceived behavioural controls with regard to the discussed land transfer options are described.

Background factors

Family ownership appeared as an important factor from the focus groups' discussion on preferences regarding land transfer options (Q1, Q2), which was in line with the results from the logistic regression. Furthermore, the discussion showed that rather than fully retiring from active farming, participants would like to retreat gradually and stay involved in farming for as long as possible (Q3; Q12a, b). The attachment to the land, the high value that is put on the family tradition of farm ownership and the attachment to the farm work itself have an influence on all three options of land transfer (selling, long-term leasing, partnerships) considered in this study.

Q1: "You should try and hold it [the land] anyway and I would be for holding it and I would be saying that to my family. It took 150 years to get it there so it will never be up there again."
(F3)

Q2: "The family farm is always a crucial aspect to the rural community and it has to be passed on to the next generation." (F2)

Q3: "I have myopathy in the legs so I can't effectively run after a cow or I can't run away from one either. So I'm better out of the equation altogether, even though I am doing a few sucklers and I'll stay going as long as I can with the other half of the farm." (F1)

Other background factors that appeared to be influential were whether or not the farmer had children and the economic returns of the farm, the latter impacting on whether or not a potential successor was interested in taking over the farm. The children of six of the seven participants were not interested in taking over the farm (e.g. Q4a, b), the reasons being that

farming pays poorly when compared to average wages in industrial jobs (Q4a); farming is hard work; and farms are too small to support two incomes simultaneously (Q5).

Q4a: "We have four in the family and none of them interested in farming. As it be, my youngest son is 40 today. They have good jobs, they are not going to farm." (F3)

Q4b: "I reared [...] a family of four on a family farm. None of the four are interested in farming, not going to farm and I am only actually looking into the idea of what is best for me. [...] I am farming myself still but on a reduced scale and I am only looking into the idea of leasing or renting or partnership or whatever." (F9)

Q5: "I had an uncle and he had two sons [...], he has 100 acres, [he] split it down the middle between the two of them and they have two Mickey Mouse farms. The two of them have 50 acres each and they can't make a living out of it." (F2)

Furthermore farmers' decision-making regarding land transfer options was informed by background factors such as health issues (Q3); land prices (Q8); the national and European policy environment regarding tax breaks and subsidies for farming (Q10; Q11; Q18).

The following three subsections present the results regarding the three land-transfer options (selling, leasing, partnerships) in more detail.

Selling

According to the participants selling the farm would have irrevocable negative consequences such as the loss of land (Q1; Q7), the end of all farming activity (Q3; Q4b: Q12a, b; Q16a) and a violation of the family tradition of farm ownership (Q1; Q2). Furthermore, selling was perceived as having a negative consequence on the landowners' financial situation (Q6; Q9). Land is seen as the most secure investment for money, whereas investing in shares or bonds is seen as very risky, in particular after the experience of the burst of the Irish property bubble in 2008 and the subsequent turmoil in the financial markets and the general economy (Q6). Although selling the farm or the land is perceived as 'easy' and involving little bureaucracy, it would not be an option for any of the participating farmers because of the emotional

1 attachment to the land (Q7). Furthermore participants pointed out that the price for
2 agricultural land is high and does reflect the situation of the housing rather than of the
3 agricultural market (Q8), giving them another reason to hold on to it. In terms of important
4 other persons, participants mentioned that solicitors and lawyers would discourage their
5 clients from selling their land (Q9).

6
7 *Q6: "Maybe there is no huge day to day return from it – but the most solid investment over
8 the years is land. It retains its value by and large fairly well." (F3)*

9
10 *Q7: "Irish farmers [...] haven't an economic love of the land; it's a love of where they live, a
11 place where they live. [...] A lot of landowners have nearly starved in order to hold onto their
12 land. They would rather have the land than make money nearly." (F2)*

13
14 *Q8: "When I started farming in 1959 land prices were based on the value of the land relative
15 to what it could make and [...] to return on borrowings [...]; but that completely changed. I
16 farmed intensively from 1997 to maybe 2001 – you couldn't buy land and finance it, there
17 was no way you could do it." (F8)*

18
19 *Q9: "I went in to my solicitor a couple of years ago, I was transferring some land, he said
20 'Transfer nothing, do not transfer nothing because you have nothing to gain and all to lose.'
21 (F8)*

22 23 Long-term leasing

24 Long-term leasing farmland has attracted increased interest from farmers as the Irish
25 government has raised the tax relief thresholds on income from long-term leasing in 2014.
26 This was seen as a big advantage by the participants of the focus group when looking at long-
27 term leasing (Q10; Q13). However, there was general concern about the unreliability of
28 policies and that incentives given today could be withdrawn again in the future (Q11). Some
29 participants said they would rather not lease out the farm, as this would end their involvement
30 in the farm work (Q12a, b), although it should be noted they were considering the situation
31 where the whole farm would be leased out. Long-term leasing part of the land was seen by
32 some as a way of lowering their own workload, which in some cases had become necessary

1 due to health issues (Q3; Q13). That way they were able to bridge the time until their children
2 might become interested in farming and eventually give them the opportunity to continue the
3 family tradition. There was general agreement that leased-out land would deteriorate in
4 quality due to the lease-taker not looking after it properly (Q14). One farmer pointed to the
5 risk of lease-takers defaulting (Q15).

6
7 *Q10: "I looked at my assets and the income I'm getting from the lease plus the old age
8 pension would make me comfortable but only because it's tax free." (F2)*

9
10 *Q11: "[The] tax concessions could change in a change of government and they could change
11 overnight." (F8)*

12
13 *Q12a: "It struck me from sort of my mindset that some type of partnership would suit my
14 particularly situation fairly well. Leasing I suppose from a tax point of view was very attractive
15 but with leasing you are I suppose turning the key on your farm forever, you can look out the
16 window more or less. I thought I was too young to do that." (F3, aged 70)*

17
18 *Q12b: "[F3] also made the point that one of the things he liked about the idea of a
19 partnership was that it allowed him to remain involved in farming as against if you lease it,
20 you know, he is finished with being actively involved in farming." (F4)*

21
22 *Q13: "I was dairying up to 20 years ago and I was told in the Mater [hospital] to pull my arms
23 in or I might end up in a wheelchair. So I got out of cows and I leased the milk quota for five
24 years. [...] When the tax changes came last year he [the neighbour] wanted to lease the
25 whole place, from one of my sons and they had that kind of done." (F2)*

26
27 *Q14: "Through leasing perhaps the value of the farm ,..., the farm becomes rundown over a
28 period." (F4)*

29
30 *Q15: "He [the tenant] couldn't manage it [the lease], a bad harvest came and he got swiped
31 out, swiped, gone!" (F8)*

Partnerships

Overall partnerships were regarded as the land transfer option with the smallest number of negative consequences. Entering into a partnership enables the farmer to stay involved in farming and keep the farm active while lowering the workload (Q12a, b; Q16a, b). Furthermore it gives the older farmer financial security in form of a binding contract, while the younger farmer can expand and build upon existing assets. In addition financial risks and administrative costs are shared (Q17). Partnerships can potentially be transferred to the next generation. If the next generation is not interested in farming they can still keep the family ownership of the land while somebody else, e.g. the partner, farms it (Q18). As long-term leasing forms part of partnerships the same concerns about future changes regarding tax incentives and the risk of the partner defaulting were highlighted as in the case of long-term leasing. Farmers also stressed the necessity of a good personal relationship with and trust in a farmer in order to enter into a partnership and give away some of the control (Q 19).

Q16a: "One of the positives that [Farmer 3] came up with, which was very valid, well we all came up with it, that partnership ensures that the farm continues to be an active farm." (F4)

Q16b: F4: "Obviously labour is a huge one in a partnership versus leasing. [...] Since I went into partnership I take a day off every week at zero cost to the partnership.

F3: "You're moving towards a five day week!"

F4: "Moving towards a five day week, exactly, we'll get there!" (Laughter)

Q17: "The other thing about partnerships is they have the advantage [...] you have the one set of accounts and all that kind of thing as well, it saves costs. The partnership then has the advantage [...] that [...] profitability or losses are shared by both then." (F4)

Q18: "One [farmer] was suggesting that say he goes into a partnership with a neighbour and God forbid in the period of the partnership he dies and he is passing on his farm to his son who is not an active farmer... that because there is a partnership in place, the farm is going to continue being actively farmed as a partnership." (F4)

Q19: "Now I have plenty of neighbours with which I wouldn't dream of entering into an agreement with, absolutely wouldn't touch them with a 40-foot pole. But then there are other

1 *people I would. I talk to them and trust them. [...] There is family interaction for over the last*
2 *100 years maybe and [...] there is personal things there that might have happened on a*
3 *football field or a hurling field [...] and these things are carried over into business. It's a funny*
4 *old game."* (F2)

6 **5. Discussion**

7 Almost half of the surveyed farmers did not have a designated successor and two thirds of
8 them did not intend to retire from active farming in the future. The sample included farmers in
9 their mid 50ies and as Lobley (2010b) points out the proportion of farmers without successor
10 diminished in the UK with increasing age to around 40% when in their 60ies. Thus the
11 proportion of farmers without successor could potentially be smaller if farmers in there 50ies
12 were excluded. However, 40% not having a younger partner to take over the business would
13 still represent a large proportion of the farming population being in this situation. Also, in a
14 German study the likelihood of identifying a successor peaked at around the age of 53 and
15 decreased afterwards (Glauben et al. 2002) giving rise to the assumption that these peaks
16 differ from country to country. Furthermore, there is potential of even more farmers not
17 having a successor in our sample as dairy farming – the most profitable of farming enterprises
18 in Ireland – were overrepresented and more profitable farms are usually more likely to attract
19 a successor (Davis et al., 2009; Glauben et al., 2009; Glauben et al., 2002; Hennessy and
20 Rehman, 2007; Kennedy, 1991; Stiglbauer and Weiss, 2000; Zagata and Sutherland, 2015).
21 This was confirmed by the focus group participants, who expressed the view that the
22 economic size of the farm is crucial for being able to designate a successor.

23 Given the large number of farmers without a successor as well as the negative relationship
24 between farmer age and the uptake of innovations, non-retirement in farming could become
25 an increasing problem for agricultural productivity in Ireland, which is already struggling
26 with structural challenges. While low intensity retirement farming can result in benefits to the
27 environment due to reduced inputs of fertilizer, pesticides and machine work (Potter and
28 Lobley, 1992a), older farmers tend to be less willing to actively engage in agri-environmental
29 schemes (Karali et al. 2014; Padel, 2001; Sanchez et al. 2014; Slee et al., 2006;
30 Vanslebrouck et al., 2002).

31 One option to address the issue of not having a successor could be to encourage more women
32 to take over a farm business. As Cassidy and McGrath (2015) showed a view still dominates

1 among the Irish farming community that sons and daughters take on traditional, gender
2 typical roles and only sons can take over a holding.

3 Within the study farmers' intention to retire was influenced by pension issues as well as the
4 importance of the farming tradition within the family. In particular the awareness of
5 participants of changing pension ages was positively related to the intention to retire. As
6 pointed out earlier, the minimum pension age in Ireland is currently 66 and will be stepwise
7 increased to 68 by 2028. As a result people from different birth years will qualify for drawing
8 a state pension from different ages. It is possible that participants who are aware of this fact
9 have previously mentally engaged with retirement planning, which could explain the positive
10 relationship between the two variables.

11 Furthermore those expecting a state pension only were less likely to totally retire from active
12 farming in the future. Pietola et al. (2003) demonstrated that higher expected pension benefits
13 increased the likelihood of a farmer to retire, which is in line with Väre's (2006) results,
14 showing that the greater the dependency on farm income the later the retirement. On many
15 Irish farms income is made up entirely by subsidy payments (Hennessy and Moran, 2014).
16 Farmers are entitled to draw subsidy payments also after reaching pension age, average direct
17 payments per farm were 19,139 Euros in 2014, a monthly rate of around 1,600 Euros, which
18 is twice the amount of a state pension payment. To qualify for these subsidy payments the
19 land needs to be maintained in 'good agricultural and environmental condition' without
20 producing anything. Thus, farmers with a state pension only could be less likely to retire as
21 they financially depend on these direct payments. Previous measures geared at lowering the
22 average farmer age such as tax breaks and support schemes have been limited in their success
23 in encouraging farmer retirement (Bika, 2007; Davis et al., 2013; Gillmor, 1999). In particular
24 schemes such as the Early Retirement Scheme have been criticized for supporting family
25 succession and land transfer that would have taken place anyway (Bika 2007). And while the
26 EU supports young farmers entering into the business through first and second pillar support
27 payments (European Commission, 2013a), there is currently no encouragement for older
28 farmers to pass on the land. Providing financial security decoupled from the farm income
29 could be crucial in encouraging older farmers to retire or transfer land.

30 Although we could not link the employment and retirement situation of the farmer's spouse or
31 partner to the retirement timing of farm holders, we know from other studies that this can
32 have an influence. Väre (2006) for example established that spouses with an off-farm income
33 delayed farm transfers in Finland. In studies on the retirement timing of married couples in

1 the US and Germany Blau (1998) and Blau and Riphahn (1999) showed that joint retirement
2 could not be explained by financial incentives, but was rather due to couples preferring to
3 spend their leisure time together. Further research would be needed to show if this has an
4 effect on Irish farmers' decision making, too.

5 Both, the quantitative and qualitative study identified the value of family ownership as a main
6 barrier to selling the farm and totally retiring where no successor can be designated. Kuehne
7 (2012) explains the difficulty of arriving at the decision to sell his own family farm due to the
8 fact that he was '*saturated with the farming culture ... from an early age*', and having '*little*
9 *choice but to continue the farming tradition*' (p. 204). Many farmers with children, who are
10 currently not interested in the farm, still have hope that they might change their mind. Hence
11 they tend to avoid and postpone retirement decisions until very late in their life. Encouraging
12 farm families to engage in succession and inheritance decisions early could help them make
13 arrangements that secure continued family ownership of the farm such as a partnership. The
14 focus group participants also experienced discouragement from important others such as
15 solicitors and lawyers to sell, mainly because it could result in negative financial impacts.
16 Even though selling was considered to be the easiest land transaction to actually perform,
17 entailing the lowest degree of bureaucracy when compared to leasing out land or entering into
18 a partnership, it was not regarded as a potential retirement option. Other factors with an
19 important influence on the negative attitude towards selling were the attachment to the farm
20 work and the preference of a gradual retirement process with the possibility to stay involved
21 in the farm's work for as long as possible. Our findings confirm those of an earlier study
22 made by Kirkpatrick (2013), who described the feelings of loss that farmers associate with
23 retiring from farming, such as the loss of lifestyle, open spaces and independence. This
24 preference for a gradual withdrawal reflects the way succession and retirement are
25 traditionally carried out until today on farms where a successor is present (Chiswell, 2016) as
26 well as the desire to reduce working hours and the burden of work on the farm in old age
27 (Potter and Lobley, 1992b).

28 We know from the literature on general farmer decision-making that farmers have a number
29 of different goals and objectives with regard to their farm, some of which can be of non-
30 economic nature (Burton, 1998, 2004; Burton and Wilson, 2006; Duesberg et al., 2013;
31 Edwards-Jones, 2006; Gasson, 1973; Niska et al., 2012; Silvasti, 2009; Willock et al., 1999).
32 Previous studies on other strategic decisions made with regard to the farm business had, too,
33 identified the influence of family ownership values (Dominy, 2001; Duesberg et al., 2014a;
34 Duesberg et al., 2014b; Flemsæter and Setten, 2009; Hennon and Hildenbrand, 2005; Ingram

1 et al., 2013; Siebert et al., 2006). Our research further confirms the importance of non-
2 economic factors in strategic farm decision-making and the need to take them into account
3 when designing new policy measures geared at initiating change at farm level.

4 Farm partnerships according to Cush and Macken-Walsh (2016) are a promising vehicle for
5 getting young farmers involved in farms without successor, without having to push out the
6 older generation. Such partnerships could promote the exchange of complementary resources
7 between young and old farmers, including knowledge transfer. The study also showed that the
8 land transfer option with the most positive consequences anticipated by the participants would
9 be entering into such a partnership with a trusted person. This was an interesting result as
10 according to the participants setting up a partnership would involve support and a large
11 amount of time for the negotiations of the contract. Despite these bureaucratic burdens
12 participants would assign many positive consequences to entering into a partnership that
13 would outweigh them, in particular when a consultant supports this process. Participants
14 pointed out, however, that it would be crucial for them to find a trusted person in order to
15 enter into a partnership. Finding this trusted person can be difficult as Ingram and Kirwan
16 (2011) demonstrated. This could be achieved for example through minimum educational
17 levels for the younger partner into the design of a support scheme, which could also address
18 fears of the land quality deteriorating. Furthermore younger, well-educated farmers have been
19 shown to be more likely to be innovative and engage in agri-environmental schemes
20 (Daberkow and McBride, 2003; Diederer et al., 2003; Jones, 1963; Karali et al., 2014; Padel,
21 2001; Paudel et al., 2012; Sanchez et al., 2014; Slee et al., 2006; Vanslebrouck et al., 2002).
22 Thus, minimum educational requirements could also help meet policy objectives of increased
23 output and sustainability. External support would be needed to find a matching partner and for
24 negotiating and ratifying a contract between them. It should be noted that there has been
25 recent activity in Ireland with regard to information on and setting up partnerships. For
26 example Macra na Feirme (the young farmers' organisation) and Teagasc (Agriculture and
27 Food Development Authority) have developed a land mobility information service that has
28 been operating a number of succession planning workshops across the country. The support in
29 setting up partnerships up to now has been limited in its scope. Also a more targeted approach
30 could be taken if the characteristics of farms without successor could be described more
31 precisely.

6. Conclusion

Increasing average farm sizes and lowering average farmer age are key to ensuring sustainable growth in the agricultural sector; this is particularly important in times of a growing world population and a rising number of extreme weather events jeopardizing harvests all over the world. In order to achieve these objectives finding a successor from within or outside the family is crucial – particularly where family farms dominate the primary sector, as is the case in most European and many other countries. This study conducted in Ireland showed that almost half of the respondents did not have a successor and two thirds of these do not intend to retire from farming in the future. It indicates that non-succession and an increase of low intensity retirement farming could become even more widespread in the future. To overcome this issue land transfer to younger farmers needs to be encouraged in a way that does not violate the values older farmers are holding with regard to the farm, the farm work and the family tradition of farming as well as providing farmers with financial security in old age. As pointed out earlier retirement in farming is not as clear a concept as it is in other work sectors due to the self-employment of farmers and close intertwinement of the farm as a work place and a place of living (Gasson and Errington, 1993; Riley, 2015). There is a need for alternative retirement concepts that allow for a continued involvement in the farm work and a gradual reduction of the workload as well as a secure income in old age. Such alternative concepts could ensure that farms continue to be developed and used to their full potential. Farm partnerships would accommodate such values, however, need outside support for setting up. Another option to addressing the issue of not having a successor could be to encourage more women to take over a farm business.

In the past developments towards a larger-scale agriculture have been criticised to have negative social and environmental consequences (Belfrage et al., 2005; Goldschmidt, 1978; Lobao and Stofferahn, 2008). However, if the continued increase in average farmer age and retirement farming in Europe is not counterbalanced, a decrease in activity in the primary sector could have negative implications on food security and add to the depopulation and marginalisation of rural areas. Larger farm sizes with greater economic viability could create renewed interest of younger generations in pursuing farming careers and thus contribute to the social sustainability of rural areas. Supporting alternative ways of land transfer such as partnerships would not only help to lower average farmer age and improve economies of scale in production, it would also support intergenerational knowledge and skill transfer, the continuity of family farming, and strengthen social networks rural areas.

On a more general level our results call for more multidisciplinary approaches to researching

1 farm level decision-making, approaches that fully take into account both non-economic and
2 economic factors, in particular where long-term developments are affected. Rather than
3 looking separately at economic, social and psychological factors, such projects should strive
4 for an intimate cooperation throughout all stages of empirical studies and overcome academic
5 trenches that can still separate these disciplines. While in the past years general social and
6 economic theory building have moved closer to each other, such ‘rapprochement’ has yet to
7 arrive in applied land-use research.

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