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## The Potential of Farm Partnerships to Facilitate Farm Succession and Inheritance

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### ABSTRACT

The rising average age of farmers and low level of young farmer entry is viewed as problematic on a global scale and farm partnerships are presented as a possible means by which farm succession and inheritance could take place in a timely manner. Using the example of Ireland, this research investigates a recent proposal by government to introduce a tax relief as an incentive for farmers to part take in farm partnerships. In this discussion, a hypothetical microsimulation model is used to investigate the possible outcomes of such a tax relief, with scenarios created to examine how this would materialise. It draws on the Teagasc National Farm Survey data which provides Irish data to the Farm Accountancy Data Network in the European Commission. The findings illustrate that even with a tax relief, cattle rearing farms would struggle to reap any economic benefit from entering a farm partnership, while their dairy counterparts would receive more value from tax reliefs. Results also indicate that farm viability will play a large role in whether or not collaborative farming is viewed as an option for farmers.

**KEYWORDS:** Farm partnership; succession; inheritance; collaborative farming

### 1. Introduction

Contemporary agriculture faces a myriad of challenges ranging from farm viability to reducing environmental impacts and addressing animal health and food security issues. One of the most important issues farmers face is that of business continuity, of which succession and inheritance planning is an integral part. Succession denotes the transfer of managerial control, while inheritance describes the transfer of assets<sup>7</sup>. Farmer decision-making around succession and inheritance is complex and multifaceted, and influencing factors are economic, personal and social, with every farm succession and inheritance route an idiosyncratic one (Conway et al., 2016). Due to the complexity of the situation, policy makers are challenged in their endeavour to encourage transfer of farm ownership or management to a younger generation. The increasing average age of farmers (Figure 1) globally has been problematized as a situation of lower production, efficiency and technology adoption correlated with older land-holders (Lobley et al., 2010; Howley et al., 2012; Zagata and Sutherland, 2015). This perceived problem of

reduced productivity and efficiency as a function of an ageing farm population is under particular scrutiny within Europe, North America and Australasia where the competitiveness of the agricultural sector is high on national economic development agendas.

With a view to addressing the ageing profile of farming in EU contexts, a range of strategies and policy interventions have been put in place over the last three decades or so, from early retirement schemes to various nationally-based tax incentives in an effort to encourage a more structured and predictable rate of entry into and exit from farming as an occupation. Farming is also construed as a 'way of life' as much as an occupation, and it is contended that emotional and other cultural and symbolic associations with agriculture have confounded attempts to introduce policy in a format that can take account of these complexities (Conway et al., 2016; Inwood and Sharp, 2012; Gasson and Errington, 1993). The issue remains, however, that policy at both EU and national levels has not apparently been sufficiently innovative to alter the established dynamic of low rates of transfer and an ageing farming population. The issue is

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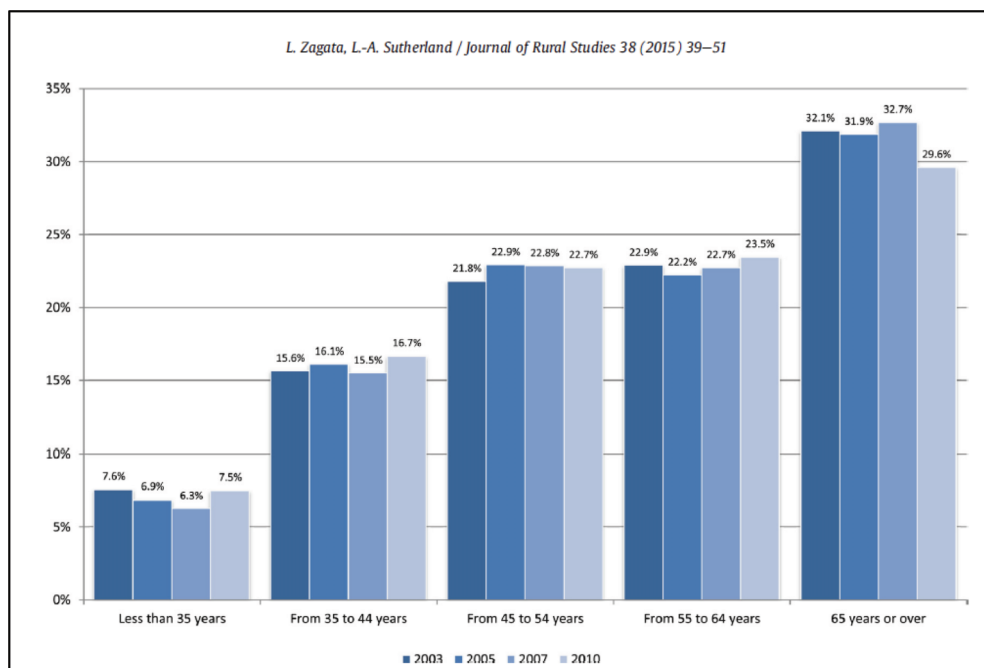
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<sup>7</sup> For this research both succession and inheritance are used in conjunction as both processes are being discussed.



**Figure 1:** Share of farm holders by age category for the years 2003 – 2010 (Zagata and Sutherland, 2015)

particularly evident in the Irish context, where the vast majority of farm transfers are made via inheritance, and generally take place within families. This has culminated in a particularly stifled land market and very limited pathways to entry for young farmers (Hennessy and Rehman, 2007; Matthews, 2014). From an economic competitiveness perspective, the notion of engaging younger farmers in agriculture as a policy priority also implies their intention to actively farm in a productive way.

One strategy for change currently being developed in the Irish policy context is the introduction and promotion of farm partnerships across all farming systems. The rationale behind farm partnerships is that they incentivise a new set of working arrangements between older and younger farmers, as a way of providing more options for younger farmers to enter farming in an active and productive way, with recognised status and responsibilities and agreed sharing of the farm profits (Macken Walsh and Roche, 2012). Farm partnerships are also held to create more opportunities to maximise efficiencies and profitability through combining expertise, experience and resources and through convincing older farmers of the benefits of earlier farm transfer. The benefits associated with young farmers being involved in an enterprise from the point of view of encouraging farm transfer have been widely cited. Potter and Lobley (1996) have coined the terms ‘succession, successor and retirement effects’ to describe the processes whereby an identified successor or lack thereof can significantly influence the original holder’s level of interest and investment in the farm when approaching what should be their own retirement from farming. Potter and Lobley (ibid) argue that ‘farmers without successors...seem significantly more likely to be disengaging from agriculture’ (p. 329). The successor effect thereby refers to the positive impact which a successor can have on a farm once he or she becomes actively involved in the running of a farm and decision-making processes. The retirement effect generally has a negative impact on farms, i.e. the process of semi-retirement tends to be characterised

by de-intensification and liquidation of assets if there is no successor present. The contention is that a farm partnership could promote the successor and succession effect together with creating an environment for shared decision making and control, while stifling the negative outcomes of the retirement effect (ibid).

A key aim of this research is therefore to provide a critique of the current mechanisms relating to farm succession and inheritance, through assessing the plausibility of farm partnerships as a means by which farm succession and inheritance can be facilitated. The issue of financial viability of a farm partnership is a second crucial aspect; if the partnership cannot sustain the farm and provide a reasonable income for those involved, it is unlikely to be embarked upon regardless of its capacity to encourage farm succession to take place. The paper is structured to initially provide a comparative analysis of farm partnerships internationally (including Ireland) as a mechanism to support succession and inheritance, focusing on structural and policy aspects. Secondly, taking the example of Ireland, it examines the financial implications for farmers of embarking on farm partnerships with a view to farm succession. It does this by applying a hypothetical microsimulation model to assess the value of a range of tax reliefs offered as incentives to enter partnership arrangements, and to proceed on to farm transfer. For this research the terms succession and inheritance are used in conjunction due to the complexity of the farm transfer process, but also given the fact that both succession and inheritance take place in the microsimulation results.

## 2. Collaborative Farming Models To Support Succession And Inheritance

Farm partnerships come under the umbrella term ‘collaborative farming’. Other arrangements considered collaborative farming include contract rearing, share farming, cow leasing and long term land leasing (Curran, 2015).

Forms of collaborative farming, particularly farm partnerships, have been identified as a step towards farm succession and inheritance. Commins and Kelleher (1973) (and later Gasson and Errington, 1993) refer to the succession process as a 'ladder' of responsibility which is gradually ascended by a young farmer entering a business. Generally the process of retirement and succession is a gradual one that follows clear phases, hence the ladder analogy. The first phase is where the farmer shares the workload with the successor. Following this, management is slowly passed over to the successor before eventually the successor becomes the sole operator. The identified middle phase is likened by Gasson and Errington (1993) to a farm partnership. A farm partnership involves the pooling of resources and skills of the parties involved, a contract is agreed which specifies profit shares for the parties involved and sets out levels of input each partner will have. Macken Walsh and Roche (2012) describe a farm partnership as a situation in which 'two or more farmers join resources and efforts in order to acquire various benefits' (p.2).

### 3. Opportunities Of The Farm Partnership Model

#### Partnerships facilitating succession and inheritance

The transfer of decision making responsibilities can be a contentious issue for farm successors with older farmers retaining control over decisions until they exit farming. A farm partnership provides an avenue for responsibilities to be more formally shared between farmer and successor, thus reducing the possibility of a successor becoming frustrated over time (Errington, 1998). This transfer of responsibility can benefit the farm by allowing young farmers bring new ideas to the business. Chiswell (2016) found that farmers in the UK were aware of the importance of these new ideas with some interviewees articulating their importance due to the ever changing nature of the sector. Also in the UK context, Ingram and Kirwan (2011) evaluated the Fresh Start Initiative, a scheme which matched new entrant farmers with retiring farmers as a means of giving younger farmers a start and older farmers a gradual exit strategy. However, this was not seen as hugely successful because there were insufficient profits from some partnerships to sustain two salaries. In contrast, Gasson and Errington (1993) describe the partnership model as an excellent means by which a successor can gain managerial responsibility prior to fully taking over a family farm. In addition they assert that farms where a farmer-son partnership is in place tend to expand far more than their counterparts. Ingram and Kirwan (2011) also note that farmers are more willing to cooperate with family members. Many Dutch farms are in partnerships which facilitate the process of gradual succession (NRN, 2012). In New Zealand farming in partnership is popular amongst dairy farmers, with McLeod (2012) referring to forms of farm partnership as 'succession options'. In the Dutch case a 'maatschap' allows a successor to build up a share in the farm business over time and also facilitates the gradual transfer of control from the farmer to their successor (Gasson and Errington, 1993). This form of partnership is utilised by the majority of farms in the Netherlands with aspects such as the sense

of security created for a successor in knowing that they will eventually take over the farm being lauded (Johnson et al., 2009; Van der Veen et al., 2002). In the case of New Zealand, the dairy industry has a well-developed career structure which gives young farmers the opportunity to begin farming and has exit schemes available for older farmers such as phased exit strategies (CIAS, 1996). Up to 40% of New Zealand's dairy farms operate under share milking agreements, indicating a high success rate, while over 20% of all dairy farms in Norway are managed using some form of partnership (McLeod, 2012). However, McLeod (2012) notes that sheep and beef farms tend to use 'more traditional' forms of succession and inheritance. Until recently, registered partnerships in Ireland were only an option where at least one partner was operating a dairy system; however, partnerships were introduced for all farming systems as of spring 2015.

#### Risk reduction

A critical issue in partnership arrangements is how decision-making and risk assessment are shared. Groom et al. (2008) note that farmers are generally risk adverse, which is exemplified by Hardaker et al. (2004) who suggest that farmers tend to avoid the uptake of new technology if they have little experience with it. Similarly, Vollenweider et al. (2011) found that uptake of the Rural Environment Protection Scheme (REPS) was dependant on the ability of the associated subsidies to smooth income over time and thus reduce financial risk. Partnership arrangements however, may promote risk reduction in net income by risk sharing and diversification effects; thus partnership arrangements should be an attractive option for farmers. Moreover, the risks associated with introducing new technologies can be shared among farmers (Larsen, 2008). McLeod (2012) cites the perceived risk involved in joining a farm partnership as a contributing factor to a final decision, going on to reference sharing of risks as a potential benefit to being in a farm partnership. For retiring farmers, a partnership may be perceived as attractive as it allows them to retain some control over the farm, particularly if they do not have a source of retirement income. Entering a farm partnership does not require the farmer to transfer any land to a successor, possibly reducing the perception that they are losing control of their farm which often deters farmers to engage in succession/inheritance (Lobley et al., 2010). From the perspective of a successor, the formation of a partnership can confirm their status on the farm. In many cases successors may be unaware if they will definitely inherit the farm or not, and often do not receive payment for the work they undertake (Gasson and Errington, 1993). The partnership contract in the Irish case incorporates the sharing of profits, which in turn reduces the risk of a successor abandoning the family farm as a result of becoming frustrated with a lack of pay or responsibility and seeking opportunities outside of farming.

While risk reduction has been outlined as a benefit associated with farm partnerships, entering a partnership can be surrounded by uncertainties given that it is a relatively novel form of arrangement, particularly within the Irish context. With farmers described as risk averse it is expected that they may be negatively predisposed to a new management structure. In relation to smaller farmers in particular, Crowley (2006) finds that they are 'very



slow to take risks and to become fully integrated in commercial markets unless forced to do so' (p. 55). She suggests that they may be affected by both cultural and economic factors when making decisions around change and may be more likely to rationally keep to a prior path rather than embarking on an uncertain venture (such as joining a farm partnership), thus avoiding potential risks associated with unfamiliarity. Partnerships have developed in a variety of ways in different countries, with diverse levels of uptake. At present they are popular amongst farmers in New Zealand, France, Norway and the Netherlands (Johnson et al., 2009; McLeod, 2012).

#### 4. Methodology And Data

In 2002, registered Milk Production Partnerships (MPP) were made available to dairy farmers in Ireland based on the Groupements Agricoles d'Exploitation en Commun (GAEC) system. Partnerships in Ireland are most similar in structure to those in France, known as GAECs (Groupements Agricoles d'Exploitation en Commun). The GAECs facilitate the bringing together of small scale farms with the objective of making farming more viable. Policy changes in French agriculture have accommodated the GAECs in order to encourage farmers to enter or remain in an arrangement. In general, governments favour agricultural land mobility via inheritance tax incentives, or lack of land transfer taxes (Bird and Slack, 2002). In Ireland, for instance, there are numerous taxation incentives surrounding agricultural land transfer (Leonard et al., 2017), while in the Australian case there is no inheritance tax (Ernst and Young, 2013). Initially partnership agreements were confined to bringing together two producers who each had a holding and a milk quota; however, in 2003, new regulations were introduced which aimed to expand the use of partnership arrangements. One of the features of this change was to provide for partnership arrangements between a parent and son/daughter and in conjunction with this, under the restructuring scheme, to allow priority access to quota to the son/daughter as a new entrant to dairying. Although initial interest in partnerships was low there has been significant uptake in recent years, particularly in the new entrant/parent arrangements. In 2016, partnerships were made available for all farm systems to enter and current figures indicate that there are 1,556 registered partnerships in Ireland (DAFM, 2016). Figure 2 presents a breakdown of these partnerships by system, it is clear that dairy (including dairy and other) is the dominant system involved in farm partnerships in Ireland, with beef (including beef and other) being the second most likely system to engage in such a farm arrangement.

Section 5 focuses on an analysis of the different tax relief schemes available to farmers in partnerships in terms of how they potentially impact on succession and inheritance decision-making. It does this through the use of microsimulation modelling to produce a comparative analysis of 2 (hypothetical) base farms involved in farm partnerships, with one farm in the pre-2016 and the other in the post-2016 (proposed) Succession Farm Partnership Scheme (SFPS), in terms of how each fares out in terms of financial viability. In addition to this, farms in pre-2016 scenarios will not receive assistance from the 'Support for Collaborative Farming Grant Scheme' (SCFG - discussed below). Here, details of the different tax reliefs under

each scheme is first outlined, followed by a description of the hypothetical simulation model applied, and then the presentation of a series of scenarios for succession and inheritance linked to partnership arrangements.

#### Financial incentives/tax reliefs

In December 2015, the Irish government announced an income tax credit (subject to EU approval) to encourage the transfer of farms within families (i.e. the SFPS). A new register will be created for farm partnerships in which one partner is a young trained farmer. This register will allow an annual €5,000 income tax credit to be split between the partners in a farm partnership for a five year period. One of the conditions is that 80% of farm assets must be transferred within 3 to 10 years of applying to register a partnership to avail of the tax credit.

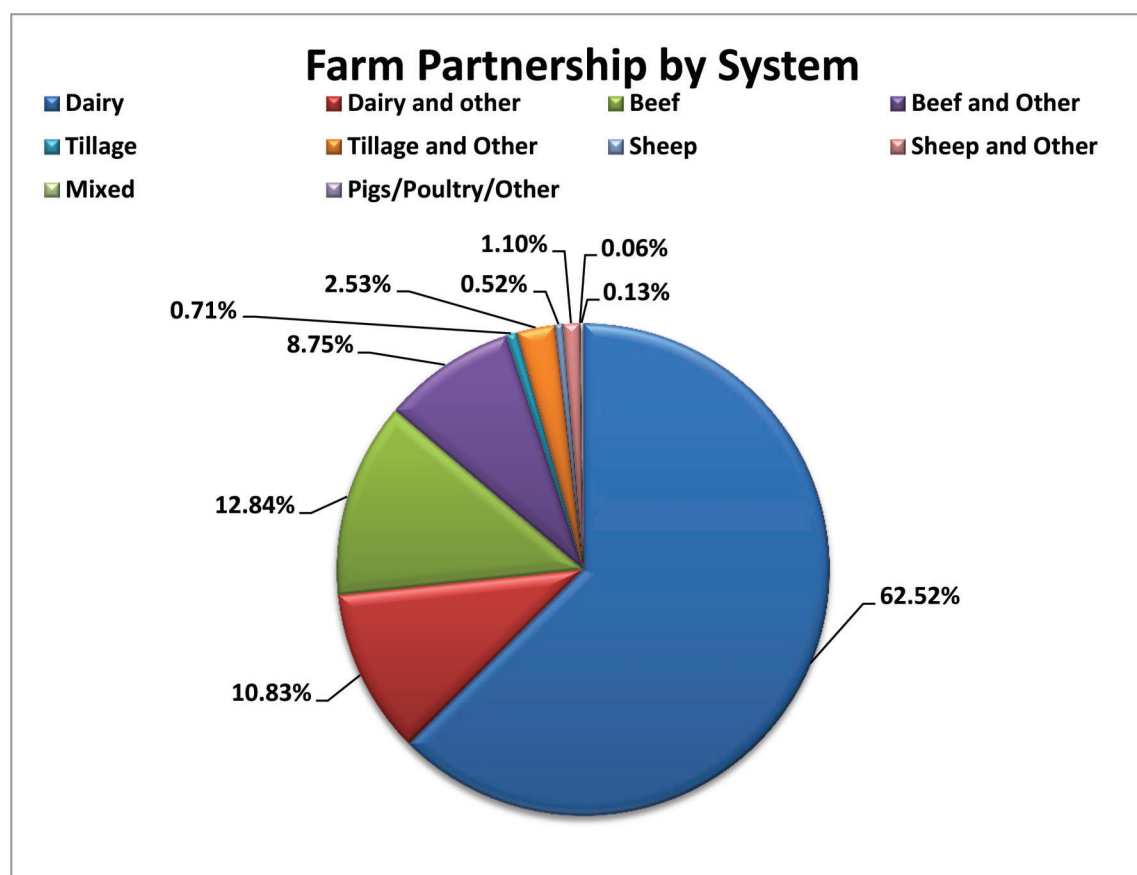
Changes introduced as part of the introduction of the most recent CAP reform have embraced the concept of multiple payment thresholds to registered farm partnerships across all CAP Pillar I and Pillar II schemes. The concept that farmers entering into a registered farm partnership should not be in any way disadvantaged when compared to farmers operating in their own right has been embraced by policy holders. Technical issues can still arise that cause problems for farmers obtaining their multiple payments.

An SCFG has also been introduced to cover 50% of the costs incurred in entering a farm partnership. This grant aims to cover some of the legal, financial and advisory fees associated with setting up a collaborative farming arrangement and the maximum payment is €2,500. Those in a Department of Agriculture, Food and the Marine (DAFM) registered farm partnership can also avail of stock relief in two ways, with young farmers receiving 100% stock relief for the first four years after setting up as a farmer. Other partners can avail of an enhanced stock relief at a rate of 50% on their share of the increase in stock value. Farmers can also benefit from a higher investment ceiling for the Targeted Agricultural Modernisation Scheme (TAMS) and multiple payments under GLAS, ANC and the Organic scheme.

#### Hypothetical microsimulation modelling

The area of farm succession and inheritance lends itself to a high level of complexity given the factors involved, such as, the wide-ranging impact of such a decision on the lives of the farmer, successor, and their families (Inwood and Sharp, 2012). For this research, the chosen scenario used to analyse the economic impact of different routes to succession and inheritance is that of entering a farm partnership. Hypothetical microsimulation is the most appropriate methodological approach as it allows for complexity to be removed to an extent and an assessment of different changes to be made at a micro level (O'Donoghue, 2014). This method facilitates the projection of income streams for both parties, whilst allowing for farm level changes (such as income increase/decrease and farm size adjustment) to be made for each scenario.

Microsimulation models use data on micro-units (e.g. households, firms, farms, etc.) to simulate the effect of policy or other socio-economic changes on the population of micro-units (Mitton et al., 2000). The need for microsimulation arises from the difficulty of observing simultaneously the outcomes for the same micro-unit



**Figure 2:** Farm Partnerships in Ireland by System (DAFM, 2017)

under a treatment and in the absence of a treatment (e.g. policy change), and also crucially as a tool to understand the complexity of a policy problem. The result of the microsimulation models can be affected by many factors, which makes it difficult to illustrate the effect of a single factor. Hypothetical models focus on a particular scenario under certain predefined assumptions. This allows the model developer to examine a simplified version of the simulated observation (O'Donoghue et al., 2014). Microsimulation techniques have become a much used instrument for their ability to provide an assessment of differing scenarios and facilitate decision making (Spadaro, 2007). In this case, microsimulation is used to understand economic decisions regarding farm partnership and conclusions will be drawn around the likely follow on implications for farm transfer. Focusing on a hypothetical farm allows for the sensitivity of farms to policies to be tested while avoiding the complications that would arise were this study to be undertaken on a real farm. Farm level decisions are not always rational or economically driven (Vanclay, 2004; Howley et al., 2012), but this method facilitates the simulation of decisions based on economic incentive as opposed to basing decisions on non-economic phenomena.

Modelling different farm partnership scenarios allows for the comparison of outcomes, resulting in the most economically beneficial succession and inheritance scenarios becoming established. Each scenario is in turn affected differently by existing policy and associated legal and financial instruments along with other, more subjective motivating factors (listed on the right hand side of table 1). Table 1 lists the main policies and motivations that will affect each scenario (DAFM, 2015; Loble, 2010).

**Table 1:** Main policies and motivations affecting succession/inheritance

Main policies and motivations affecting succession/inheritance	
Policies	Motivations
Farm Partnership Tax Relief	Age
Collaborative Farming Scheme	Income
Stock Relief	Health
CAT – Agricultural relief	Reduced work load
CGT – Retirement relief	Increased leisure time
Stamp Duty – Consanguinity relief	Financial security
Young Farmer Top Ups	Education

### Base farm characteristics

The hypothetical figures used are average figures from the National Farm Survey (NFS) (presented in table 2). The NFS collects business management information from a stratified random sample of 1,000 farms annually and is part of the Farm Accountancy Data Network of the EU. Average figures for cattle rearing and dairy farms are used for the base farm, as these are the most dominant systems in Ireland, with farmer and successor ages, marital status and qualifications being simulated so that they qualify for maximum capital tax reliefs. For the purposes of testing the efficacy of the simulation model, a base farm without other enterprises (e.g. sheep, poultry, etc.) was used. The addition of sensitivity analysis in future applications of the model to test for the impact of same forms the basis of future research as part of this project. The scenarios to be modelled are described in

**Table 2:** Average Cattle Rearing/Dairy Data (Teagasc NFS, 2013)

Average Cattle Rearing		Average Dairy	
Family Farm Income	€9,541	Family Farm Income	€62,994
Machinery	€17,717	Machinery	€57,218
Livestock (Breeding)	€26,534	Livestock (Breeding)	€85,569
Trading	€16,855	Trading	€27,867
Land and Buildings	€577,615	Land and Buildings	€973,079
UAA	38.1 ha	UAA	55.4 ha
Total cattle	61	Total cattle	143

**Table 3:** Farmer/Successor characteristics

Farmer	Successor
Age: 65 Married Pension: Contributory No off farm job	Age: 35 Education: Level 6 Ag. Education Single Off farm job (€25,000 income)

detail later in this section. To ensure each scenario is comparable two base farms are used for this research. In the case of the cattle rearing farms modelled, all farmers qualify for farm assist<sup>8</sup> payment based on low income level.

Farmer and successor characteristics used are outlined in Table 3. These characteristics are applied so that the farmer and successor qualify for maximum capital tax reliefs. A farmer aged 35 or under is considered a young farmer for capital and farm partnership tax reliefs, while a farmer over 65 is considered to be at retirement age and is eligible for a contributory state pension at age 66 (depending on contributions made).

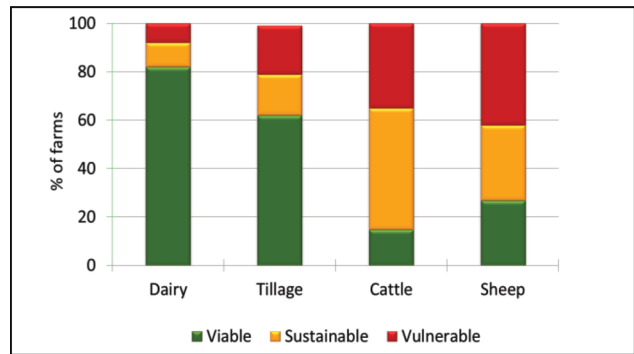
## 5. Results And Discussion

The outcomes of farm partnership scenarios are illustrated under different policy circumstances in this section, with the scenarios to be modelled described initially. Following this, previous issues involving the farm partnership structure interacting with policies are outlined. Finally, an illustration is given of the microsimulation outcomes with a brief discussion of the results.

### Scenarios – format and expected outcomes

The scenarios for this research focus on hypothetical farm partnerships before and after certain policy changes have occurred. As illustrated in table 1, there are a range of motivations and policies affecting the succession and inheritance decision, and many of these will be significant in the hypothetical scenarios. It is expected that scenarios where tax reliefs are optimised will be the most economically beneficial to the farmer and successor. However, income levels should have the biggest effect on policy drivers. Policies aimed at increasing land mobility should minimise land transfer costs and incentivise farmers to transfer land earlier; however, direct payments may make it more economically beneficial for the farmer to delay transfer until death. These payments may

<sup>8</sup> Farm assist is a social welfare payment for farmers, it is means tested. Here it is assumed that farm income has been the same in the years leading to the beginning of each scenario, thus cattle farmers here will qualify for farm assist payment.

**Figure 3:** Ireland - Farm Viability by System 2014 (Source: Hennessy and Moran, 2015)

result in land retention by older farmers, as they provide a steady source of income for retirement. Focusing on two hypothetical farms allows for the sensitivity of farms to policies to be tested while avoiding the complications that would arise were this study to be undertaken on a real farm. Variables such as farm size, income and livestock units can be held constant which may not always be the case in reality. Adjusting aspects of the farms will test the effects of succession/inheritance policies on income, in particular the effects of policies surrounding farm partnerships will be investigated.

While farm viability<sup>9</sup> is not the only factor taken into account when making succession and inheritance decisions, a non-viable farm is less likely to be capable of supporting two generations at once as part of a farm partnership. In the Irish case, Hennessy and Moran (2015) note that more dairy and tillage farms tend to be considered viable with beef and sheep farms being more likely to be sustainable or vulnerable (Figure 3), factors which are seen to impact significantly on the results presented in this research.

### Routes to succession

As mentioned, there are a range of other possible situations involving farm transfer; however, the two shown here best illustrate the effects of policy changes associated with farm partnerships and how they may have an effect on succession and inheritance processes.

### Scenarios modelled

Two scenarios are presented in this section for the farm systems mentioned; these show both a farmer and their successor prior to scheme changes and after scheme changes (described earlier and in this section). The scheme changes here include both proposed future changes and those that have created issues in the past. For all scenarios the farm will be transferred to the successor at the end of a 10 year partnership, with farm income being split 50:50 from the outset of the partnership. The cost of entering a partnership will be borne by the farmer (this cost will be fixed at €2,500 in accordance with the maximum relief available under the SCFG).

### Previous disincentives for farm partnerships

In Ireland, there have been policy changes in recent years to facilitate the promotion of collaborative farming and

<sup>9</sup> Viable here denotes a farm that has the capacity to pay family labour at the average agricultural wage and provide a 5% return on all non-land assets.



**Table 4:** Changes to area based payments for partnerships

Changes to area payments for partnerships		
	DAS (2013)	ANC (2015)
Annual payment for partnership (two farmers)	€2,468	€4,936
Annual losses from joining partnership	€2,468	None

allow multiple payments to farmers farming in registered farm partnerships. Unlike the GAEC system in France, formal farm partnerships have not been a prominent feature of Irish agriculture and policy makers have not generally facilitated collaborative forms of farming. In the case of the Rural Environmental Protection Scheme (REPS) and the Disadvantaged Area Payment (DAS) farmers availing of same suffered financially in the following ways if they joined a farm partnership. In the case of Rural Environment Protection Scheme (REPS) payments, partnerships were not catered for in the earlier schemes. If a farmer in REPS entered a partnership with a non-REPS farmer (who did not qualify for the scheme) then both partners would be rendered ineligible. Here a REPS farmer would have to exit REPS and pay back penalties. Changes introduced as part of the REPS IV scheme facilitated multiple payments to registered farm partnerships. Notably, the current Agri-Environmental Scheme (Green Low Carbon Agri-Environment Scheme – GLAS) caters for farmers in partnership to be treated as separate individuals to avoid any loss of payment. For the DAS, the issue was that two farmers in a partnership would only receive one payment. Under the follow up scheme from the DAS, (the Areas of Natural Constraint (ANC) payment) this situation has changed, and farmers are not penalised for being in a partnership (See appendix 1 for further information). Table 4 illustrates the effects of the changes in policy in monetary terms.

### Potential benefits

Figures 4 to 7 present an example of potential benefits for average dairy and cattle rearing farmers and their successors where the two parties enter a partnership, the successor here brings 10 ha to the partnership which is being leased. The graphs illustrate 'pre' and 'post' policy changes with pre change not including; higher ceiling of ANC payments, CFGS, or the proposed SFPS, but with post change including these benefits. The contribution of each income component prior to, during and after a partnership is investigated and the graphs show the percentage contribution of each component to overall income. In this way, the importance of changes and their impact on personal income at different stages of the partnership can be assessed.

### Dairy farm

The results illustrated in figures 4 and 5 are for a dairy farm before and after scheme changes. The main changes are triggered by the SCFG, SFPS and changes to ANC payments.

On entering the partnership, the farmer's income stream decreases significantly as he/she was receiving all income from the dairy farm. Income taxes also decrease with income stream reduction and decrease further when the

farmer reaches age 65 as a result of age benefit<sup>10</sup>. At 66, the farmer is eligible to receive a contributory state pension, meaning this becomes a significant contribution to overall income stream. Post change, the benefit of the scheme changes becomes evident for the farmer as income tax is reduced as a result of the SFPS. After the farm partnership ends and all assets and payments are transferred to the successor, the farmer becomes solely dependent on his/her pension as a source of income. Being dependent on a pension may be an issue in the case of a dairy farmer given the higher level of income they would have received prior to transferring the farm, thus indicating a disincentive to engage in an arrangement such as this. Based on the level of farm income the farmer in this case is not eligible for Farm Assist. One benefit post change that is not evident in figure 4 would be the benefit of the CFGS. Establishing a partnership would cost €5,000 without the CFGS, while this figure is halved post change.

In the case of the successor, entering the farm partnership means an increase in overall income because they also now have access to the farm income, on acquiring farm income the successor's income tax increases significantly. In the case of post change, the successor has a lower income tax figure due to the benefit of the SFPS. For ANC payment, the successor does not receive their payment on the 10 ha they bring to the partnership pre change, resulting in a loss of €822 per year. Additionally, without the proposed SFPS for the first five years, the partnership incurs €5,000 of income tax for five years that would not be charged under the proposed scheme. This reduction in tax presents an opportunity for farm investment or to begin saving for future investment requirements. In addition to this, the TAMS grant and stock relief stipulations outlined earlier would apply were this partnership to increase herd size or make structural farm improvements.

### Cattle rearing farm

The results for a cattle rearing system (figures 6 and 7) differ somewhat from those acquired for a dairy system. On entering the partnership the farmer's income is diminished due to splitting an already meagre income with their successor. In addition, the cost of setting up a partnership pre change decreases income further. The farmer receives Farm Assist as a result of the low income from cattle farming. Similar to the dairy scenario, the farmer is left with his/her pension as the only source of income, however this is comparatively not as significant an income decrease. As with other scenarios, the successor receives half of the farm income and payments when the partnership is entered.

In contrast to the dairy system post changes, the cattle rearing system modelled does not receive the same economic benefit. In fact, there is very little change evident in the figures presented for a cattle farmer. While both parties receive the tax relief, it does not benefit the farmer as much due to their low income tax (stemming from low income level). The SCFG has a positive effect (€2,500) as described for the dairy farmer and the successor receives the tax relief and ANC payment post change as was the case for the dairy farm. Basic Farm Payment remains the same regardless of the year of partnership, this payment may contribute to the farmer

<sup>10</sup> In Ireland, from age 65 a married couple can earn up to €36,000 tax free.



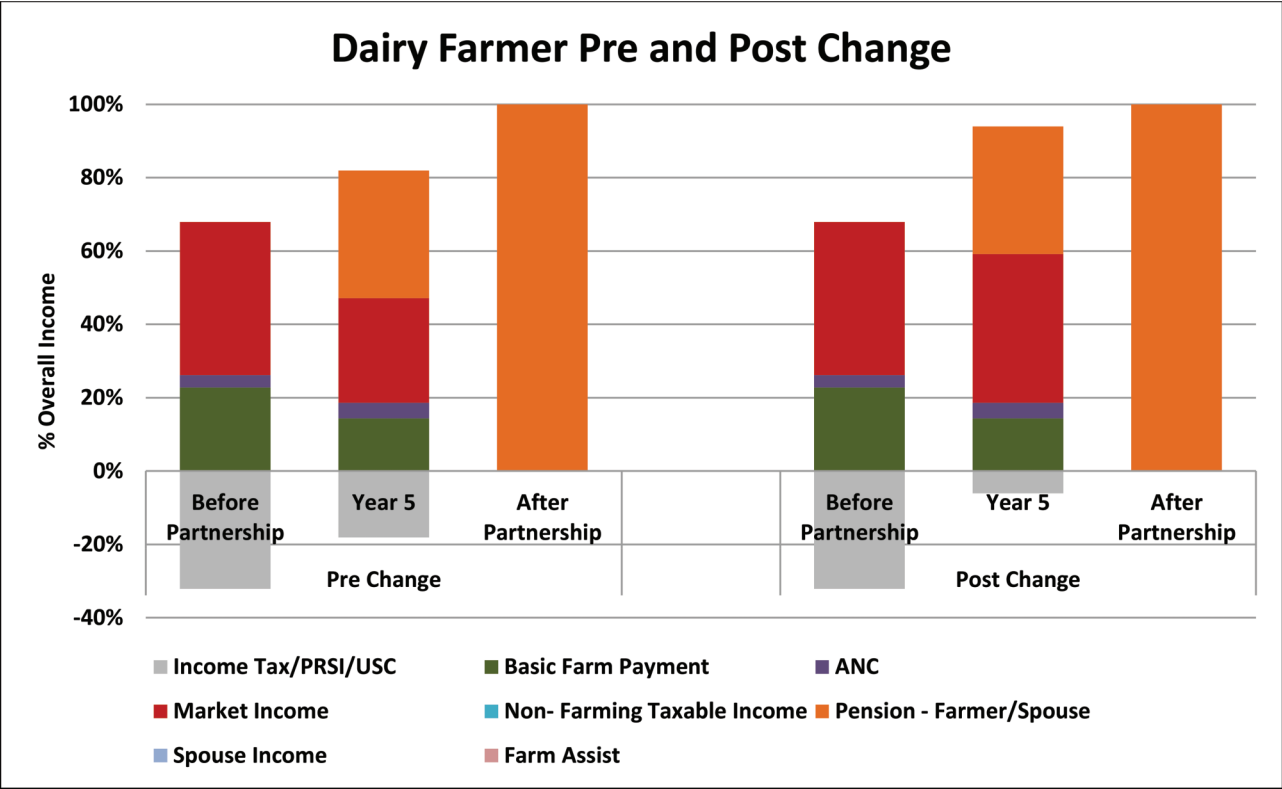


Figure 4: Contribution of farmer income components before, during and after partnership

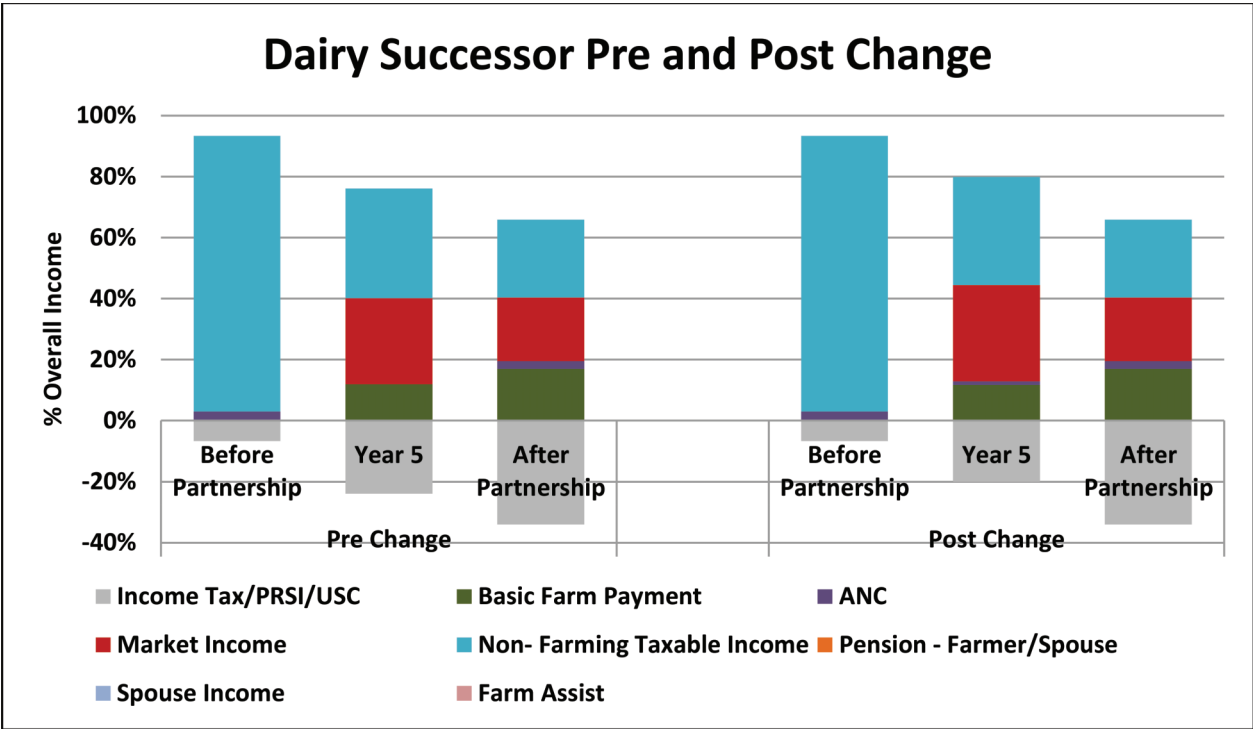
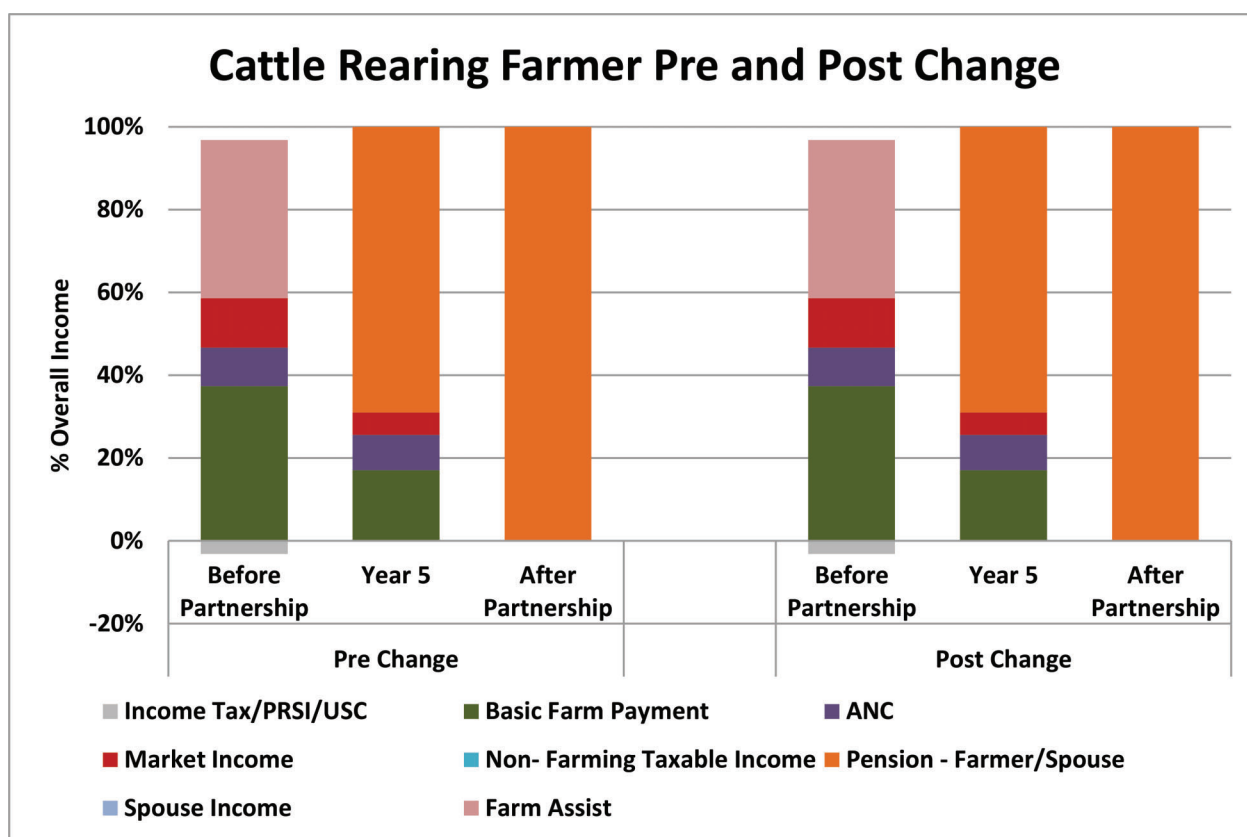


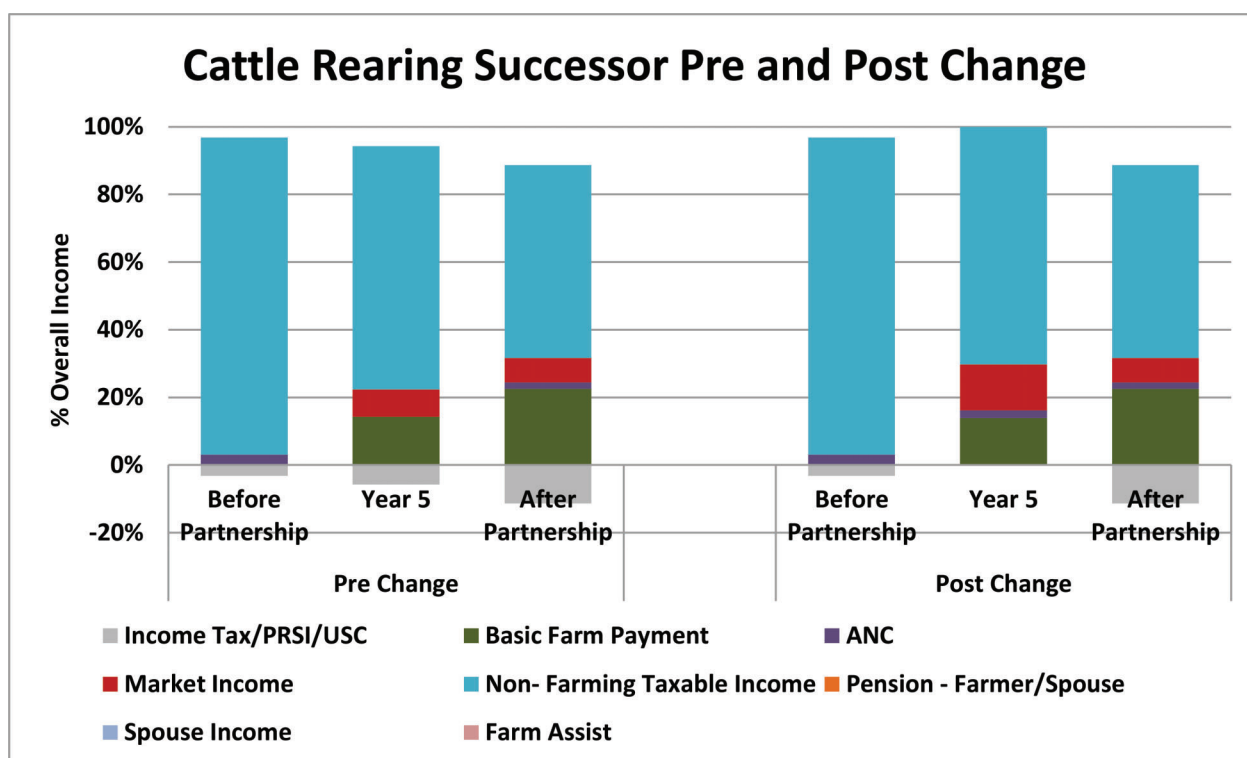
Figure 5: Contribution of successor income components before, during and after partnership

in all cases being reluctant to transfer the farm to their successor. Once the farmer has transferred all assets and payments to the successor, he/she may face financial issues; this, however depends on individual circumstance, as is the case with many aspects of farm succession and inheritance.

Changes to income structure for both the farmer and their successor are presented in the above figures. One main change of note would be the fact that 100% of the farmer's income comes from their pension once the partnership has ended and all farm income is transferred to their successor but this may pose economic issues for



**Figure 6:** Contribution of farmer income components before, during and after partnership



**Figure 7:** Contribution of successor income components before, during and after partnership

the farmer depending on their costs, but for the successor, the changes that take place regarding income appear as a form of income diversification, with their

overall income being enhanced due to the merging of farm income with off farm income. Figure 7 illustrates the benefit of the proposed tax relief for a successor (see

appendix 2 for farmer and successor income components in monetary form, graphs illustrating the changes discussed over time are also included).

### Issues of farm size and income

In addition to the influence of farm size already discussed, this can also affect the risk preferences of farmers when considering structural changes such as entering a farm partnership. Crowley (2006) asserts that smaller farms will engage in new practices but 'only if there is a high level of confidence that it will not threaten their subsistence' (p. 55), going on to note the higher risk threshold larger farms can afford as a result of their stronger financial situation. Our findings support this argument; farmers on average cattle farms have their subsistence threatened due to the splitting of an already meagre income. In this situation it is assumed that the farmer may perceive a partnership arrangement as a risk to retirement income, particularly where they do not have any source of off-farm income. As mentioned earlier, however, a collaborative farming arrangement may in such cases also reduce the risk of a successor abandoning the family farm. Thus it is also possible to conceptualise the partnership model as a farm survival strategy akin to forms of farm diversification. While farm partnerships may not be financially attractive to cattle rearing farms, the need to gradually exit and allow the entry of a successor into the farm business may be met by such an arrangement. In tandem with this, Ingram and Kirwan (2011) suggest that farm partnerships may provide a suitable means by which older farmers can gradually exit farming. In a partnership farmers may retain levels of control while their successor can also have an influence over decision making. The nature of a farm partnership contract facilitates the staged exit of an older farmer and entry of a young farmer and in this manner a successor may ascend the 'succession ladder'. However, while there are benefits of a non-financial nature associated with farm partnerships beef and sheep systems continue to take a traditional approach to farm succession and inheritance (McLeod, 2012). This indicates that farmers in systems where finances are not as robust may fail to see positive aspects of partnerships. Gasson and Errington (1993) for example describe 'limited farm size with its associated shortage of adequate income and accommodation to support the two generations' (p. 208) as constraints for the formation of farm partnerships. While this may be the case, partnerships for farm systems where off-farm work is the norm may be undertaken for reasons such as those listed earlier (see table 1). Applying this to the findings here, it can be determined that cattle rearing farms need to be made more aware of the non-pecuniary benefits of partnerships.

The differences in average size and income between dairy and cattle rearing systems indicate that dairy systems tend to be larger and more profitable. These factors are likely to be the reason that dairying is the main farm system in which farm partnerships are utilised (McLeod, 2012). The results emerging here concur with McLeod's (*ibid.*) findings, suggesting that cattle rearing systems are less suited to joining a farm partnership when compared to their dairy counterparts, particularly if the main motivation to become involved in a partnership is economic. It is established in the literature that the

characteristics of a farm can have a strong influence on succession and inheritance outcomes, with factors that influence farm income (such as farm size and system) having the most impact on the processes. Uchiyama et al. (2008) found that farm size did influence succession, with successors on smaller farms being more likely to have employment and thus an income source outside of the farm, therefore decreasing the likelihood of them entering farming. Hennessy and Rehman (2007) also found this to be the case in the Irish context. Chang (2013) raises a similar issue when stating that young people have become less interested in farming as a result of the low income that is often accrued from agriculture. The implication is that smaller farms with associated lower incomes will render attracting a successor a difficult task, meaning that the partnership option has very little role to play in the succession process. Larger farms with higher asset values are more likely to be able to identify a successor (Calus et al., 2008). In a study on farm restructuring conducted by Loble and Potter (2004) which observed a low number of respondents planning to exit farming, the majority of those exiting were older farmers operating smaller farms. The overall implication is that farm size can affect the exit and entry rate, i.e. successors are more enticed to take on larger farms, while exiting farmers are more likely to be leaving smaller farms that are probably financially unviable. Calus et al. (2008) recommend using Total Farm Assets (TFA) as an indicator for farms that will have a successor. While the idea that farm size, value etc. have a positive effect on succession outcomes, using TFA alone as an indicator would not suffice, as it does not capture important factors such as the number of children a farmer has, for example. This is similar to the research findings here, as some of the motivations listed in table 1 cannot be measured.

### 6. Conclusions

The results presented demonstrate the ways in which the SFPS and SCFG would function, with varying outcomes. In general, the most notable concerns are the relative ability of a farm to generate enough income to support both a farmer and the successor, as well as the residual income of the farmer should they transfer the farm prior to death. In this regard there are clear differences emerging from the simulation exercise that appear to have a strong correlation in the first instance with the type of farm system involved. The proposed tax scheme accrues more financial benefit to successors as they gain farm income from joining the partnership whilst also acquiring the tax relief. However, from the farmer's perspective there is a reduction in farm income, and in the case of cattle rearing systems, tax relief provides little or no benefit. While the introduction of a farm partnership scheme is a positive step towards improved land mobility, successor-centred policy does not adequately address the fact that there are two parties to be catered for in any farm succession and inheritance process. In terms of the SCFG, this provides a minor incentive as it alleviates some costs associated with the setting up of a partnership. The benefit of hypothetical microsimulation as an analytical tool for policy is clear in this paper, with the results illustrating a clear picture of the income components of a farmer and their successor and how

they would be affected by policy change. Additionally, the ground level complexities of farm transfer are abstracted allowing for a clear evaluation of proposed and previous changes.

The findings from this research would indicate that there is a rational economic path to be followed towards farm partnership for larger and more financially viable farms, which in turn may facilitate quicker hand-over of farms from an older generation to a younger one. The rationale for undertaking farm partnerships to encourage the exit of older farmers is not apparent, and the merits of the tax relief scheme are otherwise not sufficiently appealing to promote extensive uptake at the present time. While the SCFG eliminates half of the associated costs of set up, this may not be a sufficient incentive to enter a collaborative arrangement. The recommendations from this research would be for more wide-ranging enquiry into the ways in which the tax relief scheme would generate broader appeal, along with a series of recommendations on how this would be implemented. This may involve two strands of further research; the first would entail a qualitative study regarding farmer and successor perceptions of policy aimed at encouraging farm transfer. Second, a follow up quantitative study investigating other less prominent farm systems and the implications policy changes may have at farm level in terms of encouraging engagement in farm succession and inheritance processes. As it stands, its impact on the major policy concerns of an ageing farm population and associated implications for farm efficiency and agricultural productivity will be minimal. In the case of cattle farms, there is potentially an argument to be made for creating a scheme that provides an economic incentive beyond tax relief for farms of this nature; this would in turn have financial implications that would require more extensive research. Additionally, the consultation of individuals who fully understand the practical and administrative aspects of introducing new schemes is advised at the early planning stages of scheme rules and details. This could be realised in the form of small stakeholder groups participating in the design of such policy initiatives to ensure that issues of collaborative farming interacting with future policy change are minimised.

The main findings from this research indicate that farm partnerships are to some extent a suitable means by which to expedite farm succession and inheritance; however, this statement comes with some caveats. The suitability of a partnership depends on the individual farm level situation and also on what expectations the farmer/successor has for a partnership. Based on the findings from this research, deciding to enter a partnership based solely on an economic rationale is best suited to dairy systems, while cattle rearing farms may have a propensity to focus on benefits such as the gradual transfer of control and increased leisure time afforded to partners. These wider non-economic benefits that could potentially be generated through farm partnerships, which could in turn bring a shift in mind-set about the value of earlier farm transfer, require further research and wider dissemination of information on same. This is especially important in the case of farmers' operating systems where budgetary constraints are present.

In summary, facilitating a sector-wide increase in farm succession and inheritance will require a higher level of

understanding of different farm systems and the way in which partnerships as part of this process can aid these farm businesses in the first instance, and facilitate timely farm transfer in the second. Based on the results from this research, current policy does not provide a suitable financial benefit for farms that face higher levels of income uncertainty (in this case cattle rearing systems). Finally, as the farm partnership scheme is in its infancy an appraisal of the scheme is required to ensure it is effective in encouraging farm succession and inheritance.

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## Appendix 1

During 2015, initial issues arose for ANC payments interacting with farm partnerships, caused mainly due to technical problems. At an administrative level, for farms to enter a partnership (where partners both have a herd prior number) typically, one herd number would become 'dormant' on the Department of Agriculture, Food and the Marine (DAFM) registration system. In this instance only one herd number associated with a partnership could meet the qualifying criteria and therefore no payment issued to the partnership. This issue has been resolved for 2016 by applying the qualifying criteria at partnership level rather than at individual partner level. The changes now allow for multiple payments to issue from 2016 onwards. A similar technical issue arose in terms of the Basic Payment Scheme (BPS) entitlements, farmers joining a partnership would have entitlements merged making it very difficult to exit a partnership at the end of the agreed time period without financial loss (see below for working example). This has also now been resolved to ensure that when farmers dissolve their partnership, they can take back their entitlements in the same fashion as they first contributed them.

Additionally, technical issues prevented farmers in farm partnerships obtaining multiple payments in the previous Disadvantaged Area Scheme (DAS). Under the scheme, a farmer operating in his own right would

attract one payment on up to a maximum of 30 hectares. When two farmers who were drawing area based payments entered into a MPP they were then reduced to one payment threshold, likewise with three farmers. Only one payment was achievable under the scheme and consequently farmers entering registered partnerships were at a financial loss by entering partnership. Similar to agri-environmental payments, existing disadvantaged area payments (now 'Areas of Natural Constraint' – ANC) also cater for partnerships allowing multiple payment thresholds where two farmers are in partnership (i.e. max. of 60 ha for a partnership with two partners). Table 4 illustrates the potential losses from area based payments not facilitating farm partnerships<sup>11</sup>.

### Example

Farmer A farmed 40 hectares and owns 40 entitlements worth €850 each (€34,000).

Farmer B farmed 50 hectares and owns 50 entitlements worth €250 each (€12,500).

They entered into partnership and all 90 hectares was farmed under one herd number and the partnership claimed all entitlements.

If they cannot establish separate set of BPS entitlements in 2015, a situation arises where all entitlements

<sup>11</sup> This example is based on a maximum of 30 ha for a 'Less Severely Handicapped' area (€82.27 per ha).

are averaged out (that means the partnership will receive 90 BPS entitlements worth €516.60 each or a total value of €46,000).

Without separate set of entitlements, a serious issue arises when these farmers want to dissolve their partnership in the future. They will be faced with two choices, (i) divide out on the basis of total value or (ii) by the number of entitlements.

(i) If they divide the payments on the basis of total value, then Farmer A would receive 65.81 entitlements (worth €34,000) but he only has 40 hectares available to claim them. Therefore he is left with insufficient land. Farmer B would receive 24.19 entitlements (worth €12,500) and he is left with 25.81 hectares with no entitlements.

(ii) If they divide the payments based on the number of entitlements then Farmer A would receive 40 entitlements worth €20,664. He would suffer a loss or reduction in the value of his entitlements of €13,336. Farmer B would receive 50 entitlements worth €25,830. He would gain €13,336 at the expense of Farmer B.

(iii) Either way, there is no satisfactory division of entitlements on the dissolution of the partnership. This will prove to be a strong deterrent to farmers entering partnership.

(iv) It also means that they can only qualify for one ANC payment even though they are both eligible as individuals (as in the real case study further on).

(v) It is unclear whether there is an implication of a doubling of the investment ceiling under TAMS II.

(vi) This may lead to legal issues (court action) in the future if they cannot recover their entitlements in an equivalent fashion to joining the partnership.

NOTE: The fundamental principle of two farmers forming a partnership is that they can dissolve it in future without any conflict and recover the assets licensed into the partnership for its' duration. The new BPS system must embrace this principle to the fullest extent and be capable of achieving this or it will sound the death knell for farmers joining partnership. Farmers will not go into partnerships if they think there is the possibility of their entitlements being merged with their partners.

## Appendix 2

Table 5: Dairy Farmer Income Components Years 1 and 5 of Partnership

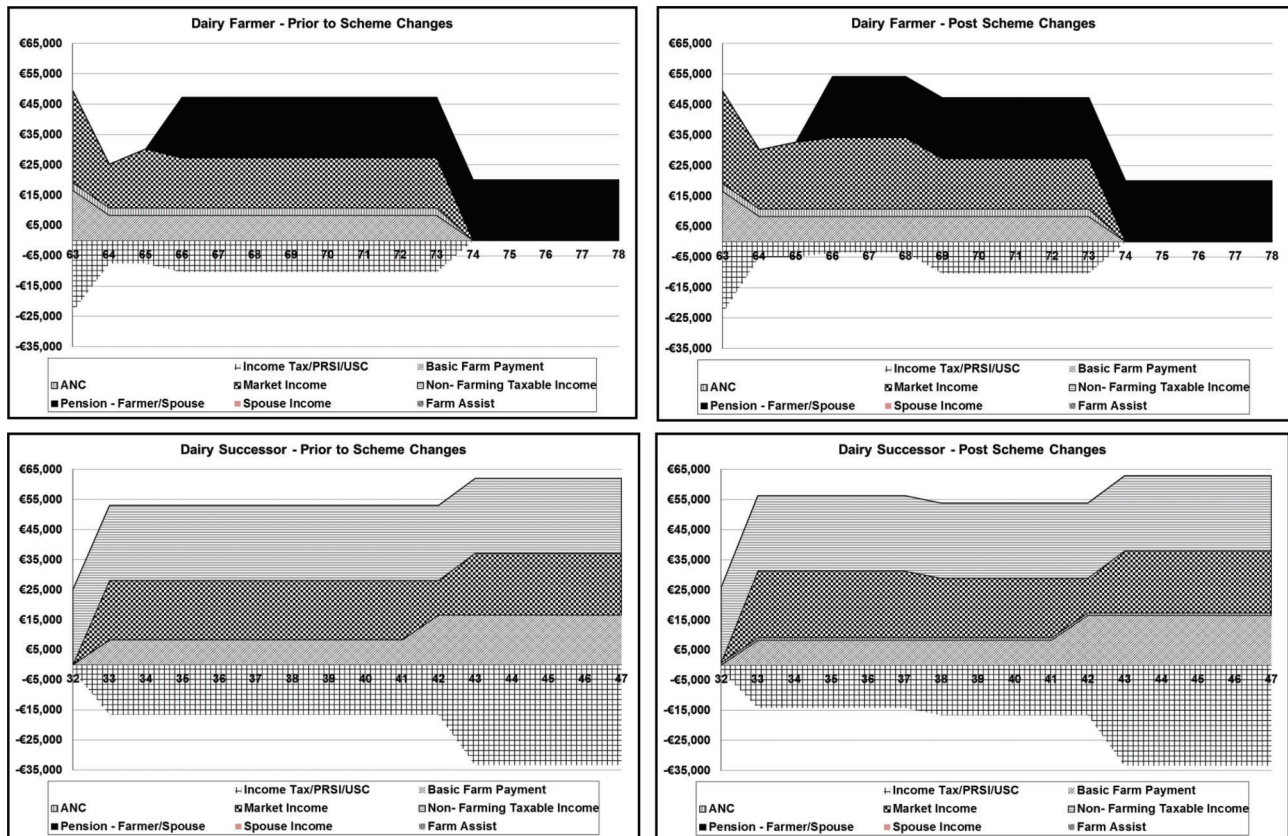
Year	Pre/ Post	Income Tax/ PRSI/USC	Basic Farm Payment	ANC	Market Income	Non- Farming Taxable Income	Pension - Farmer/Spouse	Spouse Income	Farm Assist	Cost of Set Up	Tax Credit Received
1	Pre	€-7507	€8277	€2468	€14368	€0	€0	€0	€0	€-5000	€0
1	Post	€-5007	€8277	€2468	€19368	€0	€0	€0	€0	€-2500	€2500
5	Pre	€-10431	€8277	€2468	€16444	€0	€20011	€0	€0	N/A	€0
5	Post	€-3502	€8277	€2468	€23373	€0	€20011	€0	€0	N/A	€2500

Table 6: Dairy Successor Income Components Years 1 and 5 of Partnership

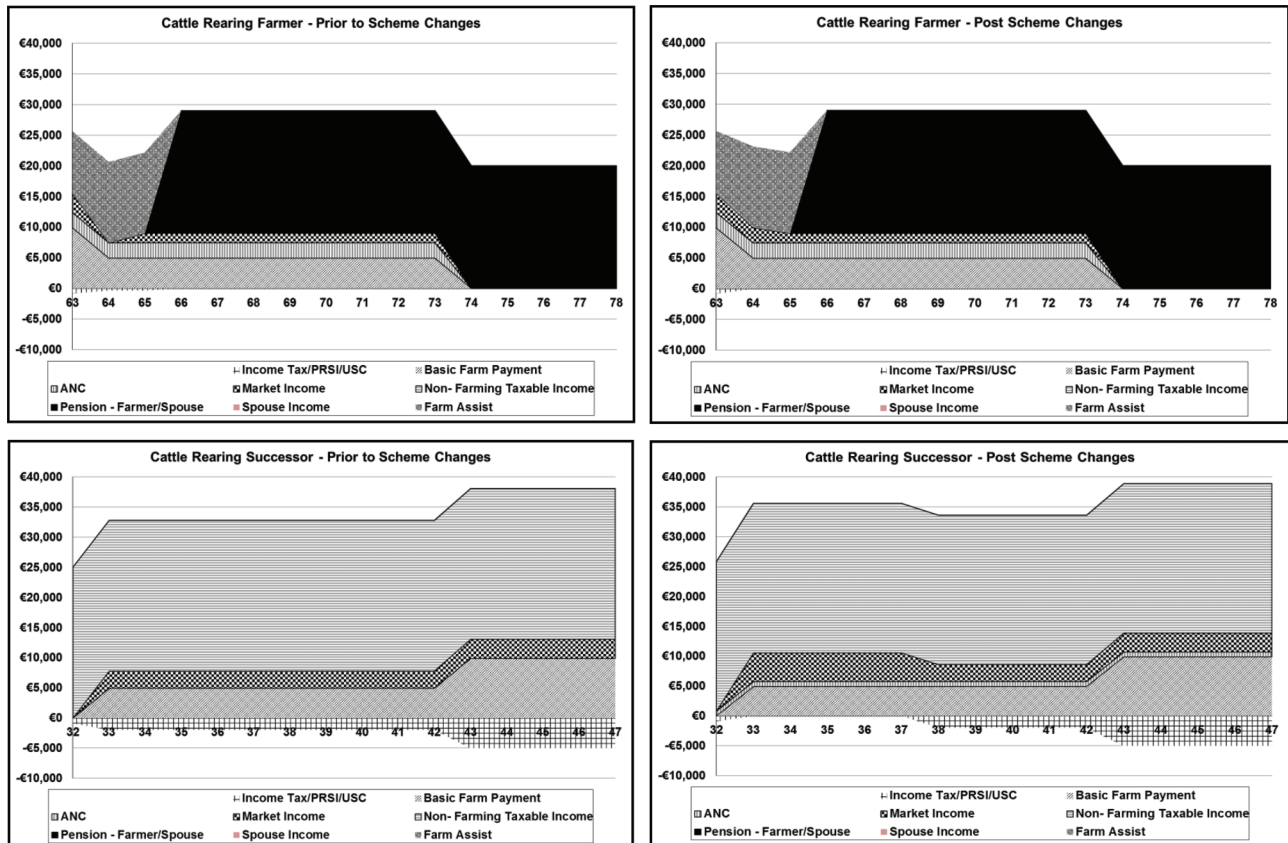
Year	Pre/ Post	Income Tax/ PRSI/USC	Basic Farm Payment	ANC	Market Income	Non- Farming Taxable Income	Pension - Farmer/ Spouse	Spouse Income	Farm Assist	Tax Credit Received
1	Pre	€-16659	€8277	€0	€19677	€25,000	€0	€0	€0	€0
1	Post	€-14159	€8277	€823	€22177	€25,000	€0	€0	€0	€2500
5	Pre	€-16659	€8277	€0	€19677	€25,000	€0	€0	€0	€0
5	Post	€-14159	€8277	€823	€22177	€25,000	€0	€0	€0	€2500

Tables 5 and 6 present the fiscal values associated with the graphs presented earlier, this provides a ground level image of the components that effect the farmer and successor income pre and post changes at the beginning and during a partnership. The reduction in tax for both parties is notable here, with the tax relief providing a strong economic incentive.





**Figure 8: Dairy Farmer and Successor Pre and Post Scheme Changes.** The graphs above illustrate the impact of scheme changes over time together with future changes. The main differences occur when a partnership is entered, here; this is when the farmer is aged 65.



**Figure 9: Cattle Rearing Farmer and Successor Pre and Post Scheme Changes.** The graphs above illustrate the impact of scheme changes over time together with future changes. The differences between pre and post scheme changes here are less prominent in comparison to dairy scenarios.