**Likelihood of Succession and Farmers' Attitudes: Evidence from a Survey in Germany, the United Kingdom and Portugal**

**By**

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**Abstract**

The likelihood of succession in the family farm is referred to in the literature as an influential factor for several family farm management decisions. In this paper, we investigate this relationship for a selection of farm management variables, such as the timing of farmer's retirement, the willingness of farmers to change the current mix of activities, their readiness to adopt new farm activities, and aim their readiness to intensify production. The categorical data analyzed, mostly Likert scales, comes from a mail survey carried out in 2002 to a sample of German, British and Portuguese farmers, amounting to approximately 4500 valid responses. Statistical association between the variables was studied computing the Chi2 statistic and testing the null hypothesis of no association between pairs of variables.

The main conclusions were that the likelihood of succession was positively related to the length of active farmers' live, to the farmer's adoption of new activities (only for the Portuguese respondents), and to farmer's willingness to intensify production. It was also found that the likelihood of succession was negatively related to the intention of leaving farmland idle. On the other hand, no empirical evidence was found of a statistical significant relationship between likelihood of succession and readiness to change the mix of farm activities.

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## Introduction

A large proportion of farms in Europe are run as family businesses and, for those farms, succession from within the family is traditionally the first choice (Glauben et al 2002). This is likely connected to the very nature of family farming, where the time span for productive or investment decision-making, for example, is often inter-generational, rather than intra-generational. In this connection, some authors argue, and give evidence, that for many family farms the main objective of farming is less profit maximisation than assuring farm succession and economic survival, and a livelihood, across generations (Gasson and Errington, 1993).

In contrast, however, some also argue that not all family farm managers look for a successor amongst their children, as some farmers in more depressed and isolated agricultural regions would rather a different and less hard livelihood for their descendents out of the agricultural sector. Quoting one such author (Fennell 1981), "the literature suggests that there is clear evidence that many farmers do not want any of the family to succeed them". Also, according to Gasson and Errington (1993), this is so "often because they do not want their children to have the same struggle as themselves on small marginal farms where the standard of living is falling behind that of the rest of society". It seems, therefore, that the harder the conditions under which farmers operate, the less likely they are to wish one of their siblings to eventually replace them.

In any case, whenever a willing successor is identified it implies a longer time-span for farm decisions, and it seems sensible to assume that that perceived likelihood of having a successor influences a number of attitudes and decisions concerning the future of the farm business and the future of the farmer himself. The literature is not plenty of evidence supporting this connection. To our knowledge, most of the literature addressing the issue of farm succession rather than studying the effects aim at identifying causes for the likelihood of farm succession. However, the issue of the effects is also addressed, sometimes in normative terms only, but also in positive and evidence-supported terms. Concerning the latter, evidence is given, and, just to give a few more salient examples, that: the more likely is the farmer to

have a successor, the more land is acquired (Hine and Houston 1973; Harrison 1981; Hutson 1987); the more borrowings to finance on-farm investment is demanded (Marsden *et al.* 1989); and the more milk quota is purchased (Burrell 1989). In the same line, Potter and Lobley (1992) argue, based on survey evidence, that the less likely is succession to happen the more willing is the farmer to take up extensification schemes. Quoting Gasson and Errington (1993), "without their [children's] interest and involvement, there may be little to drive an ageing couple into expansion".

In addition, some authors contend that the less likely a successor is, the more risk averse is the farmer, because, as he grows older, and has no or unlikely prospect of a successor, he has no incentive to expand or adopt risky productive decisions that might endanger the financial stability and (or) add to the farmer's workload. Quoting Gasson and Errington (1993) in this line of reasoning, "the presence or absence of a successor may have more influence upon business objectives and farm performance than the farmer's age. A farmer with a successor has a 'generational stake' in that successor which provides a constant incentive for forward planning and expansion. A farmer without a successor has none, and in old age may begin to run down the business and consume capital, if only to reduce workload." More recently, Calus et al (2008), point out and give evidence in the same direction, that once farmers identify a successor they become more likely to invest in the farm.

On the other hand, there is also evidence that such influence of the likelihood of succession on farmers' attitudes and behaviour varies (increases) with farm scale and with the degree of farm specialization (Glauben *et al.* 2002).

Summarizing at this point, the literature suggests, despite lack of evidence based on extensive surveys, and comparisons across countries, that the likelihood of a successor changes the attitude and behaviour of the farm manager, making him (1) more prone to intensify the farm activities, (2) more inclined to invest in the farm, and (3) less risk adverse, for example, more willing to adopt new activities. Furthermore, the degree of such influence increases with farm scale and level of specialization.

**Research Question**

Despite the unquestioned influence of the likelihood of a successor on European farmers' behaviour, published evidence on this connection is relatively scarce, as mentioned to above, and generally, not based on large surveys or on cross-cultural or international comparisons. Yet, it is important to know what is at stake when a farmer has no prospect of a successor, in order to correctly access policies directed, for example, to the promotion of early retirement of older farmers, and its replacement by younger people.

Being involved in a large survey to farmers in three European countries – the Bond Scheme Survey (Daubjerg et al 2005, Tranter et al 2004) - addressing such matters of farm succession and farmers' behavioural intentions, we realized that, despite not being those matters the central goal of the research, interesting evidence was also potentially available on the issue of the likelihood of a successor and farmer's behaviour implications. That is, we decided that such survey data would also help to answer the general question whether farmers perceiving as highly likely a successor would have significantly different attitudes towards a number of farm management issues, and different behaviour intentions concerning the future of their farm. Particularly, the Bond Scheme survey questioning structure made possible the study of the likelihood of succession, as an explanatory variable, to a number of attitude measurements concerning farm management, as dependent variables. These were: (1) timing of retirement or leaving active farming; (2) willingness to change, or, (3) to innovate activities mix; (4) willingness to intensify production; and, (5) intention to leave farmland idle.

**Data**

The data used for the analysis in this paper comes from the above-mentioned Bond Scheme survey, aimed at farmers in Germany, the United Kingdom (UK) and Portugal, carried out from late 2001 to early 2002. In each country, 4500 farmers were sampled. In Germany they were drawn from the official Pension Records database, in the UK from the Yellow Pages

telephone directory and in Portugal from the list of the Government's Office of National Statistics.

The response rates were, for Germany, the UK and Portugal, 36.8%, 40.2%, and 33.4%, respectively. Responses were checked out for bias, comparing the sample of respondents with known overall national patterns, and it was concluded that smaller farm businesses might have been under-represented in the responses from both the UK and Portugal. However, comparing early to late respondents for non-response bias, very few statistically significant differences were found.

First, and following more general questions on the farm structure and on the farmer's profile, a question on the likelihood of having a successor was set, to be answered using a five-point Likert scale:

> *(1) "Have you identified a successor?" (1-Definitely, 2-Very Likely, 3-Possibly, 4-Unlikely, and 5-Definitely Not)*

Second, questions on farmers' intentions on the future of their own farms and occupation, the dependent variables, were asked twice, under a conservative and a changing policy scenario. The first was a hypothetical "business-as-usual" scenario, that is, no changes to the Agenda 2000 direct payments, the current situation at the time. Under this first scenario, the questions dealt with in this paper were the ones concerning farmers' plans for the farm and for their own professional situation for the next ten years.

The second proposed scenario was one of a policy change to fixed[4] and decoupled direct payments without any conditionality apart from keeping agricultural land titularity (which corresponds mostly to the current CAP framework, not known at the time). The questions posed to farmers under the assumption of this second scenario were: (i) whether they would change their current mix of farming activities, (ii) whether they would adopt new farming activities, and (iii) whether they would intensify their current level of production. The actual questions posed to farmers under the two scenarios are given next.

[4] Equivalent to average payments in the last three years (see Annex 1 for the a full transcript of the relevant questionnaire section stating the scenario)

Questions on intentions under the first scenario (Agenda 2000 direct payments):

*(2) "Do you think you will be farming in ten years time? Yes or no?*

*(3) (If no to question 2) What will be your likely situation in ten years? (a) Having retired at the normal age, (b) having taken early retirement, or (c) having taken up other employment?*

*(4) (If no to question 2) What will happen to the land you currently farm? (1) Sold, (2) give up the tenancy, (3) passed to successor, (4) rented out, or (5) abandoned the land?*

Finally, for the second scenario posed (direct payment decoupled from land use), the following questions were asked:

*(5) Would you change your mix of activities?( Yes or no?)*

*(6) Would you adopt new activities? (Yes or no?)*[5]

*(7) Would you leave any of your land idle? (Yes or no?)*[6]

*(8) Would you intensify production? (Yes or no?)*[7]

**Sample of Respondents**

Respondents and respective farms are next briefly described on age and educational level attained, and also on farmed area and on the farm's main productive orientation. Concerning farmers' age, (Table 1) farmers 50 years old or older predominate, accounting for around 60% of the sample in the UK, and 75% of the samples in Germany and Portugal.

[5] For this question the respondents were actually asked to choose out of twelve activity categories (including a open category "other, specify") the ones that they would start from scratch; for the purposes of this paper to any respondent indicating at least one activity as "new" was assigned a "yes" to question 6.

[6] This question was posed as a five-point Likert scale (none - less than half - around half - more than half - all); for the purposes of this paper all the answers except "none" were considered a "Yes" to question 7.

[7] This question was posed as a five-point Likert scale (greatly decrease - decrease – remain unchanged - increase – greatly increase); for the purposes of this paper all the answers "increase" or "greatly increase" were considered a "yes" to question 8.

**Table 1: Age of Farmer (% of respondents)**

| Age | Germany (n=1201) | UK (n=1685) | Portugal (n=1283) |
|---|---|---|---|
| < 50 | 23.6 | 40.4 | 24.9 |
| 50 & over | 76.4 | 59.6 | 75.1 |

The educational level attained (Table 2) was highest amongst German respondents, as some 25% had 20 or more years of full-time education followed by the UK respondents, with around 19% with this educational level, and with the Portuguese respondents with the lowest educational level, with less than 10% of respondents accomplishing 20 years of full-time education.

**Table 2: Farmer's Age at Leaving Full-Time Education (% of respondents)**

| Educational Attainment | Germany (n=1157) | UK (n=1674) | Portugal (n=1184) |
|---|---|---|---|
| < 20 | 74.8 | 81.5 | 90.3 |
| 20 + | 25.2 | 18.5 | 9.7 |

Looking at the farmed area of respondents (Table 3), the structure of the sample varies considerably across the three countries, with most of the Portuguese respondents, nearly 88%, being small holders or tenants of less than 25 ha of farmed area. This group is also important amongst German respondents, representing slightly more than 50% of the German respondents. On the other hand, for the UK 50% farmed 100 or more ha of land each.

**Table 3: Farmed Area (% of respondents)**

| Farmed Area | Germany (n=1209) | UK (n=1674) | Portugal (n=1076) |
|---|---|---|---|
| < 25 ha | 50.7 | 7.0 | 87.2 |
| 25-50 ha | 17.3 | 14.4 | 5.8 |
| 50-75 ha | 10.6 | 15.4 | 2.3 |
| 75-100 ha | 5.7 | 13.1 | 0.9 |
| >= 100ha | 15.7 | 50.0 | 3.8 |

Finally, concerning respondents' main type of farming, the profile is similar in Germany and the UK, with most farmers mainly oriented to livestock or to mixed livestock and cropping. Few had cropping as their main orientation, as only 18% of respondents in the UK and as few as 8% in Germany had this type of farming. On the other hand more than half the respondents in Portugal had cropping as their main productive orientation.

**Table 4: Type of Farming (percentage of respondents)**

| | Germany (n=1124) | UK (n=1643) | Portugal (n=1176) |
|---|---|---|---|
| Mainly livestock | 51.4 | 51.9 | 22.2 |
| Mainly cropping | 8.3 | 18.0 | 58.3 |
| Mixed | 40.3 | 30.1 | 19.5 |

**Findings**

Next, we present and discuss findings concerning, first, the farmers' overall perception on the likelihood of having identified a successor, the explanatory variable for this study and, then, the association of this variable to the attitudinal variables included in the study and referred to above. A null hypothesis of 'no association' was set and tested by means of the $Chi^2$ statistic, suitable for such categorical data, and a probability threshold for rejecting the null hypothesis of 'no association' was set at 5%.

Comparing all possible pairs of the three countries on answers to the likelihood of succession for the full Likert scale (upper part of Table 5), and using the $Chi^2$ statistic for testing the null hypothesis of no differences, the null hypothesis is rejected for all country comparisons (at the 1% level). However, the $Chi^2$ statistic is the highest when comparing Germany to Portugal ($Chi^2$ = 203.5), and the lowest when comparing the UK to Portugal ($Chi^2$ = 42.8). This is also consistent with the result after amalgamating the original Likert scale into two single

categories (lower part of Table 5), namely, "a successor is, at least, possible" and "unlikely or definitely not a successor", where the differences are not only statistically significant for all country comparisons, but also the Portuguese and UK respondents are closer than any of these countries to Germany concerning respondents likelihood of succession. Just looking at the proportions, slightly more than half the respondents in Germany said they did not have a successor or the successor was unlikely, while in Portugal, this figure was lower (44%) and, in the UK (39%), the lowest observed percentage.

**Table 5: Farmers' overall perception on the likelihood of a successor on their own farm**

| Likelihood of Succession: | Germany (n=1209) | UK (n=1705) | Portugal (n=1373) |
|---|---|---|---|
| "Definitely" (1) | 16.2% | 22.5% | 14.7% |
| "Very likely" (2) | 13.3% | 13.4% | 17.8% |
| "Possibly" (3) | 20.3% | 24.9% | 23.8% |
| "Unlikely" (4) | 10.3% | 20.6% | 25.6% |
| "Definitely not" (5) | 39.9% | 18.6% | 18.0% |
| | 100.0% | 100.0% | 100.0% |
| A Successor at least possible (6=1+2+3) | 49.8% | 60.8% | 56.3% |
| Unlikely or Definitely not a successor (7=4+5) | 50.2% | 39.2% | 43.6% |

Coming now to the influence of the likelihood of succession from the attitudinal variables, and starting with farmers' expectations of being an active farmer in ten years time (Table 6), the results show that respondents in Germany and Portugal expecting a successor are less likely to be active in farming in ten years time than respondents without or with an unlikely successor. For these two countries, the association was statistically significant at the 1% level ($Chi^2$ for one degree of freedom, respectively 30.2 and 27.2). In Germany, the percentage of respondents without a successor and expecting to end active farming before ten years was 47%, but the equivalent figure was only 41% for respondents with a successor. In Portugal, the difference was even higher, with 62% of respondents without successor expecting to end

up active farming in ten years, and only 52% expecting to be doing this among the ones with a successor. On the other hand, the same statistical relationship was not found at all in the UK, where the proportion of respondents expecting to end up farming in ten years was 69%, irrespective of the likelihood of succession.

**Table 6: Farmers stating they would not be in farming in 10 years time (percentage of respondents)**

| Likelihood of Succession | Germany | UK | Portugal |
|---|---|---|---|
| Sucessor possible or certain | 41.0 | 69.0 | 52.1 |
| Unlikely or no successor | 46.6 | 69.3 | 62.2 |
| *n* | *1190* | *1679* | *1350* |
| *Chi*$^2$ | *30.24* | *0.01* | *27.17* |
| *df* | | *1* | |
| *Sign.* | *0.00* | *0.91* | *0.00* |

As said earlier, for respondents stating they would not be in farming in ten years time, two further questions were posed. First, what would be their occupation after leaving farming (Table 7). Second, what they would do to their current farmed land (Table 8).

Concerning future occupation, again, a statistical association to the likelihood of succession was found for German and Portuguese respondents, but not for the UK. In Germany and Portugal, compared to respondents without a successor, respondents with a successor would retire earlier (at the normal age) and would also be less likely to take up other employment. Also, the German respondents with an identified successor would be more likely to anticipate retirement (earlier than the normal age).

Concerning the destination of their current farmed land (Table 8), the differences between farmers with and without succession are very important[8], first of all, because passing the land to a successor was simple or a very unlikely option for the second group. Accordingly the proportion of farmers with a successor passing the farm to the successor were 69%, 79%, and

[8] Chi$^2$ statistic associated to a probability of less than 0.1% for the three countries.

76%, in Germany, the UK, and in Portugal, and for farmers without (or with an unlikely) successor, these figures were only 5%, 3%, and 14%, respectively.

**Table 7: Future occupation of farmers expecting to leave farming in ten years (percentage)**

| Ways out of farming (farmer's occupation) | Germany | | UK | | Portugal | |
|---|---|---|---|---|---|---|
| | Successor possible or certain | Unlikely or no successor | Successor possible or certain | Unlikely or no successor | Successor possible or certain | Unlikely or no successor |
| Retirement at the normal age | 60.0 | 37.9 | 77.3 | 78.2 | 57.5 | 48.0 |
| Early retirement | 12.1 | 9.1 | 14.7 | 11.7 | 5.2 | 5.9 |
| Taking other employment | 27.9 | 53.0 | 8.0 | 10.1 | 37.3 | 46.1 |
| n | 397 | | 564 | | 648 | |
| $Chi^2$ | 25.16 | | 2.28 | | 5.94 | |
| df | 2 | | | | | |
| Sign. | 0.00 | | 0.32 | | 0.05 | |

Naturally, without a successor, the eventual farm land destination would have to be 'sold' or 'rented out', or, for tenant farmers, simply giving up the tenancy. As expected, all these categories are increased in their importance for farmers without a successor. For the last option, the decision to abandon the farm land, in the case of owned land, the proportion of farmers without a successor choosing it was considerable in Portugal, where more than half the respondents indicated that, as their option, it was also relatively high in Germany, with 11% of farmers without a successor saying so, and also visible in the UK, with 4% of the farmers without successor stating the same. Also, compared to farmers with a successor, the proportion of farmers without a successor stating they would abandon their farmed land was four times higher for Germany and Portugal and seven times higher in the UK.

Finally, association between the likelihood of succession and farmers' attitudes concerning (1) openness to changes on the mix of activities, (2) openness to the adoption of new farm activities, or (3) openness to the intensification of farm production are assessed next. Also, (4) the intention of idling at least some of the farm land as a result of the new decoupled direct payments is also assessed.

**Table 8: Disposal of farmland, for farmers expecting to leave farming within ten years (percentage)**

| Ways out of farming (disposal of land) | Germany | | UK | | Portugal | |
|---|---|---|---|---|---|---|
| | Successor possible or certain | Unlikely or no successor | Successor possible or certain | Unlikely or no successor | Successor possible or certain | Unlikely or no successor |
| Selling the farm | 1.3 | 6.8 | 3.7 | 40.1 | 1.9 | 7.2 |
| Gave up the tenancy | 22.6 | 56.8 | 3.5 | 23.4 | 4.6 | 19.1 |
| Passing farm to a sucessor | 69.2 | 5.4 | 79.1 | 2.6 | 76.4 | 14.4 |
| Renting out the farm | 4.4 | 20.3 | 13.2 | 30.3 | 4.2 | 8.1 |
| Abandoning land | 2.5 | 10.8 | 0.5 | 3.6 | 12.7 | 51.3 |
| n | 381 | | 705 | | 495 | |
| Chi2 | 175.09 | | 427.00 | | 193.35 | |
| df | 4 | | 4 | | 4 | |
| Sign | 0.00 | | 0.00 | | 0.00 | |

For the willingness to change the mix of activities, none of the differences between farmers with, and without, succession (Table 9) were found to be statistically significant (at the 5% level). For the Portuguese sample, however, the differences were nearly significant as the probability for the $Chi^2$ statistic was 7%, with percentages of farmers in this country willing to change their mix of activities of 35% and 30%, respectively for respondents with and without successor. For the other two countries, there were also differences between the two groups in the same direction, but these were very small differences and far from being statistically significant.

**Table 9: Likelihood of succession v. changes to the mix of farm activities**

| Future Decision Intentions under the Decoupling Scenario | "Would alter mix of farm activities" (%) | | Statistics | | |
|---|---|---|---|---|---|
| Country | Successor possible or certain | Unlikely or no successor | n | df | $Chi^2$ (sign) |
| Germany | 33.8 | 32.1 | 1174 | 2 | 0.55 |
| UK | 31.0 | 30.7 | 1679 | | 0.91 |
| Portugal | 34.5 | 29.6 | 1227 | | 0.07 |

For the adoption of new farm activities, the differences between farmers with and without succession (Table 10) were found to be statistically significant (at the 5% level) only for the Portuguese sample, with the percentages of farmers in that country willing to adopt new activities of around 14% and 10%, being respectively for respondents with and without a successor. No statistically significant differences were found for respondents in the other two countries for this particular variable.

**Table 10: Likelihood of succession v. adoption of new farm activities**

| Future Decision Intentions under the Decoupling Scenario | "Would adopt new farm activities" (%) | | Statistics | | |
|---|---|---|---|---|---|
| Country | Successor possible or certain | Unlikely or no successor | n | df | $Chi^2$ (sign) |
| Germany | 9.3 | 7.6 | 1174 | 2 | 0.31 |
| UK | 6.2 | 8.1 | 1679 | | 0.14 |
| Portugal | 13.9 | 10.2 | 1227 | | 0.05 |

For the intensification of farm production, the differences between farmers with and without succession (Table 11) were found to be statistically significant only for the UK and for the Portuguese samples, with percentages of farmers willing to intensify production of 23% and 16% in the UK, and of 24% and 18% in Portugal, respectively for respondents with and without a successor. No statistically significant differences were found for respondents from Germany, where the percentage willing to intensify production under the new agricultural policies were exactly the same, 3.6%, for both groups of respondents.

**Table 11: Likelihood of succession v. farm production intensification**

| Future Decision Intentions under the Decoupling Scenario | "Would intensify production" (%) | | Statistics | | |
|---|---|---|---|---|---|
| Country | Successor possible or certain | Unlikely or no successor | n | df | $Chi^2$ (sign) |
| Germany | 3.7 | 3.7 | 1083 | 2 | 0.99 |
| UK | 22.6 | 15.5 | 1608 | | 0.00 |
| Portugal | 23.7 | 18.2 | 986 | | 0.04 |

Finally, concerning the farmers' intention of idling at least some land under the decoupled payments scenario, the differences between respondents with and without succession (Table 12) were statistically significant and in the same direction for all countries. That is, respondents without succession were in all countries more likely to idle at least some of the farm land after the proposed policy changes.

For the two groups (with and without succession), the percentage of respondents intending to idle at least some farm land were 38% and 80% for Germany, a very considerable difference, 17% and 25% for the UK, and 44% and 53% for Portugal.

**Table 12: Likelihood of succession v. leaving farmland idle**

| Future Decision Intentions under the Decoupling Scenario | "Would leave idle at least some land" (%) | | Statistics | | |
|---|---|---|---|---|---|
| Country | Successor possible or certain | Unlikely or no successor | n | df | $Chi^2$ (sign) |
| Germany | 38.2 | 79.7 | 846 | 2 | 0.00 |
| UK | 17.3 | 24.8 | 1613 | | 0.00 |
| Portugal | 44.4 | 53.4 | 1030 | | 0.01 |

**Conclusions**

Going back to the initial research question on how the likelihood of having a successor might influence attitudes and behaviour of farmers, the data dealt with in this study gives evidence favouring this relationship for some of the expected consequences, but not for others.

We would expect that farmers with an identified or likely successor would be less likely to be retired or out of farming in ten years time. This was the case for respondents both in Germany and Portugal, but not confirmed by the data from the UK. For farmers expecting to leave farming in ten years time, we would also expect a larger proportion of them taking retirement at the normal age (not postponing retirement) or to have taken up other employment. Again, this was confirmed for Germany and Portugal, but there is no evidence confirming this for the UK.

Also we predicted that under lessened agricultural policy restrictions, farmers with a certain or likely successor, when compared to the ones without a successor, would be more flexible about changing their mix of farm activities, more prone to adopt new farm activities and more willing to intensify production. Concerning flexibility, data did not confirm the prediction. For the readiness to adopt new activities, only data for Portugal confirmed the prediction. For the intensification of production, the prediction was confirmed for the UK and Portugal only, but not for Germany.

Finally, we also expected that the absence, or the unlikelihood, of a successor would make it more likely for farmers to abandon or leave some of their farm land idle. This was solidly confirmed by data for all the three countries surveyed.

**References**


Burrell, A.M. (1989) The Microeconomics of Quota Transfer. In: Burrell, A.M. (ed.) Milk Quotas in the European Community. Wallingford: CAB International.

Calus, Mieke, VanHuylenbroeck, Guido, and Dirk Van Lierde. (2008). The Relationshio between Farm Succession and Farm Assets on Belgian Farms. *Sociologia Ruralis* 48, 38-56

Fennell, R. (1981) Farm Succession in the European Community. *Sociologia Ruralis* 21, 19-42

Gasson, Ruth, and Andrew Errington (1993). The Farm Family Business. Wallingford: CAB International

Glauben, Thomas, Tietje, Hendrik and Weiss, Christoph R. (2002). Intergenerational Succession on Family Farms: Evidence from Survey Data. Working Paper EWP, Department of Food Economics and Consumption Studies, University of Kiel, February 2002

Harrison, A. (1981) Factors influencing Ownership, Tenancy, Mobility and Use of Farmland in the UK. Luxembourg: Commission of the European Communities, Information on Agriculture Nº 74

Hine, R.C. and Houston, A.M. (1973). Government and Structural Change in Agriculture. Report prepared by Universities of Notthingham and Exeter for Ministry of Agriculture, Fisheries and Food.

Hutson, J. (1987) Fathers and sons: family farms, family businesses and the farming industry. Sociology 21: 215-29

Daugbjerg, C, Tranter, R, Jones, P, Little, J, Costa, L, Knapp, T, Sottomayor, M, and A Swinbank (2005), The Visibility of Agricultural Subsidies and Market Illusions in the CAP: Some Evidence from farmers' views in Germany, Portugal and the UK, European Journal of Political Research, 44: 749-766

Potter, C. and Lobley, M. (1992). Ageing and Succession on Family Farms: the impact on decision making and land use. Sociologia Ruralis 32: 317-34.

Marsden, T., Munton, R., Whatmore, S. and Little, J. (1989). Strategies for coping in capitalist agriculture: an examination of the response of farm families in British agriculture. Geoforum 20: 1-14.

Tranter, Richard, Costa, Leonardo, Knapp, Thomas, Little, Jonathan, and Miguel Sottomayor (2004). Asking Farmers about their Response to the Proposed Bond Scheme in Swinbank, A. and Tranter R. (Ed.) *A Bond Scheme for Common Agricultural Policy Reform*. Wallingford, Cabi Publishing

**Annex 1 –Policy reform scenario (2) statement (Bonsdscheme questionnaire excerpt)**

"The next questions relate to the first step of our proposed policy change for the future of arable area aids and headage payments received by farmers under the IACS system. Please imagine that crop payments will be detached from current land use. Thus, future payments will no longer depend on which crop you plant, the area planted or even whether land is planted at all. Instead, payments will be made at a flat rate, on the basis of your average arable area claims during the previous three years.

Our proposal will also affect the livestock sector similarly, with future payments being based on the average number of livestock units (cattle and sheep) for which the farm claimed payments in the previous three years. As for crops, the entitlement would be held the same, irrespective of the actual number of livestock units kept in the future. This farm-specific payment entitlement would also be attached to the land used by the farm so that, if the farm was subsequently broken-up, future payments would continue to be made to the component parts.

Please reflect your likely practical response to this proposed policy change when answering the following questions."