

Farm succession patterns in Northern Germany and Austria - a survey comparison

Thomas Glauben, Hendrik Tietje and Stefan Vogel

Affiliation of authors:

Dr. Thomas Glauben and Dipl.-Ing. Dr. Hendrik Tietje: Christian-Albrechts-Universität zu Kiel, Institute of Food Economics and Consumption Studies, Olshausenstraße 40, D-24098 Kiel

Dipl.-Ing. Dr. Stefan Vogel: University of Natural Resources and Applied Life Sciences Vienna, Department of Economics and Social Sciences, Institute for Sustainable Economic Development, Feistmantelstrasse 4, A-1180 Vienna

Abstract

Farm succession with related household strategies is one of the main adaptation processes of family farms to structural changes that stem from globalisation. Thus, farm succession is a complex process in which farmers plan their retirement, pass on management competence and plan farm developments. In 2003 such succession patterns have been analysed by a survey of 348 farmers in Schleswig-Holstein (Northern Germany) and 278 farmers in Austria. Three samples were obtained: full time farmers in Schleswig-Holstein, full time farmers in Austria and part time farmers in Austria. The structure of the farm sector in both countries differs in several ways: Farmers in Schleswig-Holstein operate on larger scales, are more market oriented and use more intensive production technologies than their Austrian counterparts. In addition, Austrian farmers have distinct traditional attitudes in farming and are likely located in disadvantaged areas on average. The analysis focuses on differences in succession plans and farm family characteristics in the three samples. This encompasses the fact that farms in Schleswig-Holstein have proportionally higher rates of identified successors and farm adjustment plans than in Austria. Results also show that there are not only significant differences in farm succession patterns, but also in value systems.

Introduction

Farm households differ in their strategies to cope with changes stemming from globalisation. These changes include increased product standardisation in production and trade, increasingly competitive markets and a reduced public support for agriculture. There are three general patterns of family behaviour in Europe (for a comparison of European regions see: Brun and Fuller, 1992; Dax et al., 1995): (i) either intensification and standardisation of production or extensification of production, such as organic farming or eco-tourism, (ii) gradual withdrawal from farming, often moving first to part time farming and then to total exit at retirement age and (iii) continue as usual and wait until later to make changes.

Research shows, that investing in agriculture or withdrawing from agriculture are closely tied to the family life cycle centering on the availability of a successor (successor effect and succession effect: Potter and Lobley, 1996; Vogel et al., 2003). An area of sociological understanding is the gradual process by which farmers pass on decision and management skills to the family member successor (Errington, 1998).

This article compares characteristics of farm succession in two different European regions, one in Northern Europe (Schleswig-Holstein in Germany) and one in Central Europe (Austria). This comparison is based on farmer surveys conducted in 2003. The survey questionnaire contained mostly closed, but some open, ended questions covering the status of the farm succession, farmer retirement plans and attitudes toward farming. It was administered only to farmers with 45 years and older. The questionnaire was sent to 1198 farmers in Schleswig-Holstein and 2000 farmers in Austria; the response rates were 29 % and 17 % respectively.

The sample from Schleswig-Holstein (S-H) contains 96 percent full time farmers, while the Austrian (A) sample has of 50,4 percent full time and 49,3 percent part time farmers. In this paper the farm succession process in both countries is compared. As part time farming reflects totally different family strategies we effectively have three samples: full-time Schleswig-Holstein, full-time Austria and part-time Austria. Sample differences are statistically compared according to: t-test, Wilcoxon-test, Mann-Whitney-test, χ^2 -test or Fischers' exact test.

The organisation of this paper is as follows: First a description of the samples is given. Second, comparisons are made of the nature of the farm succession by region and full- or part-time farming. Third, attitude differences and values among farmers are discussed. Finally, conclusions are drawn from the found empirical evidence.

Basic characteristics of farms and farmers

The following table shows the sample characteristics of the farm structure and the farm family.

Table 1: Basic characteristics of farm, farmer and family

	S-H: full time	A: full time	A: part time
Farm			
average farm size	113,5 ha	48,7 ha	16,1 ha
crop production ¹	30,5 %	2,3 %	4,6 %
milk and beef production ¹	49,1 %	42,2 %	48,7 %
mixed crop and animal production ¹	17,7 %	48,4 %	38,5 %
organic farming	0,3 %	10,7 %	20 %
mountainous area	-----	46 %	56 %
Farmer and family			
sole proprietor	83,2 %	39,8 %	
proprietor in a partnership with wife or husband ²	16,8 %	60,2 %	
average age of farmer	52,3	52	51,6
% of farmers who are female	1,8 %	26,4 %	45,3 %
agricultural education	94 %	67,4 %	37 %
agricultural "Meister"	64,7 %	25,4 %	6,7 %
other education	10,5 %	21,9%	51,6 %
Number of sons	1,3	1,2	1,3
Number of daughters	1,1	1,3	1,3

¹ pork and chicken production, as well as permanent cultivation are not considered, so that the three categories do not sum up to 100 %

² if there is no statistical significant ($p \leq 0.05$) difference between two of the three samples the average of these two samples is given

Source: calculations on basis of surveys 2003; SH: n=348; A (full time): n=140; A (part time): n=137

A main difference between the samples is farm size. The largest farms in Schleswig-Holstein are more than twice that of full time farms in Austria and seven times larger than Austria's part time farms. In the production the main difference between Schleswig-Holstein and Austria can be found in a much higher share of mixed businesses in both Austrian samples. Schleswig-Holstein contains the greatest share of farms specialised in crop production. On the other hand, a much higher share of organic farming is found in Austria. This and other structural differences may be due to the fact that about half of the average Austrian farm being mountainous. Differences in structural characteristics show different farming strategies between the three samples.

Large differences in education occur among the samples. Higher levels in agricultural education in Schleswig-Holstein support the specialisation pattern observed there, while the higher level of non-agricultural education in Austria goes along with less crop specialisation, more organic farming and more part-time farming.

Unlike farmers in Schleswig-Holstein, who are mostly male, Austrian farmers, especially those who are part-time, were nearly half female. This may suggest a family strategy where business and family roles are interwoven.

Farm succession

Retirement plans

Table 2 reports differences in the **retirement plans** of farmers between the three samples. It also shows, with whom the farmer has discussed his or her retirement plans.

Table 2: Retirement plans

Variable	S-H: full-time	A: full-time	A: part-time
time to farm transfer			
keep farm as long as possible ¹	13,1%		29 %
number of years to the farm transfer ¹	8,3		10,4
helping on farm after transfer			
keep on working on the farm after farm transfer ¹	81,7 %		65,6 %
move out from current residence in retirement (share of answers)			
no	23,7 %	60,8 %	78,4 %
yes, other flat on the farm	46,4 %	28,3 %	17,1 %
move to other location	29,9 %	10,8 %	4,5 %
planned income sources after retirement / estimated share in farmers' total income			
share of farmers with income from helping on the farm after retirement / average share of this income in total farmers' income	15 % / 20 %	7,9 % / 18,7 %	8 % / 10,6 %
share of farmers with farmers' pension / average share of farmers' pension in income	84,2% / 26 %	95 % / 68 %	59,1 % / 48 %
share of farmers with other public pension / share of this income type in total income	37,2 % / 6 %	10,7 % / 44 %	67,9 % / 69 %
share of farmers with income from private investment / estimated share of this income type in income	68 % / 20 %	35 % / 14 %	23 % / 17 %
farmer discussed farm succession plans with:			
family	80,1 %	69,2 %	55,5 %
successor, if available ²	54,5 %	33,1 %	21,1 %
farm management adviser ¹	25,6 %	5 %	
financial adviser ¹	46,3 %	5,4 %	

¹ if there is no markable (statistical significant, $p \leq 0.05$) difference between the samples the average of the samples is the information given

² the bases are those farmers who have identified a potential successor: SH: n=203, A (full time): n=71, A (part-time): n=51

Source: calculations on basis of surveys 2003; SH: n=348; A (full time): n=140; A (part time): n=137

Part-time Austrian farmers plan to keep their farm longer than full-time farmers and a comparatively high share of them tends to remain in their residence in retirement. Part time farmers get less pension from the farmers' pension system and more from another public pension system than do full time farmers. The share of farmers with retirement income from private investment is higher for full time farms and especially high for those in Schleswig-Holstein.

The share of farmers who discussed retirement and succession plans is highest in Schleswig-Holstein. Remarkable is the high percent of farmers who have discussed their plans with financial advisors in Schleswig-Holstein. This all may suggest that Schleswig-Holstein's farmers are more entrepreneurial in planning and preparing for retirement and succession.

The successor

A crucial question in the family farm business is, whether a potential willing successor has already been identified. Table 3 shows a comparison between the three samples with respect to the availability of a potential successor. The question wording was: "Have you already identified a successor ?" with three answer possibilities: yes, definitively; no, but there is a potential successor, who might take over; and, there is no successor available.

Table 3: Availability of a successor

have you already identified a successor ?	S-H full time	A: full time	A: part time
yes, definitively ¹		57,2 %	38,6 %
no, but there is a potential successor ¹		31,1 %	37,1 %
no successor available ¹		11,7 %	24,2 %

¹ if there is no markable (statistical significant, $p \leq 0.05$) difference between the samples the average of the samples is the information given

Source: calculations on basis of surveys 2003; SH: n=348; A (full time): n=140; A (part time): n=137

Full time farmers are more likely to have a successor than part time farmers. This may suggest the view that part-time farming is a first step out of farming for the family.

Table 4 provides characteristics of the successor. The following table shows some information about the definite successor for the case when a definite successor has been identified.

Table 4: Some characteristics of the successor

Variable	S-H full time with successor	A: full time with successor	A: part time with successor
age (average) ¹	23		24,3
successor is a daughter	9,4 %	16,8 %	22,7 %
finished agric. education ¹	40,5 %		14,6 %
agricultural “Meister”	27,3 %	5,7 %	0,7 %
other, non agric. education	10,3 %	25,7 %	44,5 %
successor works full-time on farmers’ farm	20,8 %	13,6 %	1,5 %
successor is working full time outside the farm sector	4 %	32 %	

¹ if there is no markable (statistical significant, $p \leq 0.05$) difference between the samples the average of the samples is the information given

Source: calculations on basis of surveys 2003; SH (full time with successor): n=203; A (full time with successor): n=71; A (part time with successor): n=51

In part time farming the successor is more likely to be a women. We noted earlier in table 1 that Austrian part time farmers are currently half female. While the successor in full time farming tends to be more educated in agriculture, successors in part time farming have a higher rate of education outside of agriculture. Successors on Austrian farms tend to work considerably more off farm than do those in Schleswig-Holstein. With respect to off farm work, there is no significant difference between full time and part time farming in Austria. The orientation of the younger generation in Austria is more toward outside farming as in Schleswig-Holstein.

Participation of the successor in decisions

Using Errington’s (1998) scale of the intergenerational transfer of managerial control in the farm family business, 25 items covering different management activities were integrated in the surveys in Schleswig-Holstein and Austria. It was asked whether each decision or action was taken by the farmer alone, shared between the farmer and the successor or by the successor alone (a five value Likert scale: yourself alone ... shared ... successor alone). A factor analysis of each sample yielded three factors: operative management; financial management, and; management of hired workforce (table 5). The decisions and actions which formed the three factors are identified in Table 5.

Out of a total of 648 farmers interviewed in both regions, only 303 interviews where complete enough to be used in this analysis. For the 303 interviews the factor scores for the three factors were calculated. On basis of these factor scores the interviews were grouped by quartiles according to the extent of successor decision participation. Next the distribution of the three samples in the quartile with the highest successor decision participation was analysed. In all three samples the distribution of successor participation was almost equal for financial management and management of hired workforce. However, there is a difference in the operative management. 32,6 % of Schleswig-Holsteins’ farmers can be found in the 25 % of the farming families with the highest successor participation as compared to 16,5 % of Austrian farmers (there is no significant difference between the two Austrian groups). This information is included in table 5.

Table 5: Three types of managerial control

decision / action	factor/types of control	share of the samples in the quartile with the highest successor decision participation ¹
plan day-to-day work	operative management	32,6 % of Schleswig-Holstein's farmers 16,6 % of Austria's farmers ²
decide work method/way jobs are done		
decide timing of operations activities		
decide long term activity planning		
decide type and level of feed/sprays/fertilisers/drugs used		
animal stock management		
make annual crop/stock plans		
decide type and make of machines and equipment		
decide when to sell crops/stocks		
negotiate sells of crops/stocks		
decide and plan capital projects		
decide long term balance and type of enterprises	financial management	no significant differences between samples ²
identify sources and negotiate loans and finance		
decision when to pay bills		
book-keeping		
decisions about the participation in programmes	management of hired workforce	no significant differences between samples ²
decide if and when to appoint additional workforce		
chose and hire new workforce		
training and control of hired workforce		

¹ on basis of the factor scores.

² p-value < .05

Source: calculations on basis of surveys 2003; SH (full time with definite and potential successor): n=303; A (full time with definite and potential successor): n=120; A (part time with definite and potential successor): n=100

Through factor analysis the same types of decisions and actions in successor management participation could be identified over the regions and samples. In Schleswig-Holstein successors participate more in the operative management of the farm than their counterparts in Austria. This suggests that the younger generation in Schleswig-Holstein is integrated earlier in farm management decision making and that these successors gain more managerial and entrepreneurial experience.

Values related to farming and farm succession

A number of questions were asked about farmer attitudes toward farming, to the future of the farm, to the role of agricultural policies and to family views of farming. Succession is embedded in these attitudes, which influence farm family strategies and decisions.

The farmers were asked – on a 5 point Likert scale - to agree or not to agree to 12 attitude statements. A factor analysis of the answers to the statements identified four value type groupings: (i) confidence with farming and belief in future of family farming; (ii) extent of financial problems and farm workload; (iii) few problems with public regulations; (iv) traditional family farm values. Table 6 gives the information which attitude statement is identified with one of the four value types.

Factor values were calculated for each farmer, which allowed a ranking of all the interviewees from Austria and Schleswig-Holstein in the four value type groups. For each value type the whole sample was grouped into halves with 50 percent of the whole farmers holding the values to an higher extent than the other 50 percent. Table 6 shows the distribution of the three samples within the top 50 percent.

Table 6: Attitude statements and value type as a result of factor analysis

attitude statement	factor / value type	share of sample farmers within the half holding stronger values in the value type ¹
my farm can survive in a long term view	confidence with farming and belief in future of family farming	60 % of farmers in SH 47 % of full time farmers in A 30 % of part time farmers in A
I am satisfied with to chose farmer as a profession		
none of my children is interested in agriculture		
it will be difficult for my successor to find a partner		
in my family there are conflicts about farm succession		
for successful future farming there is a higher investment necessary	extent of financial problems and farm workload	no significant differences between samples ²
my farm is in a difficult financial situation		
on my farm the work load is too high		
agricultural policy facilitates my planning for the future	few problems with public regulations	31 % of farmers in SH
farming is hindered by regulations (construction, environmental protection, etc.)		66 % of full time farmers in A 82 % of part time farmers in A
the farm shall stay in the family	traditional family farm values	44 % of farmers in SH
I am farmer because of the family tradition		67 % of full time farmers in A 48 % of part time farmers in A

¹ rounded to full percentages

² p-value < .05

Source: calculations on basis of surveys 2003; total: n=618; SH: n=341; A (full time): 140; A (part time): n=137

Farmers in Schleswig-Holstein identify more with value type *confidence with farming and belief in future of family farming*. The Austrian farmers and especially part time farmers in Austria are highly represented in the value type *few problems with public regulations*. Austrian farmers, especially full time, tend to hold stronger *traditional family farm values*

than Schleswig-Holstein farmers. Using similar results Tietje (2004) shows, that these attitudes have an impact on the decisions to transfer the farm within the family. Confident farmers and farmers that agree to traditional values are more likely to transfer their farm to a successor.

Finally, in an open ended question farmers were asked what they would miss most and what they would most willingly give up when they retire. The answers to this question also give insight into farmer value systems.

Table 7: What farmers will miss most and would most willingly give up when they retire

miss or give up	S-H (full time)	A (full time)	A (part time)
miss entrepreneurial decisions and activities	68 % ¹		36 %
miss working with nature and animals	32 % ¹		64 %
willingly give up hard physical work and certain specific works in agriculture	37 %	63 %	81 %
willingly give up dealing with bureaucracy	28 %	19 %	0 %
willingly give up stress and other psychological pressure	35 %	18 % ¹	

¹ no statistically significant difference between the samples ($p < .05$)

Source: Analysis of open ended questions – survey 2003; 100 % = mentions in the categories “miss” or “give up”: SH: miss: n= 112, give up: n=136; A (full time): miss: n=32, give up: n=57; A (part time): miss: n=25, give up: n=31

Full time farmers in Schleswig-Holstein and Austria will both miss the decision making aspects of farming. This aspect is noticeably less important to part time Austrian farmers. Yet, in Schleswig-Holstein the farmers are more willing to give up the stress of decision making responsibilities. Farmers in Schleswig-Holstein perceive bureaucracy to be a greater burden than do Austrian farmers. Interestingly, Austrian part time farmers distinguish themselves from the full time farmers in that they would miss work with nature and animals much more. Clearly part time farmers place a high value on working with animals and nature.

In considering all answers to the open ended questions, the values attached to either miss or give up when retiring stem from the business side of agriculture at Schleswig-Holstein and are connected to hard work in nature in Austria.

Discussion

The patterns of farm family strategies range from intensification of production, diversification and pluriactivity as well as to plan to withdraw from agriculture. The family strategy chosen largely depends on the economic situation, the family life cycle and the preferences and attitudes of family members. A key factor of the development of the family farm business is planning for farm succession. When a successor has not been identified that most often results in an abandonment of the family farm business. According to Tweeten (1984) the loss of a family farm is an additional loss of a family from the rural community.

In this article we compare farm succession characteristics in two very different European regions. In 2003 farmers aged 45 years and older were surveyed. Three samples were obtained: full time farmers in Schleswig-Holstein, full time farmers in Austria and part time farmers in Austria. These three samples enable us to compare not only regional differences, but also differences between part time and full time farming.

Farms were much larger in Schleswig-Holstein and were highly specialised in production. In Austria, farmers were less specialised, more than half of them were characterised as mixed businesses and half of them farmed in mountainous areas.

Fifty seven percent of full time farmers in both regions have identified a definite successor relative to only 39 percent in part time farming. Higher levels of agricultural education of both the parent and successor generation in Schleswig-Holstein support the specialisation pattern observed in that region. In Austria higher levels of non-agricultural education in both generations are consistent with more part time farming, less specialisation and more organic farming. Twenty one percent of the successors in Schleswig-Holstein work full time on their parent's farm as compared to only 14 percent of Austrian full time farmers and 1.5 percent of Austrian part time farmers. This may suggest that a major part of the young full time farmers in Austria will not quit their off-farm work when they take over the farm.

Farmers in Schleswig-Holstein integrate their successors more in management decisions than do Austrian farmers. Thus, successors in Schleswig-Holstein gain more managerial and entrepreneurial experience. This is paralleled by the fact that almost all farmers in Schleswig-Holstein have discussed their succession plans with their successors. However, only two thirds did so in Austrian full time farming and only half of the part-time farmers have discussed their plans with successors. In addition, only a tenth of the Austrian farmers discussed succession plans with a financial or management adviser, while about 50 percent of farmers in Schleswig-Holstein did so.

We found the farming patterns in Schleswig-Holstein to be more market and business oriented, while a more traditional pattern was observed in Austria. The difference between a market oriented versus a traditional pattern is also seen in the farmer retirement plans: Farmers in Schleswig-Holstein tend to depend less on pensions and more on private investments for retirement than do Austrian farmers. They also more move out from their residence after retirement than Austrian farmers do.

The distinction between a business like and a traditional oriented behavioural pattern can be extended to the farmer value systems. In Bourdieu's (1977) terminology we can identify two different habituses. In fact the farmers in the three samples notably distinguish themselves in behavioural patterns but they do in their value systems as well. Farmers in Schleswig-Holstein showed more confidence with farming and belief in future of their farm business. To them, public regulation of agriculture is a greater problem than it is to Austrian farmers, especially part time. The traditional farming habitus in Austria is characterised by strong attitudes about the farm staying in the family and that one farms because of family tradition. Austrian farmers seem to take the intergenerational transfer of the farm as second nature of farming, so that they often do not even think of succession as a process to be discussed with family or external professional advice.

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