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Recruiting problems and the shortage of junior corporate farm managers: the role of gender-specific assessments and life aspirations

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Abstract: Replacements for corporate farm managers are increasingly hard to find. At the same time, a large pool of potential managers is hardly exploited: young female professionals. Focusing on the supply side of the labour market for managers, we investigate how gender-specific life aspirations impact occupational intention. Our analysis of survey data from agricultural students shows that the women are less inclined to become farm managers than the men for two main reasons: first, they expect less internal benefits (inner contentment, fun) from such a position. Second, they believe to be less suited to meet the professional requirements.

Keywords: Farm management succession, gender, occupational choice, rational choice, theory of planned behaviour

1. Introduction

Practitioners as well as agricultural associations increasingly report that replacements for retiring farm managers are hard to find (Deutscher Bauernverband, 2011). At the same time, the share of women on the management level amounts to a mere 9% (Statistisches Bundesamt, 2011: 121). The gender distribution of agricultural students, who constitute the main reservoir from which to recruit the next generation of farm managers, is entirely different. More than 50% of the graduates of agricultural and nutritional sciences have been women for more than a decade (Statistisches Bundesamt, 2013: 13). Conceptually, this low share of female farm managers can be understood as the result of a specific ‘supply behaviour’ (i.e., the career decisions made by women) and a specific ‘demand behaviour’ (i.e., the recruiting decisions made by corporate executives). Whilst such a conceptual view raises a number of questions concerning both the supply and the demand side, this paper focuses on occupational intentions of young professionals who are searching for a fulfilling working life. To the authors’ knowledge, no quantitative research has looked into the question of how gender-specific life aspirations and multiple goals impact the occupational intentions and choices that agricultural students make in favour or against a corporate farm management position. Accordingly, the paper’s tackles the core questions whether qualified young women are less inclined to become farm managers than qualified young men, and if so, why?

2. Two conceptual perspectives for explaining multi-goal occupational choice

There are two academic disciplines which have taken a special interest in the issue of occupational choice: economics and psychology. While both schools of thought do not completely disagree in their understanding of occupational choice, the existing differences are reflected in the two conceptual frameworks that are used in this study.

An economic conception of occupational choice

Economists generally assume that occupational choice can be explained in the same way as any other (economic) choice: Individuals are utility maximizers and thus choose the occupation from which they derive most utility. It has been widely acknowledged within the behavioural economics literature that individuals form subjective expectations and that they may pursue a wide variety of goals. Consequently, individuals derive utility from both the material and the non-material outcomes of their choices (e.g., Crawford and Ostrom, 2005). A second dimension of utility origins is provided by the distinction between external and internal sources (e.g., Frey, 1997). Whereas all material outcomes (e.g., salaries, profits) constitute external sources of utility, non-material outcomes may represent internal sources (e.g., pride/shame) as well as external sources (e.g., social recognition/ostracism) of utility. Being concerned with the ‘supply side’, we look at occupational intention instead of de facto occupational choice. We assume that the latent endogenous variable ‘intention to become a corporate farm manager’ is a function of three latent exogenous variables: the utility from internal non-material outcomes, the utility from external non-material outcomes, and the utility from external material outcomes – as subjectively expected by each individual.

A psychological conception of occupational choice

In psychology, a widely recognized concept for explaining and predicting behaviour is Fishbein and Ajzen's (e.g., 2010) 'theory of planned behaviour'. The intention to perform a behaviour is understood as being a function of three central factors: the subjective norm, the attitude, and the *perceived* control. The term 'subjective norm' is to designate the individual's overall evaluation of the perceived social pressure to perform a particular behaviour. The 'attitude' towards the behaviour describes the instantaneously formed overall evaluation of the behaviour in question and is determined by beliefs and evaluations regarding its likely outcomes. Finally, the term 'perceived behavioural control' describes the individual's belief to which degree she/he has control over a particular behaviour. With regard to control beliefs, a further distinction is often made between 'self-efficacy' (i.e., beliefs regarding one's own skills and capabilities), on the one hand, and 'controllability' (i.e., beliefs regarding external factors that may hamper or facilitate one's behaviour), on the other (e.g., Terry and O'Leary, 1995). By following this distinction, we assume that the latent endogenous variable 'intention to become a corporate farm manager' is a function of four latent exogenous variables: subjective norm, attitude, self-efficacy, and controllability.

3. Data and method

We carried out a standardized pen-and-paper survey at six German universities in 2013. We limited ourselves to collecting data from agricultural students since they represent the main and most qualified reservoir for junior farm managers. A total of 273 students filled out the questionnaire (135 female and 138 male participants). The resulting group of respondents remains a convenience sample and results have to be taken as preliminary evidence.

The endogenous variable 'intention to become a corporate farm manager' was measured through a 'scale' (intention scale), i.e., a constructed variable that was produced by calculating the arithmetic mean of three *reflective* variables. Items required the respondents to indicate in how far they agree with statements ranging from 'completely disagree' (=0) to 'completely agree' (=6). The calculated Cronbach's alpha amounts to 0.98.

For the questions regarding the exogenous variables of the economic model, students were asked to compare the expected outcomes of being a farm manager with the expected outcomes of employment alternatives. Possible answers were coded on the Likert-scale from 'much worse' (=0) to 'much better' (=6). All latent exogenous variables were measured through several *formative* variables.

Following Fishbein and Ajzen (2010), all latent exogenous variables for the psychological conceptualization were measured via scales that were calculated as the mean of several *reflective* variables. Items required the respondents to either answer on a semantic differential, or to indicate in how far they agree with statements ranging from 'completely disagree' (=0) to 'completely agree' (=6). Calculated Cronbach's alpha ranged from 0.76 to 0.91.

To provide insights into our research questions the following four working steps were carried out:

First, the sample of 273 respondents was divided into two subsamples: women and men. The significance of gender differences in the 'intention scale' was tested with a two sample t-test.

Second, two ordinary least squares regressions (OLS) were ran for each subsample: a multivariate regression based on the economic model and one on the psychological model.

Third, to investigate the relative importance of various factors for explaining the differences in occupational intentions, the results of the subsample regressions were contrasted. Subsample comparisons were made separately for the economic and psychological model. We first identified the exogenous variables that were significant in one of the two subsample regressions but not in the other. We then identified the variables that were found to be significant in both subsamples and compared them with a two-sample t-test.

Fourth, the overall findings resulting from both conceptual approaches were compared.

4. (Why) Are qualified women less inclined to become corporate farm managers?

The mean of the intention scale among the female respondents amounted to 2.4, whereas the mean among male participants was 3.8. A mean comparison shows that this difference is highly significant. Our data thus support the hypothesis that qualified women are less inclined to become a corporate farm manager than qualified men.

An economic investigation into the career decision of junior agricultural professionals

All questionnaire items are congruently and comparatively framed to reflect the implicitly hypothesized relationship between the variable and the intention to become a farm manager. A higher (lower) numerical Likert-scale value than 3 for the exogenous variable ‘higher income’, for instance, indicates that the respondent thinks that the income as a farm manager is higher (lower) than the income of alternative employments. Table 1 shows the results of the gender-specific economic OLS regression.

Table 1: Gender-specific results of the economic OLS regression

Exogenous variables	Female subsample (n=105) ^{a)}		Male subsample (n=101) ^{a)}	
	Coefficients	p-value ^{b)}	Coefficients	p-value ^{b)}
Constant	-1.16	0.387	-0.83	0.591
<i>External material outcomes</i>				
Higher income	-0.14	0.329	0.10	0.316
Lower income risk	0.10	0.381	0.05	0.539
Lower cost of living	-0.05	0.814	-0.12	0.401
More leisure time	-0.14	0.391	-0.11	0.391
More working time flexibility	0.17	0.269	0.05	0.575
<i>External non-material outcomes</i>				
More recognition from family	-0.33	0.089*	-0.04	0.800
More recognition from friends/acquaintances	0.08	0.661	0.35	0.022**
More recognition from future colleagues	0.28	0.089*	-0.19	0.254
<i>Internal non-material outcomes</i>				
More socially meaningful	-0.12	0.375	-0.14	0.249
More inner contentment	0.40	0.007***	0.39	0.013**
More fun	0.48	0.004***	0.34	0.032**
Less strenuousness	-0.00	0.963	0.12	0.143
<i>Control variables</i>				
Growing up on a farm (no=0; yes=1)	0.41	0.194	0.68	0.014**
Age	0.04	0.389	0.05	0.380
Born in the new federal states (no=0; yes=1)	0.76	0.007***	0.28	0.249
F-statistics (p-value)	F(15;89) = 5.93 (0.000)		F(15;85) = 7.56 (0.000)	
Adjusted R ²	0.416		0.496	

Source: own calculation. ^{a)} Differences in n compared to the total sample are due to incomplete answering. ^{b)} Level of significance (two-tailed t-test): p < 0.01 = ***, p < 0.05 = **, p < 0.10 = *.

Several exogenous variables are significant in only one of the two subsample regressions. While the intention to become a corporate farm manager is significantly influenced by the anticipated social recognition in both subsamples, the sources of recognition that are significant are not identical: for participating men, the anticipated recognition from friends and acquaintances represents a significant influence; for participating women, it is the anticipated recognition from their family and from future colleagues. It is interesting that the sign of the coefficient for the ‘recognition from family’ is negative in the female subsample. This is counterintuitive at first view and contradicts the assumption that a positive attitude of family members towards their daughters/sisters becoming managers fosters their inclination to do so. Furthermore, the fact that the anticipated social recognition from future colleagues is significant only for the female respondents’ occupational intentions can be seen as an indication that women are more worried about social acceptance by future peers and staff members than men.

Two exogenous variables, both pertaining to the evaluations regarding internal benefits and costs, are significant in both subsamples: ‘feeling an inner contentment’ and ‘having fun doing the job’ foster the respondents’ intention to become a farm manager significantly. What is more, a two-sample t-test shows that the mean of both variables is significantly lower in the female subsample. We may thus cautiously conclude that women anticipate less internal

benefits from being a corporate manager which, in turn, represents a crucial reason why they are less inclined to become corporate farm managers.

The estimations for the control variables reveal that ‘being born in the new federal states’ significantly increases the inclination to become a farm manager in the female subsample. In contrast, ‘growing up on a farm’ is significant for male respondents. This suggests that there are gender-specific differences in socialization that affect the intention to become a farm manager but are not captured by the exogenous variables of the economic model.

A psychological investigation into the career decision of junior agricultural professionals

Again the items and the resulting scales of the psychological model had been congruently constructed to reflect the hypothesized direction of influence between the exogenous variables and the endogenous variable. The higher (lower) the numerical Likert-scale value for the exogenous variable ‘subjective norm scale’, for instance, the more (less) the respondent feel social and self-image pressures to become a farm manager. Table 2 shows the results of the gender-specific psychological OLS regression.

Table 2: Gender-specific results of the psychological OLS regression

Exogenous variables	Female subsample (n=102) ^{a)}		Male subsample (n=100) ^{a)}	
	Coefficients	p-value ^{b)}	Coefficients	p-value ^{b)}
Constant	-2.46	0.014**	-1.91	0.146
Subjective norm (scale)	0.41	0.000***	0.36	0.000***
Attitude (scale)	0.49	0.000***	0.27	0.046**
Self-efficacy (scale)	0.26	0.018**	0.53	0.000***
Controllability (scale)	0.07	0.463	0.32	0.002***
<i>Control variables</i>				
Growing up on a farm (no=0; yes=1)	0.08	0.782	0.33	0.206
Age	0.01	0.699	-0.03	0.613
Born in the new federal states (no=0; yes=1)	0.66	0.004***	0.16	0.447
F-statistics (p-value)	F(7,94) = 18.30 (0.000)		F(7,92) = 25.05 (0.000)	
Adjusted R ²	0.545		0.630	

Source: own calculation. ^{a)} Differences in n compared to the total sample are due to incomplete answering. ^{b)} Level of significance (two-tailed t-test): p < 0.01 = ***, p < 0.05 = **, p < 0.10 = *.

Whereas the controllability scale is only significant in the male subsample, the subjective norm scale, the attitude scale and the self-efficacy scale are significant for both genders. The means of the three latter variables are significantly lower for women. This represents supportive evidence that women are less inclined to become farm managers than men (i) *because* they feel less social pressure to do so, (ii) *because* their instantaneously formed evaluation of the overall outcomes of being a farm manager is less positive, and (iii) *because* they consider themselves as being less suited and capable to be(come) one.

The estimations for the control variables show again that being born in the ‘East’ is a significant variable for female respondents. We may thus conclude that the psychological conception is not capable either to completely capture differences in socialization.

Contrasting the results from the economic and psychological conceptions

After systematically contrasting the results of these two types of regressions, the findings can be classified into three sets: First, we have an intersecting set of results which, as regards content, reveal the same information despite different terminologies. Results from both types of analysis are supportive of the proposition that gender-specific differences in the utilities derived from various sources are important drivers of observed differences in occupational intention. More specifically, both analyses indicate that gender-specific differences in the evaluation of non-material outcomes play an important role in explaining the gender-specific differences. A second set of findings was, and could be, derived from the economic model only. This is due to the fact that the latent exogenous variables of the economic model were operationalized through several formative manifest variables that are related to causal factors. We were thus able to find evidence, for instance, that none of the material sources of utility have a significant impact on the occupational intention to become a farm manager. That is, we

were not able to confirm the proposition of conventional economic thinking. This finding of ‘non-confirmation’ could not have been produced in the psychological model in which the variable ‘attitude’ covers all outcome expectations and evaluations without any disaggregation into further theoretical constructs. A third set of findings constitutes the evidence that could only be provided through the specific features of the psychological model. Its explicit focus on the fact that people not always have complete control over their environment was the prerequisite for the finding that the evaluation of one’s own skills (self-efficacy) is a significant determinant for occupational intention and that female respondents have significantly lower self-efficacy evaluations. Whilst this aspect enters the economic model implicitly through the proposition that individuals form subjective expectations, no theoretical constructs are provided in the economic model that allow for the distinction between one’s own capabilities and the non-controllable parameters in one’s environment.

5. Conclusion and outlook

To the knowledge of the authors, no quantitative research has tackled the particular issue of how gender-specific life aspirations impact the occupational intention to become a corporate farm manager. In our survey study of agricultural students we found evidence that qualified women are less inclined to become farm managers than men. Our analysis concerning the determinants of gender-specific occupational intention is consistent with many prior propositions (e.g., regarding the impact of women’s self-evaluation). However, some results contradict conventional wisdom and thus indicate a pronounced need for further research: For instance, our results show that the evaluation of the ‘controllability’ of a situation is a significant determinant of occupational intention for male respondents only. Future research is needed to determine whether these gender-specific differences apply to other subpopulations as well and can thus be generalized. If not, future research will need to determine more precisely the specific group characteristics that explain deviations between different subpopulations.

With a look to the practical problem of how best to mitigate recruiting problems, we can draw some preliminary conclusions. Our results suggests that first, focusing exclusively on an increase of material incentives when trying to recruit junior managers is likely to produce unsatisfactory results. A second conclusion is that human capacity building, training and persuasion may be helpful to counteract the imprints of gender-specific socialisation and lead to an increase in the inclination of women to become corporate farm managers.

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