

Extended Abstract

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Paper/Poster Title	Why farms exit? Evidence from Eastern and Central European Countries
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Abstract prepared for presentation at the 96th Annual Conference of the Agricultural Economics Society, K U Leuven, Belgium

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Abstract	200 words max
<p>We analyze the impact of country and farm specific factors on farm survival in 17 European emerging markets. We employ the Cox proportional hazards model and discrete time models with a large dataset of farms during 2006–2015. Our results show that good agricultural factor endowments is a significant preventive factor for farm survival, In terms of firm-specific controls, indicators of farms size, farm age and aggregate financial performance are the economically most significant factors associated with increased survival probability of firms in European emerging markets</p>	
Keywords	farm survival, Eastern and Central European Countries, survival and exit determinants, hazards model, discrete time model
JEL Code	Q12, Q15, Q18 see: www.aeaweb.org/jel/guide/jel.php?class=Q)
Introduction	100 – 250 words
<p>It is often argued for the EU (e.g. Breustedt and Glauben 2007; or Goetz and Debertin 2001 for the US) that agricultural support increases farms' profitability and thereby reduces farm exits. Beyond to farm-support programmes, the main drivers of farm exit at the micro level are the profitability of farming, human capital and off-farm job opportunities (Piet et al. 2012). Within this framework, the majority of contributions show that larger farms, younger farm operators and more productive farms are associated with a lower probability of exit (Shapiro et al. 1987; Glauben et al. 2006; Hoppe and Korb 2006; Mishra et al. 2010). The spatial aspect of farm exit is usually ignored in the literature. However, recent research reveals the importance of regional characteristics at the farm level. Huettel and Margarian (2009) confirm the relevance of strategic interaction as a crucial determinant of persistent regional differences in the farm size structure over time in Western Germany. Storm et al. (2014) show that farm survival in Norway is influenced by neighbouring farmers' characteristics and, in particular, by the direct payments neighbouring farmers receive. Landi et al. (2016) find that in Tuscany, the likelihood of exit is higher in areas of higher population density that are not classified as 'urban' areas. In addition, research cross-country analysis on farm exit is still limited. We aim to analyse farm exits in 17 European emerging countries with two different levels of drivers: country and individual specific effects</p>	
Methodology	100 – 250 words
<p>Our dataset comprises 17026 companies from 17 countries in Central and Eastern Europe (CEE). Farms included in our dataset had to satisfy two conditions: (i) they were in business at the end of 2006 (i.e., before the global financial crisis), and (ii) they provided information about their survival status at the end of 2015.</p>	

The entire set of company-specific variables that can be considered farm survival determinants is extracted from the Bureau van Dijk's Orbis database. Firm-specific variables cover various areas, from standard financial indicators to more subtle firm characteristics. They characterize firms from the perspective of their legal form (joint-stock company, limited liability company, partnership, or cooperative), ownership structure (number of large shareholders, foreign ownership, or state ownership), firm financial performance (ROA, gross margin, and solvency ratio), linkage with capital market (listed company), farm size and age. Standard literature about the determinants of firm survival use Cox proportional hazards models. However, recent papers have flagged up three relevant problems inherent to the Cox model that reduce the efficiency of estimators (Hess and Persson 2011). First, continuous-time models may produce biased coefficients when the database refers to discrete-time intervals (years, in our case), especially in samples with a high number of ties (numerous short spell lengths). Second, Cox models do not control for unobserved heterogeneity (or frailty). The third problematic issue is related to the proportional hazards assumption that implies similar effects at different moments in the duration spell. To check the robustness of our results, we estimate both Cox proportional hazards model different discrete time models.

Results

100 – 250 words

Our main results are following. Estimations shows that country specific effects have important effects on farms survival. More specifically, factor endowments variables including the share of agricultural land and share of agricultural employment are positively associated with farms survival. Regarding to farm specific variables, three financial performance indicators (ROA, gross margin, and solvency ratio) are consistently linked to improved probability of farm survival. Moreover, when we assess coefficients associated with these determinants jointly, then such aggregate financial performance exhibits larger impact. The farm size as a risk factor has positive impact on the probability of farms survival. The farm age can be associated with improved survival probability. The effect is consistent with earlier findings. The legal forms have a negligible effects. Our results are robust to alternative specifications.

Discussion and Conclusion

100 – 250 words

We analyzed the effects of factor endowment on farm survival. We employed the Cox proportional hazards model and different discrete time models on a large sample of 17,206 agricultural companies from 17 countries in Central and Eastern Europe (CEE) during 2006–2015. Furthermore, we employed an extensive set of firm-specific characteristics as controls, accounted for country-specific differences, and performed a number of robustness checks. Overall, our results are robust with respect to factor endowments indicators, country groups, industries, time periods, assumptions on survival distributions, and alternative estimators. Assessment of the firm-specific controls brings interesting outcomes. Standard corporate finance indicators (ROA, gross margin, and solvency ratio) exhibit also positive and weighty joint impact of their aggregate financial performance, which is in line with earlier evidence. While older firms exhibit higher survival probability, their size appears to be a risk factor, although its economic effect is less than negligible. The corporate legal form and whether the firm is listed provide mixed results, depending on the country group and individual industries. In sum, we show that indicators of ownership structure and aggregate financial performance are the economically most significant factors that are linked to increased survival probability of firms in European emerging markets.

