

Entry barriers for young farmers – do they depend on the size of the holding?

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ÚSTAV ZEMĚDĚLSKÉ EKONOMIKY
A INFORMACÍ

Introduction and Aim

- Young farmers have to overcome barriers when entering the sector:
 - lack of land
 - lack of finances for investments
 - not enough experience with farming
 - administrative procedures.
- The aim of the contribution is to evaluate the main obstacles with setting-up of farming and to assess whether the entry barriers of young farmers depend on the size of the farm.

Materials and Methods

- Primary data - electronic survey between 14–30 June 2018
- 510 respondents
- Questionnaire:
 - Identification questions
 - Difficulties when starting-up the farm – scale:
 - 1 – this was certainly a barrier
 - 2 – this was rather a barrier
 - 3 – this was not rather a barrier
 - 4 – this was not certainly a barrier
 - 0 – it is not my case (I cannot assess).



Materials and Methods

- Evaluated barriers :
 - (1) strategic planning,
 - (2) obtaining finances for start-up of business,
 - (3) obtaining finances for development of business
 - (4) purchase of agricultural land
 - (5) lease of agricultural land,
 - (6) purchase of livestock,
 - (7) purchase of properties
 - (8) lease of properties
 - (9) purchase of other fixed assets
 - (10) lease of other fixed assets
 - (11) obtaining qualified workers
 - (12) non-qualified workers
 - (13) ensuring sales
 - (14) administrative burden
 - (15) obtaining knowledge and experience.



Materials and Methods

- Majority (483) of farmers were physical persons, 135 were ecological.
- Average size of the farm was 42.4 ha, minimum was 0 (only livestock production had 12 farms) and maximum 1000 ha.
- The farmers were divided to three categories according to the size: (1) from 0 to 5 ha – small (there were 114 of them), (2) over 5 ha to 50 ha – medium (278 cases) and (3) over 50 ha – large (118).
- The average mark for each category and barrier was calculated.

Table 1: Description of a sample of respondents

Acreage	Number	Production type	Number
without land (0 ha)	12 (2.4%)	Livestock	175 (34.3%)
small (up to 5 ha)	114 (22.4%)	Crop	133 (26.1%)
medium (over 5 to 50 ha)	278 (54.5%)	Mixed	202 (39.6%)
large (over 50 ha to 1000 ha)	118 (23.1%)		

Materials and Methods

- As the variables are categorical, they were put into contingency table with 5 r – rows and 3 c – columns. Let O_{ij} be the observed count for the i^{th} row ($i = 1$ to R) and j^{th} column ($j = 1$ to C).

	c_1	...	c_j	...	c_c	Σ
r_1	O_{11}	...	O_{1j}	...	O_{1c}	$n_{1\bullet}$
□	□		□		□	□
r_i	O_{i1}	...	O_{ij}	...	O_{ic}	$n_{i\bullet}$
□	□		□		□	□
r_R	O_{R1}	...	O_{Rj}	...	O_{Rc}	$n_{R\bullet}$
Σ	$n_{\bullet 1}$		$n_{\bullet j}$		$n_{\bullet c}$	

where $n_{i\bullet} = \sum_j O_{ij}$ and $n_{\bullet j} = \sum_i O_{ij}$

- Total number of counts in the table is calculated as $N = \sum_i \sum_j O_{ij}$
- Empirical frequencies are calculated as $p_{ij} = \frac{O_{ij}}{N}$, $p_{i\bullet} = \frac{n_{i\bullet}}{N}$ and $p_{\bullet j} = \frac{n_{\bullet j}}{N}$

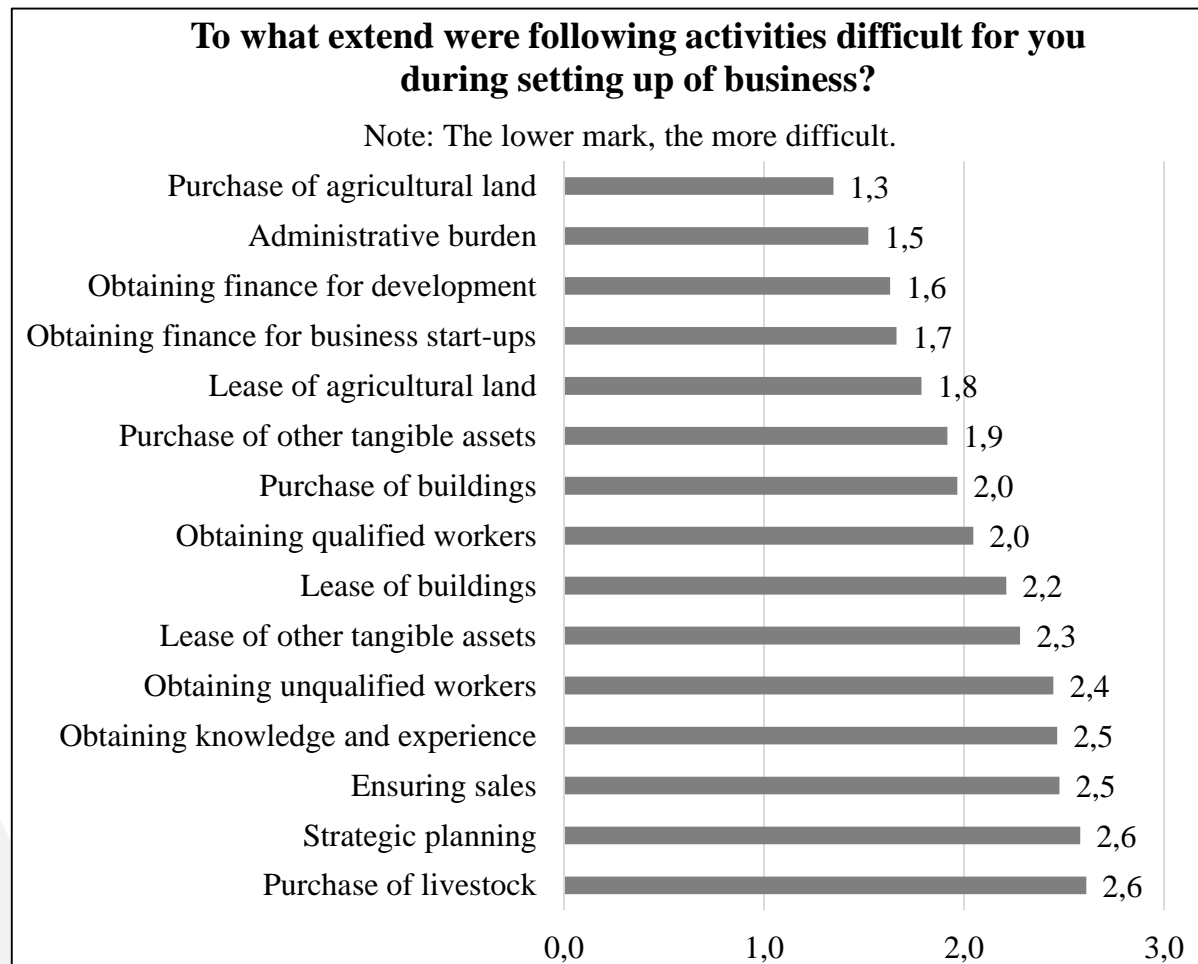
Materials and Methods

- Tested in contingency table whether there are statistically significant differences between the mark in each category
- H_0 : variables are statistically independent
- Pearson's test statistic follows an asymptotic χ^2 distribution with $(R - 1)(C - 1)$ degrees of freedom when the row and column variables are independent.
- When calculated criterion $\chi_p^2 = \sum_i \sum_j \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$ ($E_{ij} = \frac{n_{i \cdot} \cdot n_{\cdot j}}{N}$) exceeds tabled value of χ^2 distribution $\Rightarrow H_0$ is rejected \Rightarrow independence
- Calculations in MS Excel sheet

Results and discussion

- The highest barrier was **purchase of agricultural land** and **administrative burden**. Average calculated marks were 1.3 and 1.5, respectively.
- The lower is the average mark, the more important the problem is.
- 62.2% of respondents answered that **purchase of land** was certainly difficult and 15.5% rather difficult for them during setting up of their business.
- Young farmers did not perceive as big problem **strategic planning** (only 16.7% thinks that it is certainly yes and 21.4% rather yes, average mark was 2.6) and **purchase of livestock** (only 16.7% thinks that it is certainly yes and 14.3% rather yes, average mark was 2.6).

Difficulties during setting-up of agricultural business



Results and discussion

- Tested, whether the barriers statistically significantly depend on the size of the farm.
- The table value of χ^2 distribution with 8 degrees of freedom was 15.5. If the calculated value G exceeded the table value, H_0 about independence was rejected.

Was strategic planning difficult for you during start-up of business?

- Depended on the size of the holding
- Middle sized holdings answer more often that it was difficult for them to cope
- Small and large farms answered certainly yes less often than they theoretically should
- It might be due to the fact, that small farms do not think strategically at all or only in a small scale and large companies have standardized procedures on strategic planning.

Was obtaining finance for business start-up difficult for you?

- Depended on the size of the holding
- Small and large farms again answered that it was certainly difficult for them less often than theoretically could.
- Small farms can be family farms and the finances can be obtained within family.
- Large holdings have in general easier access to finances in a form of loans and credits.
- Middle sized farms answer more often that it was difficult for them to obtain finance for business start-up.

Was obtaining finance for business development difficult for you?

- Depended on the size of the holding
- Small and large companies answered less frequently that it was certainly difficult for them to obtain the finances.
- Small farms also declared less frequently that it was rather difficult.
- Medium sized companies declared more frequently that obtaining finances was certainly and rather difficult for them.

Was purchase of agricultural land difficult for you?

- Independent on the size of the farm
- Almost all managers proclaimed that it was certainly or rather difficult for them

Was lease of agricultural land difficult for you?

- Depended on the size of the holding
- More difficult for medium sized and large companies.
- Small farms did not have to lease the land that often.



Was purchase of buildings difficult for you during start-up of business?

- Depended on the size of the holding
- Small and large – less difficult, medium sized – more difficult

Was lease of buildings difficult for you during start-up of business?

- Depended on the size of the holding
- More difficult for medium sized companies, but less difficult for small and large farms.



Was obtaining qualified workers difficult for you during start-up of business?

- Depended on the size of the holding
- Medium and larger companies perceived it as a problem.
- For smaller farms it was not that significant issue as many of them did not need external workers at all.

Was obtaining unqualified workers difficult for you during start-up of business?

- Depended on the size of the holding



Was ensuring sales difficult for you during start-up of business?

- Depended on the size of the holding
- Medium sized companies answered more often that it was a problem for them than they should according to theoretical frequencies.
- Small did not have to solve this problem that often.
- Large answered that it was rather a problem for them and then that it was not rather a problem.

Was difficult to overcome the administrative burden difficult for you?

- Depended on the size of the holding
- Administrative was difficult for all companies - especially medium and large farms considered it as an issue.
- *Was obtaining knowledge and experience difficult for you?* This was an issue for all types of holdings regardless their size.

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Conclusion

- The highest barrier was **administrative burden** and **purchase of agricultural land**.
- On the other hand, young farmers did not perceive as big problem **strategic planning** and **purchase of livestock**.
- Almost all type of barriers **statistically significantly depends on the size** of the farm.
- Only purchase of agricultural land and obtaining knowledge and experience did not depend on the size category and was difficult for all size categories in a similar way.
- It seems that for **small farms it is more difficult** to set-up businesses despite that they do not have to carry on so many activities (such as obtaining qualified and unqualified workers), as they are too small to need it.

Conclusion

- **Large companies** have to do strategic planning and obtain workers. Their situation seems also **difficult**, but many activities can be facilitated by their **easier access to information**.
- Middle size companies seem to have **the hardest position** as they need to ensure more activities than small but have lower abilities to secure them than larger companies. They answered more frequently that certain activity was more difficult for them than it theoretically should or could.
- The challenge for future research is to examine the needs of young farmers in detail using qualitative methods of focus group or individual interviews to better identify the barriers during setting up and provide meaningful and effective support for them.

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THANK YOU FOR YOUR ATTENTION.

