Regional view on young farmers in the Czech Republic

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Abstract:

The problem of generation renewal is well acknowledged in the European Union. Hence, the young farmers are supported in the framework of the Common Agricultural Policy by investment subsidies and by income support in a form of payment on the area of agricultural land. The knowledge of the structure of farmers is important for policy-makers when they target the incentives to support the generation renewal. Therefore, the aim of the paper is to describe the structure of the young farmers in the Czech Republic from regional point of view, characterize their differences in number, production type, labour and range of standard production. Using Eurostat data for farmers under 40 years it was found out that the highest share of young farmers is in Middle Moravian region. Farms managed by young farmers are smaller in terms of utilized agricultural land, number of livestock units and number of employed persons as same as in average standard production in Moravian-Silesian and Middle Moravia. On the other hand, in Moravian Silesian region is the highest share of farms with livestock. Different structure needs different type of support as it is e.g. more financially demanding to set-up a farm with livestock than with crops production only.

Key words:

farmers' structure, subsidies, young farmers, Common Agricultural Policy

Introduction

General ageing of farming population is an important dimension of structural change in the EU. (Rovný, 2016) "The aging farming population has a significant influence on production agriculture, succession planning, successors, and farmland usage." (Zou et al., 2018) According to current studies, it may seem that problems of aging have only developed countries with a regressive demographic structure where the share of agriculture on the total GDP is low, but this issue of young farmers' shortage is becoming more and more not only Europe-wide but global. In order to prevent aging of the agricultural sector, demographics, statisticians and mainly politicians in the relevant ministries are conducting many local and sociological surveys. We can mention e.g. paper by Berk (2018), who analysed factors affecting the exit from farming of young farmers in Turkey. He used data "through face-to-face interview method with 85 selected young farmers (aged 15–40 years) engaged in agricultural activity in the Nigde province in 2017." His main conclusion statements are, that "rural investment support should be increased; entrepreneurship and innovation trainings should be expanded by encouraging training on agriculture. It would be beneficial to develop different applications such as distance learning modules and digital agriculture." Those educational programmes might have an effect as younger farmers are more likely to participate in educational programs than older farmers (as examined by Harwood et al., 1999).

It is necessary to support young farmers also to ensure competitiveness of European agriculture. According to Kontogeorgos et al. (2014) "the sector suffers from the lower investment and innovation propensity of elder farmers (a horizon problem)". This is in line with the study of Davis et al. (2013a), who found out that "Younger farmers have a longer planning horizon and tend to invest more heavily in business growth than comparable older age groups". As a result, "aging of the labour force exacerbates the production efficiency" (Saiyur et al., 2018). Zagata and Sutherland (2015) examined Eurostat data on young farmers in the EU and proclaimed that their statistical analysis "demonstrates considerable differences in farm structure between old and new member states, and provides support for the contention that young sole holders are more likely to operate modernised, profitable farms." Farms innovation

patterns also differ depending on the type of land use, finances and breeding management practices (see study of McKillop et al., 2018).

Walters et al. (2018) tried "to improve the productivity and profitability of a new generation of farmers in the Wimmera Mallee, Victoria, Birchip Cropping Group in partnership with the State Government (Agriculture Victoria)," resulting to establishment "the GAPP (growth, adoption, production and profit) program". They organised so called "GAPP meetings" in Australia, which were "member-led and included presentations, discussions, crop walks and trips outside their regions." Mayett-Moreno et al. (2018) introduced "an exploratory and descriptive research project aimed at understanding young farmers' views of a community-based ecotourism (CBE) project." Their analysis "elicited an important inquiry in relation to environmental inter-generation: what kind of development are future generations pursuing?"

Generation renewal is supported in the EU by subsidies. "The two main policy approaches to promoting structural adjustment in EU agriculture are Farmer Early Retirement Schemes and New Entrant Schemes for Farmers" (Davis et al., 2013b). Operation Setting up of young farmers facilitates establishment of farmers under 40 years of age, who set up for the first time as head of an agricultural holding, possess adequate occupational skills and competence, and submit a business plan for the development of their farming activity. (Matthews, 2013) "The measure has been designed to affect people living in rural areas with direct impacts to farm incomes and with indirect impacts on society by supporting rural employment and maintaining the social fabric of rural areas". (Bournaris et al., 2016). Besides, farmers under 40 years also receive higher direct payments on first 90 hectares of land. The effects of the support are ambiguous. For example, Pechrová (2015) could clearly concluded whether the farms improved after receiving the support by young farmers under measure 1.3.1 Setting up young farmers' businesses as sometimes ROA, ROE or ROS increased after obtaining the subsidy, but sometimes otherwise. Nevertheless, the knowledge of the structure of farmers is important for policy-makers to target the incentives to support the generation renewal. Certain typology of Czech farms was already elaborated by Divila and Doucha (2005), but it did not include the classification according to the age of the farm's manager.

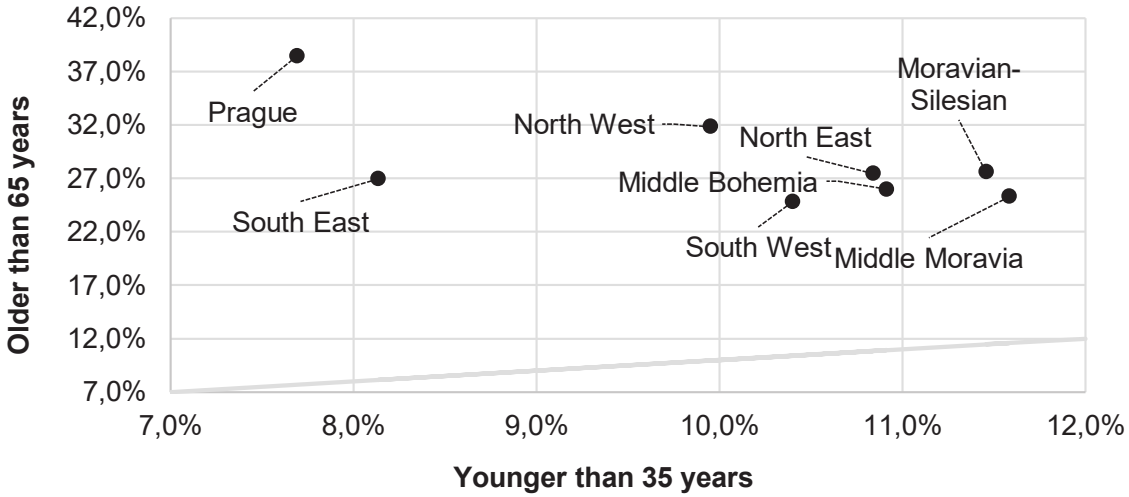
Materials and Methods

The aim of the paper is to describe the structure of the young farmers in the Czech Republic from regional point of view, characterize their differences in number, production type and obtaining of subsidies. We pay attention only to the managers of the holdings (regardless if they are physical or legal persons). (The age structure of the total workforce was examined e.g. by Doucha et al., 2011) Since June 2018, Eurostat (2018a) provides data for farmers between 35 to 39 years. Before, only the categories between 25 to 34 years and 35 to 44 years were available. Data are available on NUTS 2 level. This enables us to preciously assess the regional differences. Particularly we pay attention to the differences in the number (share) of the farmers under 40 years in particular NUTS 2 region and we put those numbers in the relation with the number (share) of farmers older than 65 years, i.e. in fact in the retirement age. Then we examine the average size of the holding measured by the acreage of utilized agricultural area (UAA) and share of the UAA farmed by young farmers in particular region. Size of the holding is also measured by the average number of livestock units (LU) and average number of annual work unit (AWU). Then the performance is assessed by the amount of standard output (SO) in euros. SO "is the average monetary value of the agricultural output at farm-gate price, in euro per hectare or per head of livestock" (Eurostat, 2017).

Results and Discussion

There are 2 710 young farmers in the CR (included in the survey of CZSO – i.e. having more than 5 ha of agricultural land) in 2016 (data for year 2016 updated in 2018) which accounts to 10.2%. The share of farmers under 35 years decreased from 11.7% in 2010, currently it is only 4.4% (Data for farmers under 40 years are not available in year 2010). The highest share of young farmers is in Middle Moravian region (11.6%) and Moravian Silesian

region (11.5%). On the other hand, the lowest share was in Prague (7.7%) and South East (7.1%). There were 3 to 8 times more men than women. In Prague, there was even no female, but 10 male farmers. The relation of young farmers to the farmers that are retired is displayed at Graph 1. Farming population is getting older, for each farmer younger than 35 years there are almost 3 farmers older than 65 years (i.e. in retirement age). Hence, all regions are above the line that marks the symmetry between shares. The worst situation is in Prague (5 retired farmers per one young), but this region is special as it is capital city. Then, there are 3.3 older on 1 younger in South East and 3.2 in North West region. In other regions, the share was between 2.2 to 2.4.



Graph 1: Relation between groups of farmers under 40 years and over 65 years

Source: Eurostat (2018a), own elaboration

The highest average acreage accounted to 201.7 ha in North West, where 200 young farmers farmed on 40.3 thous. ha and 185 ha in Middle Bohemia, where 370 young farmers farmed on 68,5 thous. ha. Contrary to that, the smallest holdings of young farmers were present in Moravian-Silesian region, only 79.4 ha, where 220 farmers had only 14.5 thous. ha. The share of young farmers' holdings on the total UAA of the region also differs. On average, young farmers are present on 11.9% of UAA of the CR. The share in particular regions varies from 8.6% in Moravian Silesian to 13.3% in North East. 13.2% is in North East and West and 12.5% in Middle Bohemia. Characteristics of young farmers in NUTS 2 regions in relation to the average of the CR is displayed in Graph 2. Region Prague is extraordinary (and hence not shown in the graph), as the level of farms' characteristics are too high. When we take the average of the CR as a measure, we can see, that North East region is on the same level (average acreage of a farm was 151.8 ha) and Prague almost on same level (145 ha on average). Then regions South East, Middle Moravia and Moravian-Silesian are below and others above average.

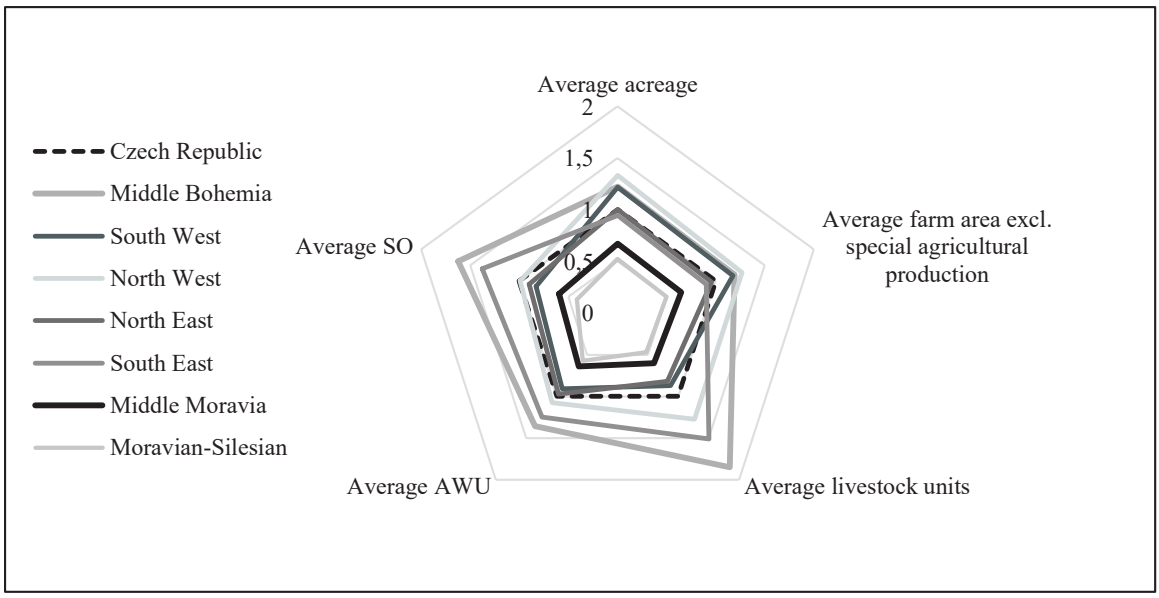
Average farm area without special agricultural production was the highest in Prague (1 718 ha), but it was an exception as there were only 10 young farmers on 17.2 thous. ha of land. The average for CR is 159.9 ha, so the North West value (203.1 ha) was above average as same as in Middle Bohemia (190.9) and South West (187.8). Moravian-Silesian farms were again the smallest.

Eurostat also provides data about number of farms with livestock and number of livestock units (1 LU = 500 kg of live weight of the livestock) at farms. On average, 79.0% of farms in the Czech Republic have livestock, but in Prague there is none and in South East only 56.9%. On the other hand, in Moravian-Silesian region, almost all farms have livestock (95.5%) as same as in Middle Bohemia (94.2%). The farms with livestock production of young farmers in the CR had on average 100.7 livestock units, but in Middle Bohemia the number was much

higher (186.0 LU) which means that the state of livestock was almost 3 times higher than in Moravian-Silesian region (47.5 LU per one farm of a young farmer). Above average number of LU was also noted in South East (152.1 LU) and North West (128.2 LU).

Regarding the workforce on a farm measured by AWU, there were 4 on average for the CR and almost 5.4 in Middle Bohemia. This is needed as the farms here are the largest in terms of the acreage and number of LU. Then, the average AWU 4.9 was noted in South East region and 4.3 in North West region. In other regions, the number of AWU was below average.

Finally, the standard output was on average 216.4 thous. euro, but many farms in different regions had higher such as in Prague (345.0 thous euros), Middle Bohemia (351.1 euros) and South East (297.5 euros). On the other hand, the less output was generated by farms in Moravian-Silesian region (89.9 ha).



Graph 2: Characteristics of young farmers in NUTS 2 regions in relation to the average of the CR (Prague not displayed)

Source: Eurostat (2018a), own elaboration

Despite that the policy-makers see the problem of ageing as urgent, e.g. Zagata and Sutherland (2015) proclaimed that their "analysis of Eurostat figures evidences considerable national differences in young farmer numbers, suggesting that there is no shortage of young farmers at national level in Germany, France, Switzerland, Finland, Austria, France, the Czech Republic and Poland". However, they compare the EU's member states among each other and hence the problem might not seem that urgent. However, we have now new data on farmers from 35 to 39 years and can see that the number of farmers under 35 years is even smaller (1 180) than the number of famers in this category (1 530). It may seem that 10.2% share of farmers under 40 years is relatively high, but if we take only the category up to 35 years, then the share is only 5.8%. And talking about the youngest under 25, there are only 100 of them. We suggest focusing on the research in the area of motivation and barriers of young farmers to enter the sector in order to find out the causes of low interest of young people to enter the sector. Certain outline in a literature review was elaborated e.g. by Šimpachová Pechrová (2017). The challenge for the future research is to perform a primary survey in the regions and to analyse the results also territorially, whether the motivation and barriers of young farmers to enter the sector differs depending on the region of the Czech Republic.

Conclusion:

The problem of generation renewal is well acknowledged not only in the EU, but also in other developed countries where the share of agriculture on the total GDP is low and in some development countries. In the EU, the young farmers are supported by the financial means from the Common Agricultural Policy. There are investment subsidies and income support in a form of payment on the area of agricultural land. The knowledge of the structure of farmers is important for policy-makers when they target the incentives to support the generation renewal. Therefore, the aim of the paper was to describe the structure of the young farmers in the Czech Republic from regional point of view, characterize their differences in number, production type, labour and range of and standard production.

Based on newly available Eurostat data for farmers under 40 years it was found out that the highest share of young farmers is in Middle Moravian region. Farms managed by young farmers are smaller in terms of utilized agricultural land, number of livestock units and number of employed persons as same as in average standard production in Moravian-Silesian and Middle Moravia. On the other hand, in Moravian Silesian region is the highest share of farms with livestock. The largest farms were in Middle Bohemia (measured by the acreage, number of LU, AWU and standard production) that is not surprising as according to the Eurostat (2018b) classification it is Predominantly urban (and hence more developed) region.

Different structure needs different type of support as it is e.g. more financially demanding to set-up a farm with livestock than with crops production only. The investment subsidies provided may be higher in certain regions with low share of young farmers in order to attract people into the sector (if there is a potential, enough available suitable land etc.).

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