ECONOMIC ACTIVITY OF ELDERLY PEOPLE IN ECONOMIC INDUSTRIES

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Abstract

One of the government actions to mitigate the effects of an ageing population in European countries is the raising retirement age. In the Czech Republic, the retirement age was gradually increasing, but regardless of factors such as educational level, the health status of workers and the type of employment. The aim of the paper is to show that the situation about economic activity of older workers is very specific within each industry of the economy. We show that in some industries workers are able to work into old age while in some industries it may not be possible. Economic activity is well described by different statistical sources and we used detailed from both the Labour Force Survey and Statistics on Income and Living Conditions for the last few years. We study the type of work, the hours worked by older workers, including the reasons for the lower number of hours worked. We also combine the results with macroeconomic statistics to estimate the size of the issue in terms of affected gross value added and employment.

Key words: ageing of population, economic activity, economic industry, hours worked

JEL Code: J14, J21, J26

Introduction

The ageing of population is a complex issue but with rather negative perception in our modern society. Among several aspects connected with ageing, also productivity is targeted. This may be formulated as is the productivity of older people negatively affected in comparison with younger ones. Simply, the decline of productivity in line with rising age of workers is commonly used statement. Generally, this was proven by several studies, e.g. Freyer, 2007 or Tang and MacLeod, 2006. However, some studies find the age as the positively factor of productivity in some specific economic activities. They demonstrate that the productivity in some professions increases with age as well as creativity and achievements of workers, e.g. Posner (1995). It follows that increasing number of elderly workers are not a problem in whole

economy. It should be seen at this issue on individual level because the industries and other factors play role in the issue of economic achievements and output.

This contribution deals with the situation about economic activity of elderly workers in individual industries of the Czech economy with a special focus on workers' education, as we believe that educational level of workers also plays an important role in this analysed issue. The data from Labour Force Survey (LFS) allows the detailed analyses of the economic activity by age and educational level in particular industries of economy. We also study the hours worked by older workers, including the reasons for the lower number of worked hours. Finally, we combine the results with macroeconomic statistics on gross value added to estimate the labour productivity of elderly workers on the level of industries.

1 Age Composition of Labour Force in Industries of the Czech Economy

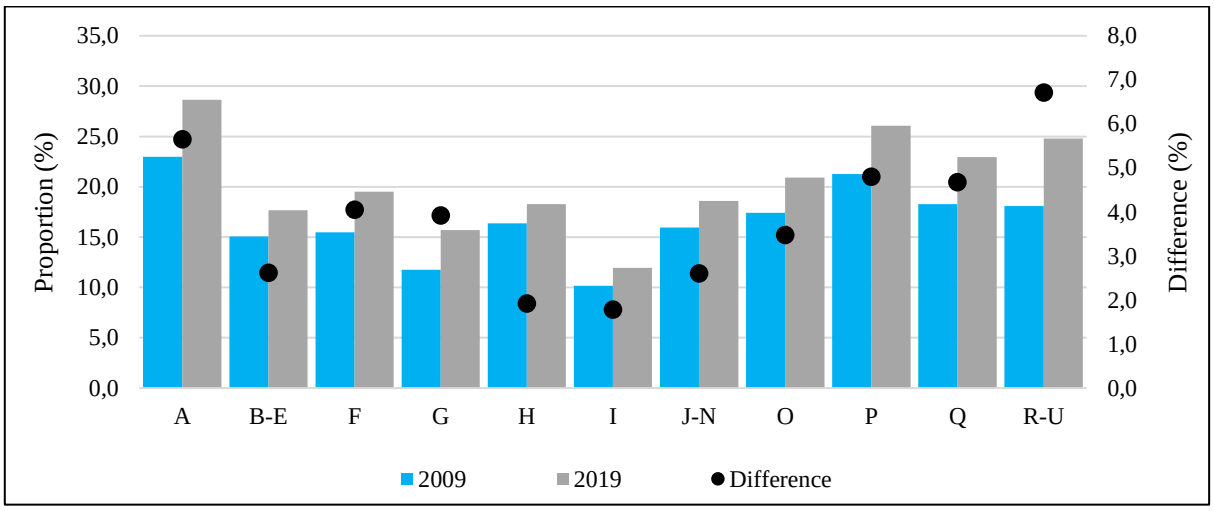
As the population is ageing, the age structure of workers in the economy is also changing. The ageing labour force means more experienced and educated workers in some industries, experts, professors, doctors etc. On the contrary, the decrease in physical and mental abilities can be treated as a serious problem in some industries (Šimková, Marek, 2017).

The average age of workers in the Czech economy was 41.3 years in 2009, in 2019 it was already 43.2 years. The average age has increased by 2 years in last decade. The average age increased the most in construction (F), trade (G) and sector of services. Next, we will take a closer look at the structure of workers aged 55 years and over in individual industries.

1.1 The Change in Proportion of Elderly Workers

The proportion of workers aged 55 years and over is increasing over time, with differences in individual industries of the economy. On average, it has increased by 3.5 p.p. from 15.8% to 19.3% over the last decade (i.e. between 2009 and 2019). The largest increases can be seen in agriculture (A), construction (F), education (P) and other household services activities (R-U). The highest proportion of workers aged over 55 years was in agriculture (28.6%) and in education (26.1%) in 2019 (see Fig. 1).

Fig. 1: The proportion of employed people over 55 years in industries in 2009 and 2019 (%)



Notes: A = Agriculture, B-E = Total manufacturing, F = Construction, G = Wholesale and retail trade, H = Transportation and storage, I = Accommodation and food services, J-N = Information and communication, financial and insurance, real estate, scientific and administrative activities, O = Public administration and defence, P = Education, Q = Health and social services, R-U = Entertainment, arts and other services and households' activities.

Source: CZSO 2020, authors' calculations

Between employed people over 55 years in total manufacturing (B-E) in 2019 were 61.2% of workers aged 55-59 years and 9% over 65 years. In education (P) it was as follows: 53.5% workers aged 55-59 years and 17.2% aged over 65 years. Most workers over the age of 65 were in the industries J-N (Information and Communication, Financial and Insurance, Real Estate, Scientific and Administrative Activities).

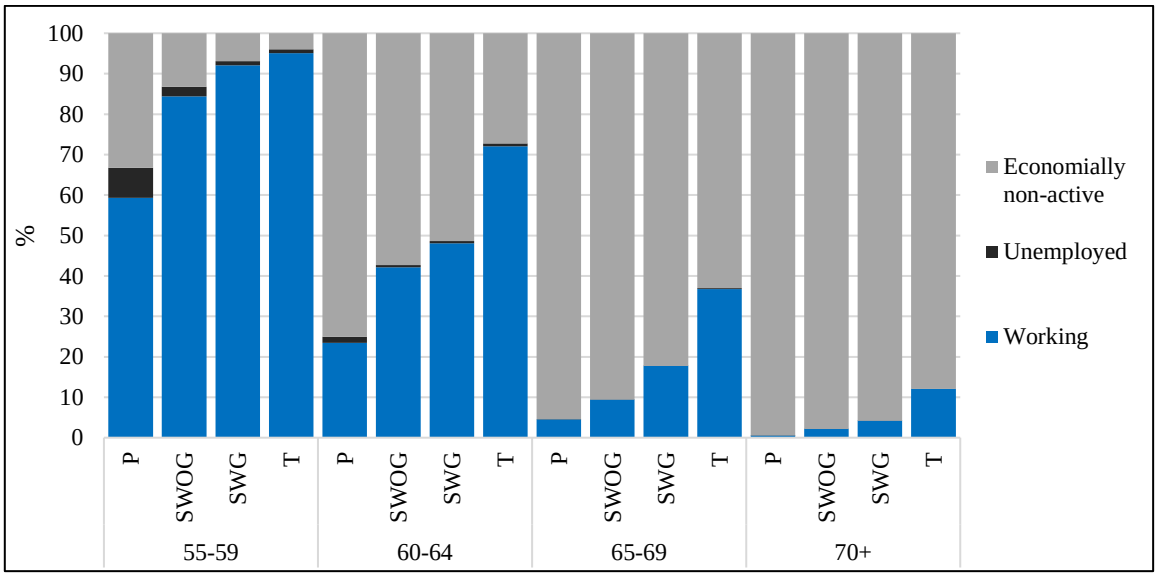
1.2 The Role of Educational Level

The level of education is a factor according to which the age structure of workers in individual sectors differs.

According to the LFS, the economic status of a person is employed, unemployed and economically non-active. In the age group 55-59 years, 87.3% of persons were employed (in 2019), 47% were employed in the age group 60-64 years, 14.8% were employed in the age group 65-69 years and 3.6% were employed in the age group 70 and more years. Unemployment of people over 55 years is very low, only it is 2% in the age group 55-59 years, for older people it is below 1%. The rest of the population are economically non-active, mainly due to regularly retirement, disability retirement or caring for another person. As can be seen in Fig. 2, with increasing educational level of people, employment also grows, in all assessed age groups. In the age group 60-64 years, the proportion of workers with a tertiary educational

level is three times higher than the proportion of workers with a primary educational level. In the age group 65-69 years, the proportion of workers with tertiary educational level is even eight times higher than the proportion of workers with primary educational level.

Fig. 2: Economic status by age and educational level in 2019 (%)



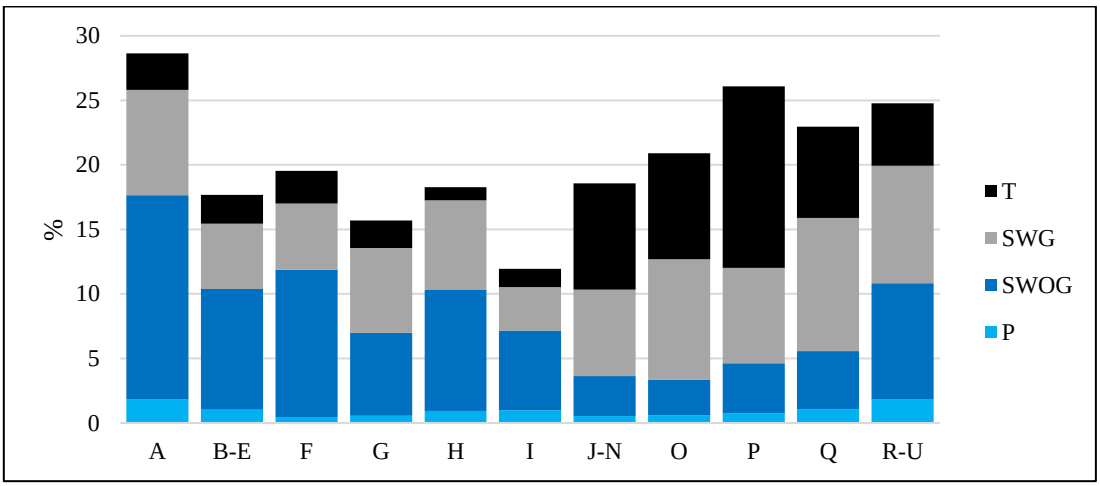
Notes: P = Primary educational level, SWOG = Secondary without graduation, SWG = Secondary with graduation, T = Tertiary educational level

Source: CZSO 2020, authors' calculations

Looking at level of industries, there are more older workers with tertiary educational level in the sector of services. As mentioned above, 26.1% of workers were older than 55 years in education in 2019, of which 14.1% had tertiary educational level (Fig. 3). The data show that the higher the educational level of workers, the longer they stay in the work process and retire later, especially in sector of services. This is also confirmed by foreign studies. For example, the study of Schram et al. (2021) concludes that manual workers and those exposed to physical workload factors have lower working life expectancy. It can primarily be explained by ill-health-based exit routes.

Older workers are expected to perform less work than younger workers. Tang and MacLeod (2006) present a work effort as significant difference between younger and older workers. It means that younger workers have more hours spent on the job as well as higher degree of concentration than older workers.

Fig. 3: The proportion of employed people over 55 years by level of education in industries in 2019 (%)



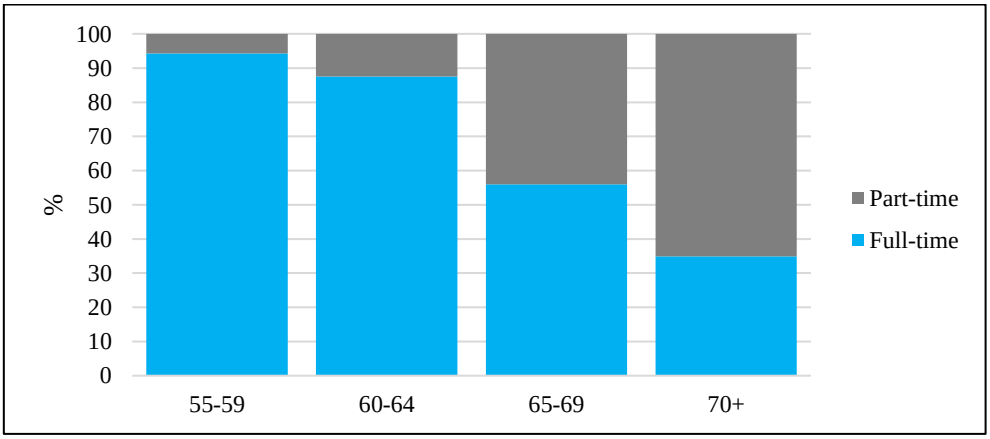
Notes: P = Primary educational level, SWOG = Secondary without graduation, SWG = Secondary with graduation, T = Tertiary educational level

Source: CZSO 2020, authors' calculations

2 The Workload of Elderly Workers

Data from LFS allows the study of hours worked by older workers, including the reasons for the lower number of hours worked. These data confirm the conclusions of foreign studies, with increasing age the proportion of full-time jobs (Fig. 4) and the number of hours worked (Fig. 5) decreases. While in the age group 55-59 years full-time jobs predominate (94.3%), in the age group 65-69 years every second worker works full-time. In the age group 70 years and older every third worker works full-time, and part-time jobs predominate (65.1%), see Fig. 4. The proportion of full-time jobs increase slightly with the increasing educational level of workers.

Fig. 4: Full or Part-time Job by Age in 2019 (%)



Source: CZSO 2020, authors' calculations

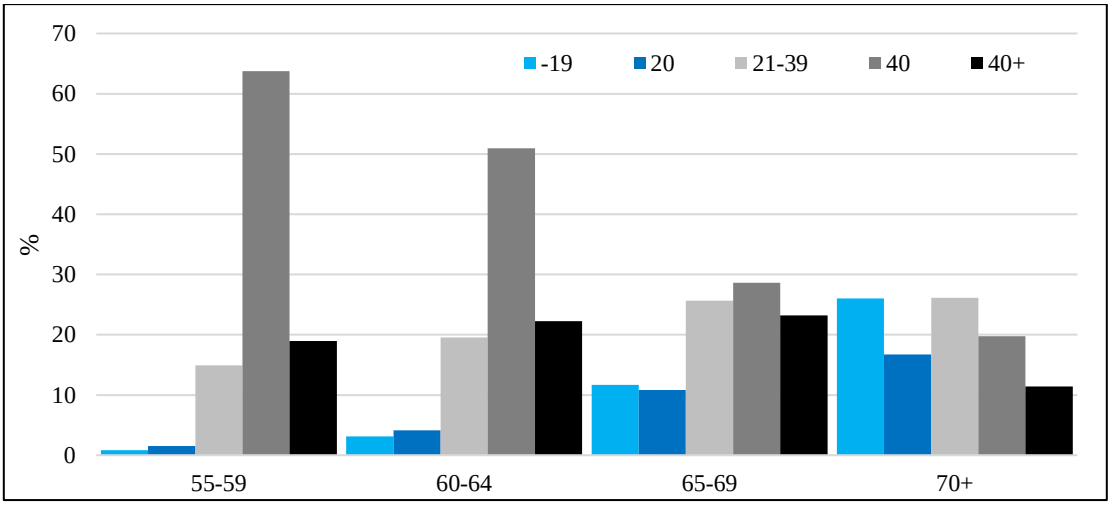
In terms of level of industries, the highest proportion of part-time jobs among workers in the age group 60-64 years occurs in accommodation and food service activities (I – 26.5%), trade (G – 20.8%) and education (P – 14.1%). In the age group 65-69 years of workers, most part-time jobs are in education (P – 58.5%) and in accommodation and food service activities (I – 51.6%). Among workers in the age group 70 years and older, the highest proportion of part-time jobs in public administration (O – 78.3%).

Full-time jobs (40 hours a week) predominate among workers aged 55-59, and a fifth of workers at this age works more than 40 hours a week. However, with increasing age, the number of hours worked decreases. At the age of 65-69 of workers, lower part-time jobs are more common, compared to younger workers, 25.6% of workers at this age work 21-39 hours a week, 10.8% work 20 hours a week and 11.7% fewer hours. However, a large proportion of workers at this age still work higher than full-time (23.2%), see Fig. 5.

A higher proportion of people who work 40 or more hours a week are among workers with a tertiary educational level. With increasing age, the differences in the number of hours worked between the educational level of workers increase.

In comparison between industries, construction (F) and public administration (O), there are the largest proportion of people working full-time or more. For workers aged 55-64 it is over 90% of people, for workers aged 65-69 it is about 60% of people.

Fig. 5: Hours Worked per Week by Age in 2019 (%)



Source: CZSO 2020, authors' calculations

There are several reasons for working part-time for older workers. Of course, health reasons predominate. For workers in the age group 55-59, health is an obstacle to full-time job for 50% people. The remaining 50% are not able to work full-time due to personal or family reasons or due to care of another person.

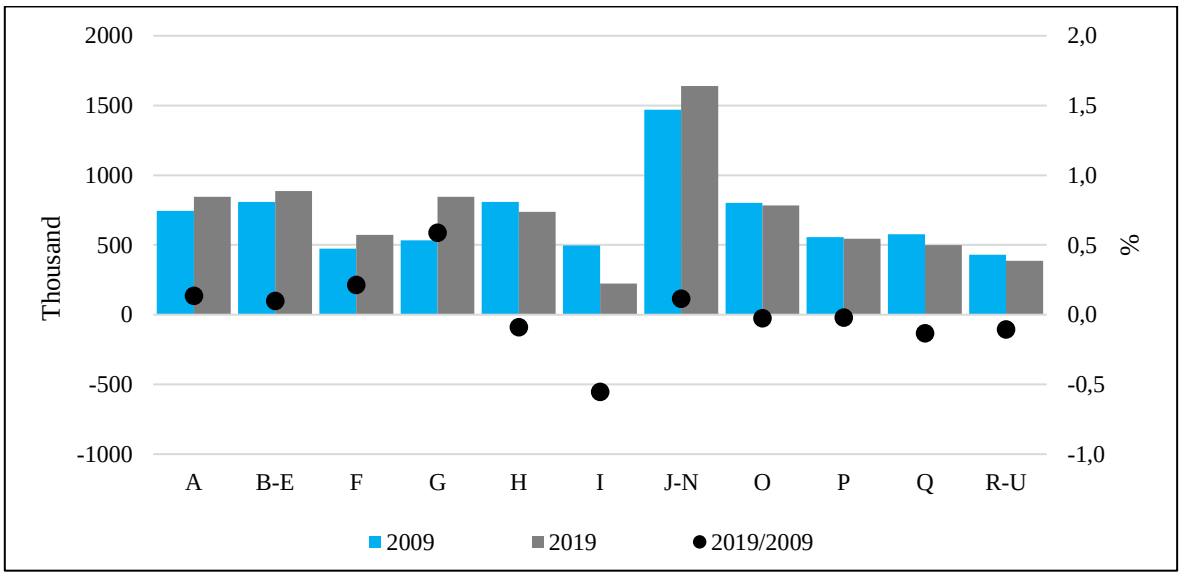
The study of Sewdas et al. (2019) or Hiesinger, Tophoven, (2017) indicate that older workers in poor health, and older workers with a physically demanding job, are at increased risk of health-related job loss. In the case of the Czech Republic, the data from LFS for 2019 show that health status were reason for leaving job for 35.4% workers in age group 55-59 years, for 47.8% workers in age group 60-64 years and for 28.1% workers in age group 65 years and older. These proportions apply only if we do not count retirement (early, regular or disability) as the reason for leaving job. Other reasons for leaving job of workers in age 55 years and older are dismiss from employment, end of temporary employment, personal or family reasons or care of another person.

3 Macroeconomic Issue of Economic Activity of Elderly People

Why is it important to analyse the economic activity of older workers at the level of individual industries, and with an accent on the educational level? Because there is a different value added in each industry and thus labour productivity. And older workers contribute to the value added to varying degrees. In some industries more, in some less. Labour productivity measurement represents one of possible methods to be used for determining impacts on population ageing to labour market and thus on the national economy. It is a revealing indicator among economic indicators presenting dynamic measures of economic growth, competitiveness and living standard (Šimková, Sixta, 2016). In accordance with Sixta et all. (2011) it is defined as the volume of output per input used. Labour input in this contribution is measured in the number of employees (in persons). In the number of workers 55 years and older, respectively. Output is represented by gross value added (GVA) at constant prices 2010.

When we look at the GVA per workers 55 years and older, we see that it reaches the highest value in industries J-N (Information and Communication, Financial and Insurance, Real Estate, Scientific and Administrative Activities). If we focus on the fastest labour productivity growth between 2009 and 2019, we see that the highest increases occurred in trade (G) and construction (F). There are the industries with a lower average age of workers. Generally, labour productivity of workers 55 years and older grew at a slower pace in sector of services, see Fig. 6.

Fig. 6: Gross Value Added per Worker Over 55 years in 2009 and 2019 (thousand CZK, %)



Source: CZSO 2019, 2020, authors' calculations

Conclusion

The issue of population ageing as well as labour force ageing have a lot of economic and non-economic consequences. Since the process is nearly inevitably, it seems logical to be prepared and accept it. Our paper dealing with the issue of productivity of older people should contribute to such discussion. We show that general statement of declining productivity is very simplified, and we have to carefully study situation within different industries of the economy.

Our results show that economic progress is certainly contribution the increase of the productivity of all age groups and it will smoothen observed decline in productivity by age. The issue of education has to be considered, as well. It is a subject of many demographic studies whether people with tertiary education have better health condition and therefore longer healthy life expectancy. This means that high proportion of people with tertiary education in services may lead to less serious effects in comparison with manufacturing. Since the proportion of older workers is rising, we can expect more difficulties in industries of agriculture, manufacturing and construction.

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