IS SKILLS’ RENEWAL IN AGEING WORKFORCE POSSIBLE? EVIDENCE FROM SERBIA

VERA GLIGORIJEVIĆ
E-mail: vera.gligorijevic@gmail.com

NATALIJA MIRIĆ
E-mail: natalymiric@gmail.com

PETAR VASIĆ
E-mail: vasic.dem@gmail.com

University of Belgrade, Faculty of Geography
Studentski trg 3/III, 11000 Belgrade, Republic of Serbia

ABSTRACT: This paper examines the role which different demographic groups (youth, persons of prime working age and older persons) have played in the overall change of the labour force (reproduction), changes in the educational attainment and changes in the distribution of occupations. This paper uses the pseudo-cohort analysis and cross-sectoral data collected from the Labour Force Survey. Main findings show that the educational attainment of new entrants into the labour force was higher than that of retiring workers over the time period of 2004–2014. The composition of occupational changes over the decade confirmed what had been observed for the educational attainment of the labour force. Young new entrants into strongly growing occupations (most of which were highly skilled) by far outnumbered the retirees over the past decade.

KEYWORDS: labour force, ageing, education, occupations, Serbia

INTRODUCTION

As it is known, Serbia will face numerous changes due to demographic factors in the decades to come. Due to longer life expectancy and a decrease of the fertility rate, the overall workforce, as well as the total population, is expected to age more rapidly, and with the retirement of the baby-boomers there will be less people of working age available. In the decades to come, more and more workers will have tertiary education and will be involved in some of the “new” occupations that are emerging nowadays due to structural economic
changes and human capital growth. According to the predictions considering the workforce, the participation rate in Serbia will fall from 67.6% in 2011 to 61.1% before 2050. Supposedly, over the three decades between 2011 and 2041 the number of persons of working age will decrease by 740,000, that is approximately 15% [Sekulić 2011, 2014].

The predicted values for the workforce are a result of demographic trends recorded over the past forty years. In the period between 1971 and 2011 the number of working-age persons decreased by approximately 700,000 (12%) over four decades. The impact of the shrinking workforce, best shown through the dependency ratio, was to a certain extent blurred by the global economic crisis which took away many jobs. The actual scope of the lack of workforce was at first underestimated, which is typical for Serbia, where economic transition and high unemployment rates result in a delusion of labour surplus. However, the demographic changes have taken their toll on Serbia: four decades ago, almost four workers were entering the labour force for each retiring worker, but in 2040 only two workers will be entering the labour force for each older than 65 [Radivojević and Nikitović, 2010].

Besides the labour reproduction problem, ageing also causes changes in the educational and professional structure of the workforce [Gligorijević 2012]. The focus on human capital as a driver of economic growth for developing countries has led to insufficient attention on school attainment [Hanushek 2013]. Improvements in educational attainment are the key to explaining productivity and income growth and the fact that a substantial portion of the demographic dividend is an education dividend [Cuaresma, Lutz and Sanderson 2014]. In attempt to estimate the impact of ageing on the trend of these changes, the methodology of this paper decomposes the respective changes according to the participation of each of the examined subgroups (youth, persons of prime working age, older persons). It was worthwhile to study how the labour force has changed over the last ten years, because that is precisely when the baby-boomers started retiring [Stojilković and Devedžić 2010]. The impending retirement of the baby-boom cohort represents the first time in the history that such a large and well-educated group of workers will exit the labour force. This could imply skill shortages in the economy [Neumark and Johnson 2013].

The first section of this part outlines the general methodological approach that will be used for analysis in the rest of the chapter. The following section decomposes the change in the educational attainment of the labour force over the period of 2004–2014 by demographic group. The same approach is then used to examine the components of change in the distribution of occupations, which underwent considerable alterations over the decade. The final section summarizes and concludes.

**METHODOLOGICAL APPROACH AND DATA**

This paper uses demographic methods to inspect the changes of the workforce (total growth, educational structure, occupational structure). Increase in the number of workers and the structural changes in the period between 2004
and 2014 are classified according to three age groups: new entrants, prime-age group and retirees. The contribution of each of the three groups was measured using the pseudo-cohort analysis. This means that two instants in time were observed as cohorts 2004 and 2014, and that the effects of emigrations and mortality were also taken into account.

Roughly speaking, the method rests upon the following general equality concerning the measure of change in a particular characteristic between time $t_1$ and time $t_2$:

$$\Delta(T) = E + \Delta(PA) - R,$$

where $\Delta(T)$ = the total change observed in the characteristic over the period, $E$ = new entrants over the period, $\Delta(PA)$ = change in the prime-age group over the period, and $R$ = retirees over the period. New entrants are the difference of the labour force aged between 15 and 34 in 2014 and the persons aged between 15 and 24 who were already in the labour force in the year 2004. This approximates young persons who entered the labour force between 2004 and 2014. Retirees are the difference of the labour force 55+ in 2014 and the labour force 45+ in 2004. Prime-age workers are the difference of the labour force aged between 35 and 54 in 2014 and the labour force aged between 25 and 44 in 2004 [OECD 2012]. The decomposition of change described above can be applied to each educational attainment level within the labour force. This kind of decomposition has been carried out for several characteristics, namely occupation or sector and gender, in order to provide an indication of the demographic changes for each of these characteristics.

In the same way that a real cohort of individuals shown in the panel data set would age by one year each year, the pseudo cohort is created by examining each demographic group over one year, all from that year in the data set the next year, all from that year the following year, and so on. Although the actual individuals making up the annual samples thus created would be different, since the Labour Force Survey (LFS) is a national representative survey, the individuals in pseudo cohort will be representative of the real cohort of this age in the national population [McIntosh 2004]. According to Evandrou and Falkingham [2000], the main advantages of using a pseudo-cohort approach are that it is less expensive and time-consuming, as the data already exist; it covers a long time-period, and sample attrition is not a problem, such as with panel data. Since a fresh sample is drawn from the surviving population each year, the cohort represents remaining representatives of that population. Despite these limitations, the pseudo-cohort analysis can provide useful insights into inter-cohort differences and inform policy making.

The Labour Force Survey was the main source of data for this paper. The reports issued by the National Bureau of Statistics were not sufficient, so we requested additional processing of the survey data. The reports from 2004 and 2014 (first quarter) were used to analyze the total growth, and the structural changes (education and occupation) were analyzed using the specially processed data which crossed education levels and occupation with the data considering relevant age groups. Total growth and the educational structure were analyzed for the active population, while the occupational changes only took into account employed population. The educational structure of the labour
force was analyzed on three levels: low (international equivalent is ISCED 2 – primary education/elementary school), medium (international equivalent is ISCED 3 and 4 – secondary education/high school) and high (international equivalent is ISCED 5, 6 and 7 – tertiary education/ faculty, masters, doctor’s study).

NET CHANGE

Over the past ten years, the labour force in Serbia has been decreasing by approximately 1.6% annually, and the demographic composition of this change is presented in Table 1. During the time period of 2004–2014, the labour force has shrunk by 1/6 of its original value, with the younger generations entering the labour market and the baby-boomers leaving it. The retirees leaving the workforce outnumbered the new entrants (young workers). The decrease suffered by the labour force between 2004 and 2014 amounts 16.4% and it was differently affected by each of the three age groups: new entrants, prime-age workers and retirees. Older workers accounted for about 75% of the total change, while the prime-age workers counted for 25%.

Table 1. Contributions to growth in the labour force by demographic group, Serbia, 2004–2014 (%)

<table>
<thead>
<tr>
<th></th>
<th>Total growth (A+B+C)</th>
<th>Young workers (A)</th>
<th>Prime-age workers (B)</th>
<th>Older workers (C)</th>
<th>Replacement surplus (A+C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Republic of Serbia</td>
<td>-16.4</td>
<td>14.8</td>
<td>-8.0</td>
<td>-23.1</td>
<td>-8.3</td>
</tr>
</tbody>
</table>


The overall inflow, was achieved solely by young workers. The replacement surplus in Serbia for the time period of 2004–2014 is -8.3%, which signifies that the simple labour force reproduction process never happened.

Of all the OECD countries, only Denmark has suffered a decrease in the labour force, whereas the other 21 countries’ workforces grew by 11% on average between 2000 and 2010. The average replacement surplus in OECD countries is 5%, thanks to the new entrants’ cohort which is twice the value of the one in Serbia [OECD 2012]. The enormous outflows of the baby-boomers is noticeable in all of the countries, but more developed economies combat the problem of shrinking workforces by stimulating the growth of women’s and immigrants’ activity rates. Immigrants participate in the overall labour force inflows of OECD countries by twenty, or in some cases, even forty percent [OECD 2012].
THE COMPOSITION OF CHANGES IN THE EDUCATIONAL ATTAINMENT OF THE LABOUR FORCE

The differences between new entrants and retiring older workers are very large. The portion of young new entrants having low attainment levels of education is 29 percentage points lower than that of the retiring older workers, and the percentage of new entrants having high attainment levels is 21 percentage points higher than in retirees (Table 2). The improvement in the attainment levels of the labour force across generations in Serbia was moderate, the labour force with low attainment levels declined by 30 percentage points, approximately. The results in Table 2 tell us little about volumes, about the relative numbers of entrants and retirees, and possible demographic imbalances resulting from large retiring cohorts compared with declining youth cohorts. To get a clearer picture of the possible imbalances, we proceed to the decomposition of the total absolute change in the labour force by attainment level over the 2004 to 2014 period (Table 3). The objective is to get a clearer perspective of the contributions of various demographic groups to the evolution of educational attainment in the labour force.

Table 2. Educational attainment of the active population, new entrants and retirees, Serbia, 2004–2014

<table>
<thead>
<tr>
<th>Attainment Level</th>
<th>Older Workers (Retirees)</th>
<th>Young Workers (New Entrants)</th>
<th>Percentage Points +/- Retirees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low attainment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Older Workers</td>
<td>34.7</td>
<td>-29</td>
<td>46.4 + 7.7</td>
</tr>
<tr>
<td>Young Workers</td>
<td>46.4</td>
<td>+21</td>
<td>18.8 + 21</td>
</tr>
</tbody>
</table>

*Notes:* The second and third columns of each attainment level give the difference between the percentage of persons in the attainment level within the group compared to the corresponding percentage within the retiring cohort.


Table 3. shows a moderate improvement in the educational structure of the labour force. In the period between 2004 and 2014, the number of highly educated people grew by 9.1% in Serbia. This change was mostly influenced by the group of young new entrants, whose portion in the highly educated category grew by 32.7%. The second largest effect on the rate was made by the retirees whose numbers decreased by 25.5%. The number of highly educated prime-age workers also increased, but insignificantly (only by 1.8%). For the time-being, a simple replacement of the high educated is possible, but the tiny replacement surplus of 7% and index young and older workers 2.2, brings into question further reproduction of the highly educated workforce, because
the younger generations, although more and more educated, are by far outnumbered by the retirees. The result is a modest enhancement, especially in comparison to the OECD countries whose tertiary education rates grew by 50% between 2000 and 2010 allowing the replacement of the retiring labour force cohorts by highly educated new entrants [OECD 2012].

Low educational attainment levels reduced by 40% in Serbia. This change was mainly influenced by the elderly, whose numbers reduced by 35%, and the prime-age generation (a 9% decrease). The younger generations had little impact on the change in low educational attainment levels (Table 3). Apart from the growth of tertiary education, the overall educational structure of the workforce is also improving through the growing secondary education.

Table 3. Composition of the change in the primary, secondary and tertiary-educated labour force, by demographic group, 2004–2014 (%)

<table>
<thead>
<tr>
<th></th>
<th>Young workers</th>
<th>Prime-age workers</th>
<th>Older workers</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low (primary)</td>
<td>4.1</td>
<td>-8.9</td>
<td>-34.8</td>
<td>-39.1</td>
</tr>
<tr>
<td>Medium (secondary)</td>
<td>13.8</td>
<td>-10.5</td>
<td>-17.9</td>
<td>-14.6</td>
</tr>
<tr>
<td>High (tertiary)</td>
<td>32.7</td>
<td>1.8</td>
<td>-25.5</td>
<td>9.1</td>
</tr>
</tbody>
</table>

Sources: Labour Force Survey 2004 and 2014

The rates of medium attainment levels in Serbia decreased between 2004 and 2014, which is quite the opposite of the scenario in the OECD countries, where secondary education grew in this time period, with the exception of Estonia and UK [OECD 2012]. The decrease of the medium attainment levels in Serbia was largely affected by the prime-age group with numbers declining by 30%. The group of young new entrants made the change less drastic, since their part in this category increased by 15%. It’s obvious that the ageing workforce and the retiring baby-boomers made the medium attainment levels drop, because secondary education was most common in this age group. Since the young new entrants’ group is relatively small, so is the number of young people with secondary education. The situation in other countries would be similar, if there wasn’t for the immigrants who predominantly hold secondary education diplomas and make up a large portion of the medium attainment level group. According to the OECD report [2012], in most countries, the attainment levels of new immigrant entries into the workforce were also higher than those of retiring cohorts, but not to the same extent as young resident entrants.

DEMOGRAPHIC COMPONENTS OF OCCUPATIONAL CHANGE

The data concerning occupation used for further analysis mainly follow the International Standard Classification of Occupations (ISCO), which classifies occupations into two four-digit levels, and this categorization has been
modified and expanded with a number of occupations from Internal Classification of Occupations of Republic of Serbia. However, for the analysis conducted here, the two-digit classification has been used. It represents an appropriate compromise between fine resolution, on the one hand, and sample variety, on the other, given that change is being measured at the level of individual occupation.

The rise of the demand for highly skilled labour force is a result of technological change. As a consequence of the rising demand for highly skilled labour, the educational attainment levels of young workers are higher, too. Theoretically speaking, higher attainment levels should automatically lead to structural changes, but this process takes time because of the initial problem of over-qualification for the existing occupations. The growth of highly professional occupations induces an expansion of the occupational sectors that employ unskilled labour and a contraction of the occupational sectors that require medium skilled labour. This phenomenon is referred to as job polarization, and it can be explained through the routinisation hypothesis: medium-skilled and manual jobs are substituted by technological improvements and the relative demand for jobs with non-routine tasks increases. Non-routine tasks include not only abstract tasks which require high educational levels, but also non-routine manual tasks, as in numerous service occupations such as elderly care, security services, etc. [OECD 2012]. Job polarization can also be caused by offshoring and outsourcing activities which often limit the number of jobs available in some occupational sectors.

In the period between 2004 and 2014, the number of employees has only grown in four occupations, three of which require highly skilled labour (business and administration associate professionals, general managers, legislators and senior officials and teaching professionals). The number of employees diminished in all other occupational sectors, especially in the ones that hire unskilled labour, such as market-oriented skilled forestry, fishery and hunting workers, market-oriented skilled agricultural workers, metal, machinery and related trades’ occupations, building and related trades’ occupations, business and administration professionals, assemblers (Table 4).

Table 4 also shows the individual contributions of each of the demographic groups to the overall changes in employment trends observed in each occupational sector over the period of 2004–2014. The number of older workers is decreasing in the growing occupational sectors, while the number of young workers is increasing in the developing occupations and decreasing in the contracting occupational sectors. Older workers outnumber by far the new entrants in all of the contracting occupations, but the situation is quite the opposite in the newly emerging occupational sectors, where the number of new entrants is three times larger than the number of older workers. This imbalance of new entrants and older workers is the key to estimating the net occupational change through generational change in the workforce. Prime-age workers contribute to the growing occupational sectors in a similar manner as the new entrants, while in the contracting occupational sectors they tend to resemble the retirees (Table 4).
Table 4. *Contribution of different demographic groups to occupational growth, Serbia 2004–2014*

<table>
<thead>
<tr>
<th>SOC code</th>
<th>Occupations</th>
<th>Growth in labour force (%)</th>
<th>New entrants (young workers)</th>
<th>Prime-age workers</th>
<th>Older workers (retirees)</th>
<th>Share of employment 2004 2014 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>Business and administration associate professionals</td>
<td>153.9</td>
<td>63.3</td>
<td>1034</td>
<td>-12.8</td>
<td>1.8 5.6</td>
</tr>
<tr>
<td>11</td>
<td>Chief executives, senior officials and legislators</td>
<td>97.3</td>
<td>56.1</td>
<td>57.4</td>
<td>-16.1</td>
<td>0.2 0.4</td>
</tr>
<tr>
<td>81</td>
<td>Stationary plant and machine operators</td>
<td>68.3</td>
<td>51.1</td>
<td>41.7</td>
<td>-24.4</td>
<td>1.4 3.0</td>
</tr>
<tr>
<td>23</td>
<td>Teaching professionals</td>
<td>64.1</td>
<td>34.9</td>
<td>37.6</td>
<td>-8.4</td>
<td>2.2 4.5</td>
</tr>
<tr>
<td>22</td>
<td>Health professionals</td>
<td>-15.3</td>
<td>15.4</td>
<td>-0.1</td>
<td>-3.8</td>
<td>1.6 1.7</td>
</tr>
<tr>
<td>51</td>
<td>Personal service workers</td>
<td>-15.8</td>
<td>29</td>
<td>-9.3</td>
<td>-36.4</td>
<td>5.5 3.2</td>
</tr>
<tr>
<td>52</td>
<td>Sales and related occupations</td>
<td>-29.2</td>
<td>10.3</td>
<td>-17.7</td>
<td>-21.8</td>
<td>9.2 8.1</td>
</tr>
<tr>
<td>61</td>
<td>Market-oriented skilled agricultural workers</td>
<td>-28.3</td>
<td>6.9</td>
<td>-43</td>
<td>-30.9</td>
<td>17.4 14.0</td>
</tr>
<tr>
<td>72</td>
<td>Metal, machinery and related trades occupations</td>
<td>-46.6</td>
<td>6.5</td>
<td>-21.4</td>
<td>-31.9</td>
<td>6.0 4.0</td>
</tr>
<tr>
<td>71</td>
<td>Building and related trades occupations (excluding electricians)</td>
<td>-53</td>
<td>2.6</td>
<td>-1.9</td>
<td>-36.7</td>
<td>3.6 2.1</td>
</tr>
<tr>
<td>24</td>
<td>Business and administration professionals</td>
<td>-71</td>
<td>9.3</td>
<td>-34.9</td>
<td>-45.1</td>
<td>3.1 1.1</td>
</tr>
<tr>
<td>82</td>
<td>Assemblers</td>
<td>-85</td>
<td>3.4</td>
<td>-48.8</td>
<td>-32.7</td>
<td>2.1 0.4</td>
</tr>
<tr>
<td>62</td>
<td>Market-oriented skilled forestry, fishery and hunting workers</td>
<td>-96</td>
<td>3.1</td>
<td>-36.5</td>
<td>-56.1</td>
<td>3.6 0.1</td>
</tr>
<tr>
<td>All occupations</td>
<td></td>
<td>-16.4</td>
<td>14.8</td>
<td>-8</td>
<td>-23.1</td>
<td>100 100</td>
</tr>
</tbody>
</table>

Notes: Table does not show all occupations.
Sources: Labour Force Survey 2004 and 2014

Over the past ten years, new occupations have emerged in Serbia and the 2004 LFS does not include them. Table 5. presents these new occupations. These occupations clearly exhibit job polarization and an imbalance of retirees and new entrants. Job polarization is evident from the fact that occupations related to ICT are developing (information and communications technology professionals, information and communications technicians, numerical and material recording clerks), along with various occupations that require unskilled labour, namely protective services occupations, food preparation assistants and personal care workers. Estimating individual contributions of each of the demographic groups to the growth of these new occupational sectors was impossible, but the age structure report from 2014 proves that the average age of the employees in these new occupations is significantly less than in other occupations.
Entries of young workers outcome the retirements of older workers in these new growing occupational sectors.

Table 5. *New occupations in 2014, Serbia (%)*

<table>
<thead>
<tr>
<th>SOC code</th>
<th>New occupations</th>
<th>Share of employment</th>
<th>Age distribution employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>Information and communications technology professionals</td>
<td>0.0 0.6</td>
<td>49.5 41.2 9.2</td>
</tr>
<tr>
<td>54</td>
<td>Protective services occupations</td>
<td>0.0 2.5</td>
<td>33.3 56.6 1.00</td>
</tr>
<tr>
<td>94</td>
<td>Food preparation assistants</td>
<td>0.0 0.3</td>
<td>35.1 57.6 7.1</td>
</tr>
<tr>
<td>43</td>
<td>Numerical and material recording clerks</td>
<td>0.0 2.6</td>
<td>27.6 54.7 17.6</td>
</tr>
<tr>
<td>35</td>
<td>Information and communications technicians</td>
<td>0.0 0.7</td>
<td>22.2 61.3 16.4</td>
</tr>
<tr>
<td>53</td>
<td>Personal care workers</td>
<td>0.0 0.5</td>
<td>20.9 69.9 17.1</td>
</tr>
</tbody>
</table>

Sources: Labour Force Survey 2004 and 2014

In strongly growing occupations, the large surplus of new entrants over retirees means that many of the jobs were newly created, and there appeared to be no shortage of candidates, among both new entrants and prime-age workers. This generational replacement does not seem to be an issue for Serbia when it comes to the growing occupational sectors, but the same can’t be guaranteed for the contracting occupational sectors such as health professionals or personal service workers. These occupations will be more than necessary in the future because an increasing number of elderly people will be in need of fostering.

**CONCLUSION**

There are three major problems in relation to the workforce. Firstly, the number of persons actively looking for a job or working is diminishing, while the number of retirees is growing rapidly, which increases dependency ratio. Unless certain measures are taken up, the combination of more retirees and less people working will affect the financial stability of the health and pension insurance system, because the growth of pension expense rates over the past few years is not sustainable in the long run [Zdravković, Domazet and Nikitović 2012]. Secondly, the educational structure of the labour force is improving very slowly. A large number of college graduates are retiring from their positions and probably not enough young workers with appropriate college degrees will take all of those jobs. Even though a college degree is seen frequently among young people entering the workforce, there simply are not enough highly qualified new entrants to even out the highly qualified retirees. The ageing workforce provides improvement in a sense, because the portion of unskilled labour in
the workforce is lessening, but on the other hand, many highly skilled people are leaving the labour force, which is a down side. Rejuvenation of the workforce doubles the number of college graduates in comparison to the number of persons with secondary education, but takes no effect on the portion of unskilled labour (elementary school only). The third problem is the dynamic change of the occupational structure. Job polarization of growing occupations in Serbia proves that the problem of an overqualified labour force might be slowly emerging. For the time being, there is no problem with generational shift in the high educated, growing, occupational sectors, but one might arise even when more baby-boomers retire from their positions in health and personal services that require secondary education.

That is why in the developed countries of EU, international migrations of the workforce are regarded as the key factor to closing the gaps that the baby-boomers will create by retiring. The gaps will be manifested in terms of educational imbalance between new entrants, prime-age workers and older workers, as well as in terms of a disproportionate occupational distribution. Until now, in Serbia, international workforce migrations have been regarded as a problem, particularly of the emigrations of highly educated young people. Only the most recent papers raise the question of workforce immigrations to Serbia [Nikitović 2009, 2013; Bobić 2013; Kupiszewski et al. 2012]. Today, there is no significant number immigrant workers in Serbia. There is no telling whether this is a good thing or a bad thing, because immigrant workers are usually less skilled than residents and their activities are often not taxed, but still their gains could spill over into the government budget and relieve the labour force. The experience of labour migration countries may be an instructive guide to what the future holds for countries expecting to increase their labour migration in the following decade.

REFERENCES


INTERNET SOURCE


http://dx.doi.org/10.1787/migr_outlook-2012-en

ОРIGNИALНИ НАУЧНИ РАД

ПОСТОЈЕ ЛИ МОГУЋНОСТИ ЗА УНАПРЕЂЕЊЕ ЉУДСКИХ РЕСУРСА У СРБИЈИ?

БЕРА ГЛИГОРИЈЕВИЋ
E-адреса: vera.gligorijevic@gmail.com

НАТАЛИЈА МИРИЋ
E-адреса: natalymiric@gmail.com

ПЕТАР ВАСИЋ
E-адреса: vasic.dem@gmail.com

Универзитет у Београду, Географски факултет
Студентски трг 3/III, 11000 Београд, Република Србија

РЕЗИМЕ: У овом раду истражује се улога старосних група (млади радници, примарни радни контингент и старији радници) у променама радне снаге које су се десиле у периоду 2004–2014. У фокусу су се нашла три процеса са којима смо се суочили на почетку овог века: опадање броја радно способних лица, промене образовног састава радне снаге и промене структуре занимања. Резултати истраживања
су показали да су старије кохорте значајније учествовали у бројном кретању радног контингента и „скупљању” знања и вештина, и поред тога што је образовни састав нових учесника (младих) у радној снази био повољнији у односу на најстарије запослено становништво. Обрнуто, млади радници су највише допринели промени структуре занимања, јер су доминантно учествовали у старосној структури две категории: занимања која су забележила пораст запослених у периоду 2004–2014. и тзв. „нова занимања“ која у 2004. години нису ни постојала.

КЛУЧНЕ РЕЧИ: радна снага, старење, образовање, занимања, Србија