ECONOMIC INACTIVITY OF POPULATION: BULGARIA’S KEY MATTER OF PUBLIC CONCERN

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Abstract: Dynamics and variation of the structures of economically inactive and unemployed populations in Bulgaria over the period 1992-2011 are analysed in the study. Four basic demographic characteristics – sex, age, marital status and place of residence, and two major socio-economic attributes – employment and level of education, were selected for the analysis. The results of a study on age-specific levels of inactivity and unemployment over the period mentioned are also presented as well as the main results of a 3-variant scenario for evolution of economic inactivity to 2030 in Bulgaria. The study is based on the data of the population censuses conducted in Bulgaria over the reference period.

Key words: economically inactive population, unemployment, modelling and forecasting of economic inactivity.

Introduction

Since the beginning of the new millennium the labour force evolution turned into one of the major challenges to management in modern era faced by European countries. One of the indices for the increasing awareness of its significance is the fact that specific numbers related to its evolution were included as key targets in the Lisbon strategy [European Council, 2003: 10] and its follow-up – Europe 2020 – where the first target concerns the increasing of the total employment rate of people aged 20-64 to 75% by 2020.

The developments of two very different processes are, broadly speaking, the main determinants of labour force evolution: demographic reproduction...
and level of economic activity. Each of them on its own represents complex phenomena resulting from a great number of demographic, economic, social, political, psychological, historical and other factors [Borissova-Marinova and Moraliyska-Nikolova, 2011: 32-36]. The existing very complex dependences and interrelations among determining factors act detrimentally, thus leading to a situation where there is no integral universal approach for modelling and forecasting of labour force or economically active population despite the abundant demo-economic studies published over the past few decades.

The significant changes in the demographic reproduction of many European countries observed since 1990s and their basic possible unfavourable impacts on economy development have been widely discussed for the past 15 years [see Grant, 2004; ILO, 2010; ILO, 2010a; European Commission, 2011; Eurostat, 2013, etc.]. As a result, the raising likeliness of substantial hindrances set by the demographic development to the achievement of EU key targets for employment and sustainable and inclusive economy was perceived at last by the governance and broad public.

All aspects of this issue concern to the fullest extent Bulgaria where the total fertility rate has been below the replacement level since mid-1980s [Coleman, 2009]. For more than two decades the country has undergone the impact of a long-standing negative natural change combined with relatively high, given this country’s size, level of unabated net migration [Sugareva and Lilova, 2010; Borissova-Marinova and Moraliyska-Nikolova, 2011; etc.]. As a result of these processes the population ageing accelerated and since the early 1990s a decrease in the size of working age population has been observed [Borissova-Marinova and Moraliyska-Nikolova, 2011]. The other side of the issue emerges from the long-drawn low levels (in European context) of economic activity and employment in the country [European Commission, 2014: 15-20; Borissova-Marinova, 2014b: 140-144] connected mainly with the transition period to market economy, the underlying socio-economic restructuring and the effectiveness of state policies to employment and economic activity implemented [Beleva, 2014: 680-681]. The issues concerning the labour force status and evolution in Bulgaria, if seen from that perspective, turn into a challenge to the future of country’s economy. This also fosters high competition among countries in Europe and elsewhere. The efficiency of steps undertaken to solve the above issues will extensively govern the socio-economic development of the country over the next decades.

The notion of “labour force reproduction” is introduced in demographic theory as a term following the same track of logic as does the notion of “population reproduction” as a process progressing among one of the population subgroups of utmost importance, nationwide. This term defines the result of all changes in the units of the dynamic statistical aggregate and their repercussions

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3 For the first time the results of research on possible significant impacts of population ageing, for instance, on economic and social development of the countries, were announced by UN in 1982 – see UN International Plan on Action of Ageing. (Available from: http://www.un.org/es/globalissues/ageing/docs/vipaa.pdf. [Accessed: 13.05.2015]).
on the size and composition of the population (or a determined its subgroup) over a definite period of time [Sugarev, 1975: 295]. This theoretical concept is used to study some aspects of the process of renovation of population and to analyse the process of generations' replacement [Pressat, 2006: 38]. Labour force reproduction is, as it was mentioned above, a very complex process having a multitude of dimensions. According to the nature of the characteristic [Stefanov, 1974: 397-431; Dumont, 1992: 206-225] underlying a specific study the attention could be drawn to: the demographic structures of the labour force by sex, age, level of work capacity, disability level, marital status, number of children of economically active persons, different territorial aspects (urban-rural, types of territorial units, settlements, etc.); the labour force economic structures by employment, unemployment, economic sectors, branches, professions, occupations, ownership, employment status, workplaces offer, wages and many others; the labour force social structures by different attributes of education, social group, income level, changes in individual value system, state policy on economic activity, etc.; as well as cultural, psychological, historical, or other labour force structures.

As the economic inactivity acts as the reverse of economic activity and labour force, well-timed retracing and analysis of the trends among economically inactive population stands as a task of research, but not only. Outlining the Bulgaria-specific issues in this area could transform in a substantial element of management and strategy for labour market development and socio-economic growth of the country. People outside labour force form an area still indirectly experiencing the results of the long-term and short-term policies implemented in the field of employment and unemployment in the country as well as those of the general economic policies and programmes which probably is one of the reasons why much less attention and research is dedicated to it, especially in Bulgaria [see Beleva, 2014: 680-683; Atanasova, 2014: 126-132; IME, 2015: 5-8; IME, 2015a: 26-30; European Commission, 2014: 22; Simkiss and Reid, 2013; MLSP, 2015].

The present study's subjects are: 1) the economically inactive population, and 2) the levels of economic inactivity in Bulgaria. The moment of statistical aggregate of economically inactive population is derived from the number of working age population by subtracting the labour force (or economically active population) in working age. Thus, the economically inactive population encompasses the persons in working age who, owing to different reasons⁴, are out of what labour force is. The main results of a study on the economic inactivity of the population in working age in Bulgaria in the transition period to market economy as well as the prospects for its evolution are briefly presented in this article. The study includes the results of an analysis of the longstanding trends of evolution of the economically inactive population in Bulgaria. The results

⁴ Among them, the most important and statistically observed are health-related reasons (disease or disability); family-related reasons (raising up children, taking care of another family member); continuation of studies; not actively job searching which does not allow the person to be reported as unemployed according to the definition implemented; and others.
obtained from a research on the variation of four basic demographic characteristics – sex, age, marital status and residence, and two major socio-economic attributes – employment and level of education, are analysed. The trends of evolution of the age-specific profiles of economic inactivity in Bulgaria over the period 1992-2011 are also traced. Finally, the results of the what-if scenario of evolution of economic inactivity in the country to 2030 are discussed. In order to focus better on the different aspects of the problem of economic inactivity in Bulgaria and as the flows between unemployment and inactivity are supposed to be relatively large, the analysis of the reference period also includes the subgroup of unemployed.

As economic inactivity is not directly observed, some limitations to the study should be brought into focus. The first issue on the agenda is the issue of accuracy in measuring the economic activity over the studied period. It largely depends on the integrity of the employment/unemployment’s definitions used. Two considerations should be mentioned here. On the one hand, it is crucial for Bulgaria to put the persons who have never worked before and seek a job for the first time into the group of unemployed. Thus, the level of economic activity/inactivity among the youngest age groups would be measured more precisely. Moreover, this consideration may be thought to be valid for some other age groups, too, especially women: the middle-aged groups are meant here when the persons have completed their reproduction plans and would like to enter the labour market but the unemployment definition used in Bulgaria does not allow including them. On the other hand, the evolution of the so-called “invisible economy” over the analysed period in the country also has its impact on the registered levels of economic activity/inactivity [CSD, 2013: 5]. This reasoning definitely may be applied in its entirety to the cases where the persons are employed only in “shadow economy companies” by virtue of what they are reported as economically inactive. These and some other reasons which here could not be developed in detail give us grounds to conclude that it is most probable that the calculated indicators of economically inactive population in the country do not reflect in an exact and complete manner the real levels of economic inactivity in the country over the reference period.

The issue of information availability and its quality for studying this subject over the past two decades comes second. Theoretically, there are two possible statistical sources of data for the research on economically inactive population and unemployed in Bulgaria: the population censuses and the survey on labour force. But it should be pointed out that for the most part of that period (i.e., until 2008) the data coming from these two sources could not be combined because of their inconsistency as there were notable differences in the applied methodologies in them. For example, even the definitions of employed and unemployed in the labour force survey did not comply with those of the population censuses thus making impossible any attempt for composing consistent and reliable time series. Not to mention the lack of such a crucial attribute as are the gender and the marital status in the data of the survey, of the 2-dimensional distributions in it or the disparities between the scales used for the basic demographic and socio-economic attributes such as age distribution with those used in the censuses. Furthermore, the published data on disability and earlier
retirement in relation with attributes such as economic activity and employment are insufficient, inconsistent and unreliable which makes impossible the regular and relatively precise measuring of those two outflows to economically inactive population. Very similar is the situation with the information concerning the outflows from the labour force owed to family-related reasons, education or others. The impossibility of composing consistent and reliable time series is the main reason why the present study is based on the data of the three population censuses conducted over the period analysed – in 1992, 2001 and 2011, and why such an important attribute as “reasons for inactivity” was not studied in this research.

Thirdly, the fact that several changes in the retirement age were made in Bulgaria over the period mentioned which creates some problems as to the comparability of the subject studied should also be taken into consideration. The working age upper limit was 60 for men and 55 for women until 2001 but in 1990s there was no upper age limit in the labour force survey for the unemployed. Since 2002 the upper age limit has been progressively increasing to reach nowadays 64 for men and 61 for women. As a consequence of the changes in the evolution of the processes and in the concepts for economic activity, inactivity and unemployment applied in the population censuses and labour force survey, the working age population included people over 16 to 60 for men and to 55 for women until 2001. Since 2002 the age groups from 15 to 64 have been registered in the censuses and the survey as working age population. As a result, any comparisons made of data and indicators, especially those related to the higher age groups, should be considered very prudently.

Dynamics of basic structures of economically inactive and unemployed populations in Bulgaria over the period 1992-2011

Each of the basic demographic and socio-economic characteristics analysed adds another dimension of the challenges before the Bulgarian labour market to cope with inactivity and unemployment.

The most important economic characteristic of working age population is its structures by employment and activity. Dynamics of the components of working age population by employment and inactivity in comparison to the employed over the period 1992-2011 (Fig. 1) are indicative for the magnitude of the problem. After the sharp increase in the number of economically inactive population in the beginning of 1990s (it rose more than twice as much in 1992 compared to 1985) the indicator didn’t progress any further to the end of the decade. But over the past decade it doubled again to reach about 1.7 mln inactive people in working age in 2011. In contrast to it was the evolution of the number of unemployed in the country: after the rapid increase in their number in the beginning of 1990s the indicator continued to rise and reached its peak in 2002 (over 1.2 mln in 2001) followed by a progressive and stable decrease to 2011 (0.5 mln). Hence, nowadays the size of the economically inactive and unemployed population in the country has become so large that it represents about half (43%) of the country’s working age population.
Among the main demographic characteristics of economically inactive and unemployed population is their distribution by sex (Fig. 2). The distribution of economically inactive population is distinct by a slightly larger percentage of men in 1992 (58.3%) which steadily decreased to 46% in 2011 at the expense of the increasing percentage of women. An opposite process is observed among the unemployed: starting from the exact half of the total number in 1992 the percentage of men rose progressively over the period and exceeded 57% in 2011. Thus, the long-lasting trends in sex distributions of inactive and unemployed populations in the country do not reveal serious overproportion of either of genders over the transition period as a whole. One of the possible demographic reasons for such an evolution is the great stability of the sex structures of total working age population and total labour force in Bulgaria. Such a situation requires a special attention and more in-depth research on specific reasons for inactivity and unemployment among each sex.

The age distributions of both categories analysed differ substantially in the beginning of the period but strong similarities going over the period could be traced between the two genders in each of them. The age structures of inactive men and women (Fig. 3) were dominated by the young people (aged below 29) over the first decade of the period. The percentage of that age group exceeded
80%. In the second half of the period their percentage decreased as much as twice while the percentage of the age group over 50 rose significantly: it tripled among men and increased 8 times among women. As a result of these processes the percentages of young and elderly among the inactive population in 2011 became very close (about 40%). The percentage of the medium age group also increased much over the past decade and reached about 20% in 2011.
The young and medium age groups prevailed in the age distribution of the unemployed (Fig. 4) having almost equal percentages from 1992 to 2001. Since 2001 their shares started decreasing slightly at the expense of rising percentage of the age group over 50 whose value reached one quarter in 2011 of the total of unemployed among both sexes.

The ageing of both economically inactive and unemployed populations in Bulgaria could not be thought as a positive trend at all. Given the relatively very low levels of economic activity and employment among the young people in the country, inclusive due to the lack of tradition in combining the period of education and training with some part-time employment, for instance, the age structures were more favourable in this sense in 1990s. The changes in these structures over the last decade resulted mainly from the economy restructuring but they also indicate worsening of the labour market conditions and complication of the problem because more than one third of the inactive and unemployed populations in 2011 (over 800,000 people) were aged over 50 which requires special measures, programmes and policies to cope with this imbalance.

One of the main demographic attributes often connected with economic activity and employment, especially of women, is the family status – i.e. marital status, number and age of children born, etc. Of all these attributes only the marital status de jure is observed in the population censuses in Bulgaria and even though not over the whole period analysed. Both structures are rather similar for each sex (Figs 5 and 6). The married prevail in the structures of inactive and unemployed by marital status followed by the category non-married and this is more clearly expressed among women (Figs 5 and 6). The two remaining categories – divorced and widowed, had almost negligible percentages over the period except for the widows among the inactive women (where their percent-
age remained about 12%). Hence, married people were more than half of the inactive and unemployed populations in 2001 (with exception on inactive men where this percentage was a little lower – 37%). Generally speaking, such a structure is not very different from that of the total working age population and this finding indicates the low impact of demographic reasons for such an evolution and the significance of the economic and social factors for it.

The trends in the urban-rural distribution of economically inactive population add another aspect to the problem. The urban-rural distribution of economically inactive population (Fig. 7) is prevailed by the towns for both sexes. Over 80% of the inactive people were living in them in the first decade of the
period. The percentage of inactive persons living in villages increased rapidly over the last decade and reached about one third of the total inactive population in 2011. This fact combined with the trend of rapidly increasing share of total urban population in working age and urban labour force is an indirect evidence of the deterioration and dissolution processes in the rural economic and social structures going in the large areas of the country.

The level of education was selected as a major social characteristic of the economically inactive population. Three categories were formed according to the educational degrees: primary or lower, secondary and higher level of education (Fig. 8). The low educational level prevailed in this distribution of economically inactive population over the period studied – its percentage was above 60% in the beginning of the period and decreased progressively to 50% in 2011. A considerable increase was observed as to the percentage of secondary education – from 30% to more than 40% in the end of the period so that its percentage became very close to that of lower education. Some growth is also registered among the inactive people with higher education, mainly over the second half of the period. The trends developing among inactive population of the country related to its educational structure are not positive, especially in the past decade. Two possible reasons for them should be mentioned: the very low, slow and dubious economic growth over the period and the lack of correspondence between the educational system of the country and the labour market demand’s requirements.

Fig. 7. Distribution of economically inactive population in working age by sex and place of residence, 1992, 2001 and 2011

Dynamics of economically inactive population and the evolution of its basic characteristics come as results of the interlaced influence of a great number of factors having impact on it both during the current and the preceding periods. Being a part of the demographic system of the society, inactive population’s development experiences the effects of the processes such as mortality and external migration schedules, morbidity and disability levels and intensity, etc. Fertility schedule determines to a great extent the future size and some of demographic structures of economically active and inactive population. The role of nuptiality and family behaviour models having impact on the activity levels of considerable groups of population also should be noted. On the other hand, being connected to the economic system of the society, inactive population and especially the unemployed are under the direct influence of processes as sectoral structure development, changes in its territorial structure, of the phases of the economic cycle, of the parameters of labour market demand, labour payment and work conditions, etc., as well as the increasing State interference in the labour market. Stated another way, the moment state and the dynamics of each inactive and unemployed populations’ structures result from the impact of complex and different combinations of the mentioned and other factors in a given period. These dependencies should be studied thoroughly and measured if possible in order to get a better understanding of the regularities governing the evolution of these categories of population.

Fig. 8. Distribution of economically inactive population in working age by level of education, 1992, 2001 and 2011
Age-specific levels of inactivity over the period 1992-2011 and prospects to 2030

The trends in the age-specific levels of inactivity over the period studied could be used as benchmarks of the research lines needed to measure and explain the flows between unemployment and inactivity in Bulgaria. The age-specific rates were calculated as a ratio between the number of inactive or unemployed people of each age group and the number of people in working age from the respective age group. The age-specific profiles of inactivity of men did not differ much during 1990s (Fig. 9) but over the last decade the rates of all age groups under the age of 55 rose significantly. As to the women, the increasing of age-specific rates started since the beginning of the period and did not stop until its end. It affected all age groups under the age of 50 but most substantially the people of medium age groups aged from 30 to 49. Some decrease was observed only in the rates of pre-retirement age groups and it was more clearly expressed in women’s profiles. The main possible reasons underlying such an evolution could be: firstly, the increasing flow of middle-aged unemployed entering the inactive population according to the terms of unemployment registration; and the rising flow of inactive people starting some economic activity in the invisible “grey” economy.

The age-specific profiles of unemployment (Fig. 10) show very well the significant weight of youth unemployment for both sexes over the whole period. The considerable rise in the rates of all age groups under 59 in 2001 and the subsequent huge reduction in their values to 2011 also affected in a similar degree both sexes. Thus, in the end of the period the specific rates for all groups aged under 45 for men and under 55 for women were already lower than the

![Fig. 9. Age-specific Inactivity Profiles of men and women in Bulgaria, 1992, 2001 and 2011, in %](image)

respective levels in 1992. Another particularity of the evolution of unemployment over the period analysed refers to the fact that women’s age-specific rates were higher than the respective ones of men only in 1992. After that and until the end of the period women’s rates stayed lower than men’s and this is valid for all age groups. Two assumptions could be mentioned here as possible reasons for such an evolution of the processes: firstly, the traditionally high rates of employment (meant in European context) of women in Bulgaria since 1920s to the end of 1980s; and secondly, the stronger inclination of women in comparison with men to accept a position designed for lower education and qualifications than theirs or to start a less paid job.

**Fig. 10.** Age-specific Unemployment Profiles of men and women in Bulgaria, 1992, 2001 and 2011, in %


**Fig. 11.** Total inactivity rates of men and women in Bulgaria over the base period 1992-2011 and projected rates according to the 3 variants of the scenario, 2015-

*Source:* Own calculations.
To study the prospects of evolution of economic inactivity to 2030 in Bulgaria a scenario was developed in 2014 as a part of a project commissioned by the Military Academy of Bulgaria [Borissova-Marinova, 2014c] and its main results are presented in brief. The last target convergence scenario of the National Statistical Institute to 2080 developed after the common Eurostat methodology was used as a demographic projection in it. The age-specific activity rates were projected using single linear extrapolation models. The scenario of economic activity levels was developed in 3 variants in order to reflect the close dependence between the levels of economic activity of 3 population groups (namely, the young and pre-retirement age groups as well as of some part of women, especially those with lower education) and the economic cycle phases.

In the first, realistic variant the projection period is divided into 3 parts: stagnation until 2016 related to overcoming the impact of 2008 economic crisis; slow and slight increase of economic activity to 2019 and gradual but steady rise of economic growth after 2020 by virtue of which the economic inactivity levels very close to those of 1985 are expected to be reached in 2035 (Fig. 11). This means about 17% total inactivity rate for both sexes in 2030. The second, optimistic, variant reflects the possibility of more favourable socio-economic development over the whole projection period: with slower decrease of economic inactivity until 2018 and constant medium-sized reduction of economic inactivity of both sexes afterwards. The target 1985 levels of inactivity are expected to be reached in 2035 according to this variant by most of age groups so that the total inactivity rates of men and women are expected to fall under 8% in 2030. The third, pessimistic, variant illustrates the possibility of unfavourable and slowed down socio-economic development of the country. Extension of base period’s end trend is expected until 2018, i.e. slight increase in economic inactivity levels, and low and wavering decrease for both sexes to the end of the projection period. Thus, the total inactivity rates are expected to be about 24% for men and 30% for women in 2030.

Fig. 12. Age-specific Inactivity Profiles of men and women in Bulgaria, 2015-2030, according to the 1st variant (realistic) of the what-if-scenario, in %

Source: Own calculations.
According to the first two variants, the most significant absolute and relative decrease of inactivity is expected in the lowest (under 24) and highest (over 55) age groups for both sexes (Figs 12 and 13). In the third variant some decrease is also expected, but to a much lower degree (Fig. 14). Nevertheless, it is expected to be higher for the youngest age groups and far too slighter for the highest age groups. The decrease of economic inactivity among the medium age groups (35 to 54) is expected to be rather lower. According to the first two variants, a significant decrease of inactivity levels of both sexes is expected in
the period 2020-2030: they will fall below 10% for the men in 2025 according to the 1st variant and in 2020 according to the 2nd one. According to the 3rd variant, the rates of the mentioned age groups will stay under 15% to the end of the period. For the women, the inactivity rates of the respective age groups will decrease below 15% in 2025 according to the 1st variant and in 2020 according to the 2nd one. According to the 3rd variant that threshold will not be reached even in 2035. As a whole, the differences in the age-specific inactivity rates between men and women are expected to decrease considerably towards the end of the projection period.

Among the possible reasons, underlying the projected evolution of inactivity in Bulgaria, three should be noted here. Firstly, the increasing average age at marriage and first childbirth as a result of which more young people after having finished their education start working and seeking opportunities to build a stable career. Secondly, the improving of economically active and especially of unemployed persons’ registration which is expected to occur with the gradual reduction of the invisible “grey” economy, inclusive the registration of unemployed who seek job for the first time. And thirdly, the gradual return to normal conditions of the labour market, including the increase of the number of workplaces demanded as total and for people with low qualifications, will allow not only to register the activity levels among them more precisely but as well to increase them, for instance among the Roma people.

**Conclusions**

The results obtained of the study could be summarized to the following conclusions.

Firstly, over the past 30 years significant changes occurred in the total and age-specific inactivity and unemployment levels in Bulgaria. The impact of the demographic factors over the inactivity levels is relatively low whereas the changes in the age-specific inactivity and unemployment rates which are closely related to the economy and labour market conditions development had prevailing impact.

Secondly, the basic trends in inactive population’s evolution over the base period consist in longstanding increase of its number, converging sizes of inactivity among men and women with increasing preponderance of women lately, rapid process of ageing affecting both sexes in almost equal degree and prevalence of low educated persons in this population subgroup.

Thirdly, the evolution of potentially inactive population to 2030 results from the long-term trends in the total population reproduction over the past several decades as well as from the changes in the future demographic and socio-economic development of the country and the labour market set in the hypotheses of the scenario.

On the fourth place, the developed three variants of the scenario could be used for studying the possible consequences of socio-economic evolution over the next 15 years on the development of economic inactivity in the country. Relatively little changes in the population reproduction regime were set in all three variants. Consequently, the changes in the potentially inactive population
are due to a great extent to the changes in the economic activity rates according to the hypotheses set.

The possible effects of the decrease in economic inactivity, illustrated by the first two variants of the scenario, explicitly show the significance of using this important resource as a counterbalancing force to offset the rather unfavourable trends of labour force demographic evolution in the base and projection periods.

The minimal changes in inactivity age-specific levels according to the 3rd variant would lead to huge reduction of potential labour force in the country and to unusual worsening of the demographic and economic burden’s indices.

The incorporation in the labour market of that part of economically inactive population which would like to work turns into a substantial factor for economic growth and social development of the Bulgarian society in the coming years. The necessity of solving the most urgent economic and social challenges and reaching the 2020 EU targets in the area of economic activity and employment convert the evolution and changes in the inactive population in a key challenge of the State government.

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