FUNCTIONAL DEPENDENCE OF PENSION USER CATEGORIES IN RELATION TO THE TOTAL NUMBER OF THE EMPLOYED

Jelena Birovljev

University of Novi Sad, Faculty of Economics Subotica, Serbia
✉ *birovljevj@ef.uns.ac.rs*

Željko Vojinović

INB
✉ *zv@inbajmok.com*

Vera Mirović

University of Novi Sad, Faculty of Economics Subotica, Serbia
✉ *vera.mirovic@ef.uns.ac.rs*

Abstract: When and how will one country take care of its workers who are left due to their injury, illness, death or old age without ability to care for their existence, and who contributed most of their life as tax payers. The role of the social system is just that. Social systems of intergenerational solidarity operate for decades in all European countries, regardless of their political and economic structure and level of development. Number of employees within a pension system is dependent on many factors, but it is also independent compared to the category of pensioners and possibilities of functioning of the pension system. The total number of beneficiaries directly derived from the number of employees in some earlier period, while the possibility of pension payments vary depending on the current number of workers. Some categories may behave differently in relation to the total number of employed in an economic system, but the functioning of the pension system is depending on this indicator. In Serbia, for years the number of deaths exceeded the number of births, large-scale migration of citizens, the progress of medical science as a factor of increased life expectancy of people, higher rates of unemployment, longer years of service until retirement and some other less significant factors influenced the disproportion in the number of employees in relation to the number of pensioners. This resulted in a very poor state of the pension system and caused the question of its future functioning. A social problem is getting more difficult to resolve, in quality and quantitative terms, because its main source of inflow of funds is in constant decline while expenditures are increased.

Preface

Every person has an aspiration to ensure their existence and life in the later years of their lives, when the ability to work is reduced, due to the greater possibility of illness or other inability to provide a living for themselves and their family. This can be achieved only through certain aspects of the accumulation of resources and their conservation in the real value through different types of investments.

There are many institutions dealing with this issue. All these institutions within the state system make a social system whose role is to ensure the economic security of citizens. The so-called social insurance includes pension, health and unemployment insurance. The aim of the social security system is to cover the risks of old age, inability, illness, disability and death. This provides a certain economic and social security of all citizens having legitimate income and their family members.

Pension insurance system

The pension insurance may be mandatory, prescribed by the law, or voluntary, depending on the citizens' free will for this kind of social protection. Aiming to protect the interests of its citizens, the state may set them a legal obligation to get insured against certain risks. The most often forms of citizens' mandatory protection refer to the insurance from motor liability responsibility, health and pension protection.

Pension insurance systems are divided into those based on the established contributions and those based on the established fees (Davids 1995, p.231).

The need to combine mandatory and voluntary pension insurance was born out of the need for survival of such system and the continuation of current funding due to a variety of adverse factors, all aiming to the maintenance of the pension system that should meet the following requirements:

- Adequacy - to insure pensions that will cover the daily existential needs of pensioners and prevent the spread of poverty to this group of citizens,
- Resistant - the pension system should remain resistant to all demographic and economic changes,
- Bearable - for the working population the system should not be burdensome to their income,
- Sustainable - thus conceived to meet the objectives it should be financially strong and long-term stable,
- Encouraging - for individuals who set aside from their earnings, despite their needs and preferences, it should be motivating enough to save responsibly for the future,

- Independent from the state influence and improper spending, and also sustainable without additional funding from the budget.

Fundraising through contributions from the insured or from other sources of income, investment or budgetary inflows, forms a mass that serves for securing the payment of pensions to current beneficiaries. In some pension insurance systems, the payment of compensation may be time fixed or for life (Hansel 1999, p.45).

Reforms are attempts to overcome problems faced by individual pension systems. The stronger connection between contributions and pensions, strengthening the long-term savings and creating funds that are the largest institutional investors create a climate of economic growth and development of the national economy.

Pension system reforms may be implemented in three ways: parametrically, systemically and functionally. Parametric reform includes raise of the age limit for retirement, more strict requirements for retirement, whether early or disability, reduction of pension amount, increase of contributions to the pension system, increase of competent institutions' efficiency and their administration. The objective of such reform is to improve the financial situation of the current financing system.

Systemic reform attempts to focus on creating an overall incentive of faster economic growth and development, accelerated development of the financial market and capitalized financial system.

Functional reform aims for stronger linking of contributions and pensions, reduction of unnecessary outflow of pensions, increase of work productivity and efficiency. This aims to reduce the informal labor market and the gray zone.

To implement the reform in a positive direction, there must be a macroeconomic stability, low inflation rate and long-term financial stability. Strong participation of financial institutions, banks and insurance companies, firm legislation and very strict control by the state are necessary. All of this with respect to economic principles, rules, financial profession and without the interference of other factors may give a positive result.

Reforms are most often implemented in the three pillars of pension insurance, combining the compulsory and the voluntary. The first step is to introduce the voluntary pension pillar, where the state transfers the sustainability of financial security from itself to individuals and employers. Private accounts of individuals shall be introduced to the system, thus forming the basis for pension and the amount thereof according to the motives of the individual. Thus, the risk of a shaken state, or mandatory system, is partially shifted to private, or voluntary pension system. First such reform of the three pillars, three independent yet mutually harmonized institutions, was conducted by Switzerland in 1984, and it is now being successfully applied in other countries (Georgen 2000, str. 208-209).

The second pillar is planned to be introduced after the third. It is a combination of mandatory and voluntary pension system and it is supposed to act as an alternative to the very unstable existing state system and insufficiently formed private pension insurance. It is an attempt of reforms that are conducted in Serbia.

All reforms are welcome if the current situation does not lead anywhere, only a question has not been raised how to implement these reforms, i.e., which goals should be met and whether it is possible to implement these reforms in the current economic and financial system.

State pension systems have been facing problems for decades, which is the case in a number of countries. Such problems result from general population trends in developed countries, extension of the population life expectancy and smaller birth rates. According to the United Nations estimate, share of European population older than 60 in 2050 will grow to 28% from 16% that amounted to in 2000, or 8% in 1950. Similar trends may be expected in North America and even Asia (Swiss Re, 2008, p. 7).

Functioning of the pension system in Serbia

Pension insurance includes all citizens who have legitimate income, on which basis the citizens and their contribution are recorded, and therefore their entitlement to receive pension. These are all employed persons or self-employed persons and farmers. According to the applicable regulation, the mandatory social insurance includes:

1. Pension-disability insurance,
2. Health insurance and
3. Unemployment insurance.

The rights resulting from the above insurances are as follows:

- The right to old age pension, in the case of living to the old age,
- The right to disability pension, in case of disability,
- The right to family pension, in case of death,
- The right to compensation of funeral costs,
- The right to compensation for bodily damage, in case of injury at work or professional disease.

Through mandatory contributions on earnings assets are accumulated in funds that are managed by the State or the supervisory authority through their institutions. These institutions are divided into state and private pension funds. In the case of control and supervision, the state usually appears through the central bank or the supervisory agency. In Serbia, control and supervision over the work of private pension funds are achieved by the state through the National Bank.

In most countries, pension systems were functioning according to the current financing system, which means PAYG (pay as you go) and grants from the state. Private pension funds were formed through the accumulation of capital.

There are three ways to exercise the right to pension through the three-pillar pension insurance. The first pillar has a mandatory social character. The second pillar is mandatorily formed as a supplementary insurance to pension insurance on the principle of personal accounts. The third pillar is the result of citizens' voluntariness in case strict legal regulations are created for its functioning, with strict control and supervision by the state.

**Figure 1 Accumulation and Payment Manner**
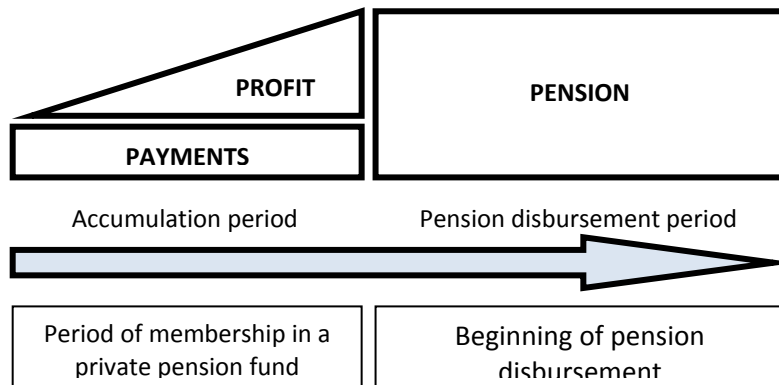
The first pillar is the result of current financing and intergenerational cohesion and solidarity. Equivalence of payments and disbursements, i.e. contributions and pensions is monitored annually, and it functions more according to the system of proportion and not of equalization. The contributions are usually a percentage of the salaries of the employed, and the amount of pension depends on the length and the amount of investment. It can be determined based on the amount of earnings in a shorter or longer period of contribution allocation.

In any case, in order for this ratio mechanism to survive for a longer period of time, and it is continuous for a special purpose, it is necessary to satisfy certain principles of operation:

- ➢ Mandatory allocation of contributions,
- ➢ Non-assignation of the right to pension,
- ➢ Solidary participation of all employees,
- ➢ Equalization of investment and reception of pension,
- ➢ Generational cohesion and solidarity,
- ➢ Resistance to various demographic and economic disorders,
- ➢ Maturity of risk and fulfillment of obligations.

According to the principle of functioning of this system based on proportion, and not equality, possible fluctuations in the sufficiency of financial reserves to cover liabilities are obvious. Therefore, an option subsidy by the government is provided.

Figure 2 Organization of the State Pension Fund, PIO (Pension and Disability Insurance)
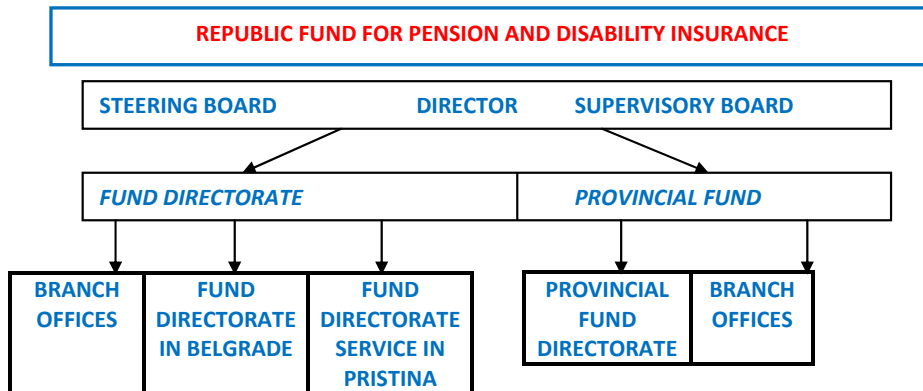
For the purpose of more rational and more successful performance of duties, as well as easier accessibility to achieve the right to a pension, the State pension fund is organized according to functional and territorial principle into the Fund Directorate, the Provincial Fund in Novi Sad, the Directorate Service in Pristina, 35 Branch Offices, 13 Branch Office Services and 121 Substations. The Fund organs are:

- the Steering Board,
- the Supervisory Board and
- the Fund Director.

The Steering Board (StB) has 7 members, representatives of the insured, employer and beneficiaries of the right. It is elected every four years. President and deputy president are elected by the SB with the consent from the Government of the Republic of Serbia, every two years.

This Board also elects the fund director every four years, with the consent from the Government of the Republic of Serbia.

The Supervisory Board (SuB) is elected for four years by the representatives of the insured and beneficiaries of the right. The President and the deputy are elected by the SuB. The role of the StB is to supervise financial operations of the Fund, to review the implementation of the law and other regulations regarding the financial operations, to control the implementation of the StB's decisions, to submit reports to the Government of the Republic of Serbia at least once a year, and to the Fund StB quarterly.

This is a common principle of pension insurance in stable economies, with a large number of employees and a small number of pensioners, i.e. with a younger age structure of the population and higher birth rate of the community.

In Serbia too, the principle of capital accumulation of a voluntary nature and it is the result of financing by an employer or individuals motivated to savings. How much is this system interesting for the European countries and their citizens from the moment of formation of the common currency - euro, cannot be supported with relevant data in this paper. The fact is that the European common currency has experienced a decline in value in regard to other currencies, and we therefore express doubts about the possibility of these funds to earn income that can cover the foreign exchange loss.

The main objectives of investing in these funds are safety, liquidity and expected income. The investment activity of pension funds is strictly regulated by the investment policy and the law in order to protect the members of the fund.

According to international practice and the manner of determining pensions, we have two types of capitalized funds that we also call:

- Funds with defined contribution plans,
- Funds from defined benefit plans.

In Serbia, the Law on Voluntary Pension Funds enables contracting pension plans with defined contribution schemes. The principles of operation of these funds are:

- members' voluntariness,
- allocation of investment risk,
- membership equality,
- transparency of work and
- accumulation of assets.

The management of funds is entrusted to the Fund Management Companies. All contributions and receipts on various grounds are kept in the custody bank accounts. Thus formed, the funds' assets are legally separated from the cost a Fund Management Company has.

Pension funds' assets are recorded as annuities, and since we have an accumulation period and a disbursement period, there are two annuities. The funds are kept in individual accounts, what allows tracking of each individual payment and investment effects. Pension annuity contracting is not included during the accumulation.

Payment of the pension annuity works under general principles of insurance, which means taking a risk by the insurer. Insurance companies usually assume both risks – the investment risk and the risk of death. After retirement, funds from personal accounts shall be transferred to the life

insurance company, where the height of the annuity shall be determined. Otherwise, if the fund member assumes the risk to themselves, the funds shall remain in their account, and the amount of pension is calculated through different formulas, while the withdrawals are possible up to the amount of funds in the account.

The pension fund in Serbia does not act as a legal entity, but is established as a special purpose fund. Permission to establish a fund is issued by the National Bank. Control and supervision over the fund operation is very strictly conducted by the National Bank of Serbia, which is the institution entrusted with the issuance of a fund management decision. Assets of the Management Company and the Fund's assets are strictly separated. The Fund's assets may be subject to forced collection, lien, mortgage; it cannot enter into bankruptcy or liquidation mass of the Company, the custodian bank or a Fund member, neither can it serve to settle obligations of any of the listed persons towards third parties.

The Fund realizes revenues not only through the payment of contributions by the insured, but also through the investment activity. First of all, it is necessary to point out that there are limits, referring to the funds' investments and they are strictly prescribed by law:

- up to 10% of assets may be invested in securities of a single issuer, or more if they are related parties, except the securities issued by the Republic or the National Bank,
- up to 5% may be invested in securities of the organizer of the pension voluntary fund who has joined that fund.

It is prohibited to invest in securities issued by the Management Company, custodian bank, brokers or dealers working for the Fund, stockholders of the Management Company or other related persons to all the above listed persons.

Results of the pension funds in Serbia

The rate for the determination of contributions for pension and disability insurance is 26%. For insured persons in regular employment the base is their personal income up to a maximum of RSD 3,685,560.00 annually.

For those who pay the contributions by themselves, the lowest base is 35% of the average Republic salary for the previous quarter, and five such averages at the most. The bases are adjusted every three months, according to the movement of earnings, and there are 13 bases available that cannot be changed, which for the first quarter of 2015 amount to.

In 2007, there were 1,569,048 pensioners listed of the Pension Fund, and at the end of 2013 there were 1,722,649. To make things even more difficult and worse, as the number of pensioners was increasing, the number of employees was decreasing. According to the data of the Pension Fund, published in the

Statistical Bulletin, the ratio of pensioners and employees in 2007 was 1: 1.5, and at the end of last year it was 1 to 1.1, i.e. every employee has already had a pensioner for themselves. At the end of 2013, there were 1,722,649 pensioners and 1,875,964 insured - employees. The employees included not only workers, but independents or artisans, farmers and military personnel as well. However, when you take only the ratio of pensioners who have achieved a pension from employment and employees then the ratio is even lower: 1: 1.

Table 1 Ratio of the Number of the Insured and the Number of Beneficiaries

year	Number of beneficiaries	Number of insured	ratio
2005	1508976	2422338	1:1,6
2006	1544048	2358165	1:1,5
2007	1569555	2317270	1:1,5
2008	1580339	2232861	1:1,4
2009	1603668	2116174	1:1,3
2010	1626581	2024020	1:1,2
2011	1638645	1963842	1:1,2
2012	1703140	1899557	1:1,1
2013	1722649	1875964	1:1,1
2014	1739162	1850000*	1:1,1*

Source: www.pio.rs. Annual Bulletin, insurers and pension beneficiaries, 2005-2014, p. 9-12, examined 02.04.2015.

Table 2 Review of Pension Beneficiaries Per Years Per Category

year	Beneficiaries from the category employed	Beneficiaries from the category independent activities	Beneficiaries from the category farmers
2005	1239573	45225	224178
2006	1267574	47181	229293
2007	1290611	49872	229072
2008	1306394	50959	222986
2009	1324338	54450	224880
2010	1345733	58368	222480
2011	1357846	61851	218948
2012	1420892	66718	215530
2013	1438016	72036	212597
2014	1454332	77047	207783

Source: www.pio.rs. Annual Bulletin, number of beneficiaries by categories of insured, 2005-2014, p.3, examined 07.04.2015

The right to the beginning of pension payment from the state fund shall be acquired on the basis of fulfilling the conditions, which is the so-called "full pension" when one lives to the legally prescribed age and service of work. Reforms to the Law on Pension and Disability Insurance were going in the direction of raising the age limit and years of service in a way that each year the right to the old age pension would move by four months up until the year 2023.

During the period 2007-2013, the amount of pension in Serbia increased by RSD 6,745.00, what in percentage is not a small amount compared to the minimum contribution, and counting on the 1.7 million pensioners it is a big impact on the Fund, and therefore on the budget.

Serbia's problem is not only increased pensions, but also an increasing number of beneficiaries in regard to the number of the insured. The number of new pensioners has increased by 153,454, which on average amounts to almost 60 pensioners more at the teller of the Pension and Disability Insurance Fund every day. The number of people who got retired was greater, of course, because the figure of 60 people per day includes a difference between those who got retired and those who died.

The following graph shows trends in the number of insured and all user categories in the observed period of 10 years. By curvilinear movements we see that the insured are approaching the total number of users and are almost equalized. The category of employees and self-employed has the same trend, while users from the category of farmers have the opposite movement and in terms of insured persons and users, this movement is positive.

We will show the interdependence of the number of insured and pensioners in the regression and dynamic analysis.

Graph 1 Trend of the Employed and All Categories Beneficiaries
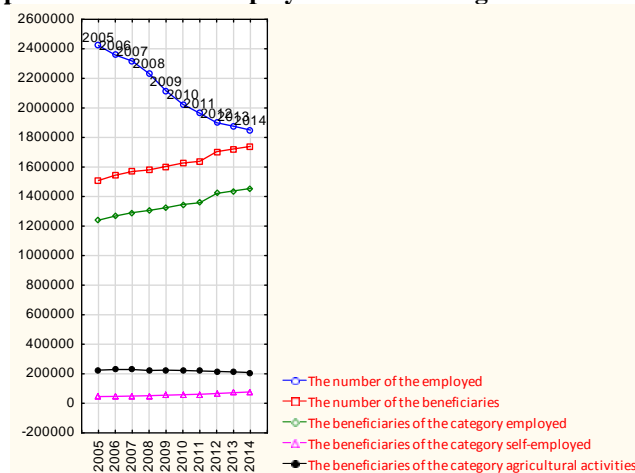
Source: Authors

Regression sample analysis

One of the main tasks of the sampling method is to evaluate the unknown parameter values of the basic set, arithmetic mean, variance, standard deviation, and parameter proportions based on the calculated sample statistics. The second part of the task of sampling method is to check the validity of a hypothesis or an assumption which is formulated or set in advance on the unknown basic set parameter values. The hypothesis implies a scientific assumption based on the known facts in order to derive with a certain conclusion. When a hypothesis about the unknown basic set parameter value is formulated, then check or testing the truth of the hypothesis formulated is done on the bases on the information from a randomly selected sample. The procedure used to check the formulated hypothesis is called the statistical hypothesis testing.

Depending from the type of set hypothesis, or whether it is simple or complex, two types of testing are possible:

- Two-way, two-sided or symmetrical test
- One-way, one-sided or asymmetrical test

If testing of the value of a basic set arithmetic mean is performed based on normal distribution, where the null hypothesis Ho has been formulated in the form of Ho:$\mu = \mu_o$, then we are talking about the two-way test, where the error risk $\alpha$is equally divided to both ends of the normal curve.

If the null hypothesis Ho reads Ho:$\mu \leq \mu_o$, then we are talking about the one-way or asymmetrical test, where the total error risk α goes to the right side of the normal curve.

Here, we have tested the hypothesis for the difference of arithmetic means on two identical samples, making the comparison of the "total number of employed" variable with the variable:

1. The total number of beneficiaries
2. The beneficiaries of the category employed categories,
3. The beneficiaries of the category self-employment category,
4. The beneficiaries of the category agricultural activity.

The tests are two-way. Based on the tested hypothesis of equality of arithmetic means of two identical samples we have come to the conclusion that there is statistical significance in all of the tested pairs because their significance is not greater than 0.05.

Based on regression analysis, we will try to come to a conclusion about the correlation between the total number of employed with each category of beneficiaries.

Table 3 Paired Samples Test

	Paired Differences					T test	no.	Statistical significance
	Arithmetic mean	Standard deviation	Standard error of the arithmetic mean	95%r Interval of trust				
				Lower limit	Upper limit			
Pair 1 Total no. of the employed – The total number of beneficiaries	482342.80	289842.29	91656.18	275002.11	689683.48	5.263	9	.001
Pair 2 Total no. of the employed – The beneficiaries of the category employed	761488.20	285546.11	90297.60	557220.81	965755.58	8.433	9	.000
Pair 3 Total no. of the employed – The beneficiaries of the category self-employed	2047648.40	224436.17	70972.94	1887096.43	2208200.36	28.851	9	.000
Pair 4 Total no. of the employed – The beneficiaries of the category agricultural activities	1885244.40	208037.15	65787.12	1736423.58	2034065.21	28.657	9	.000

Based on the diagram of dispersion it can be concluded that the points are grouped from the upper left to the lower right corner of the coordinate system which indicates the existence of a negative regression linear relationship between the movement of the total number of users and the number of insured. Correlation relationship is strong.

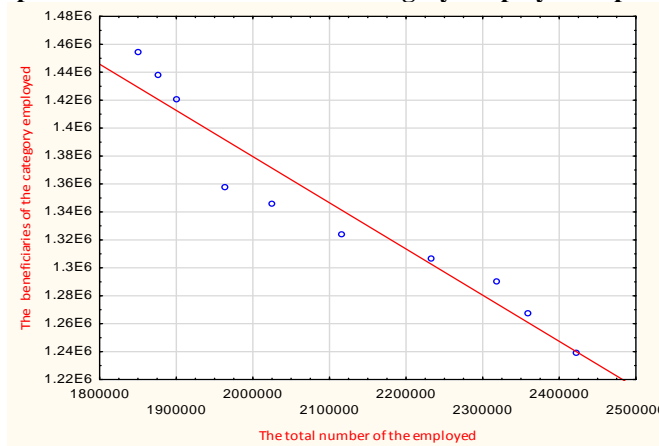Linear regression equation reads: $Y = 2,362000 – 0,3506X$

Graph 2 The Total Number of Beneficiaries Depending
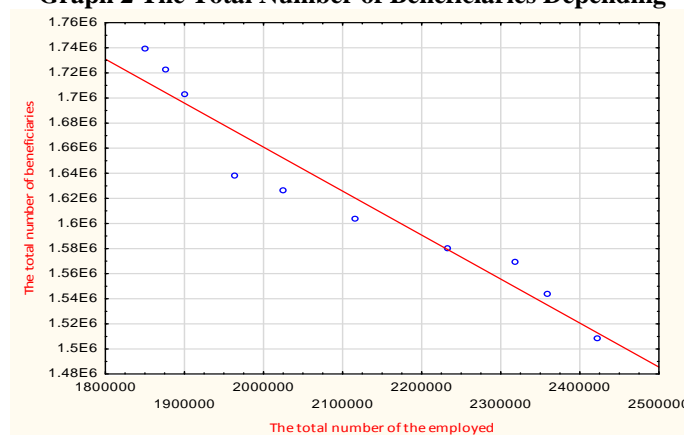
Source: Authors

Based on the diagram of dispersion it can be concluded that the points are grouped from the upper left to the lower right corner of the coordinate system which indicates the existence of a negative regression linear relationship between the movement of the total number of users from the employed category and the number of insured, that is employed persons. Correlation relationship is strong.

Linear regression equation reads: Y= 2,041000 – 0,3307X

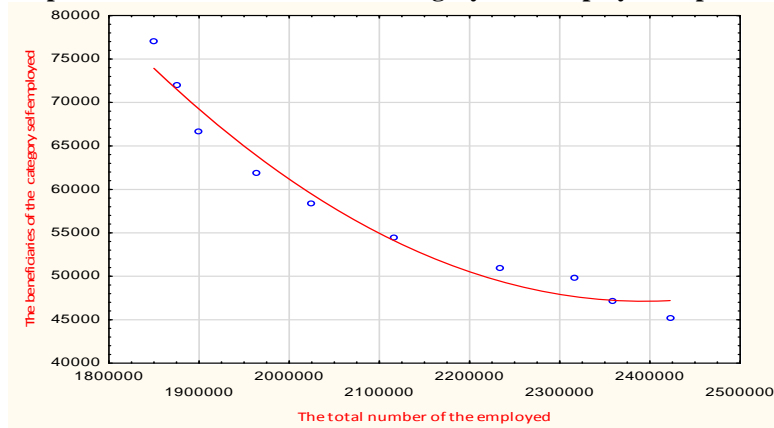**Graph 3 The Beneficiaries of the Category Employed Depending**

Source: Authors

Based on the following diagram of dispersion, which shows users from the category of self-employment in relation to the total number of insured, it can be concluded that there is a curvilinear correlation shaped as square parabolas, because curve line shapes of square parabolas can be adapted to the original data pairs. It may be noted that the correlation is strong as the points in the diagram of dispersion are grouped around an imaginary parabola that is interpolated between points in the diagram of dispersion.

Linear regression equation reads: $Y= 5,670300 – 0,4344X +0,0090747X^2$
Based on the following diagram of dispersion it can be concluded that there is a curvilinear correlation between the total number of insured and insured from agriculture category, shaped as square parabolas, because curve line shapes of square parabolas can be adapted to the original data pairs. It may be noted that the correlation is strong as the points in the diagram of dispersion are grouped around an imaginary parabola that is interpolated between points in the diagram of dispersion.

Linear regression equation reads: $Y= -2,69110 +0,4364X -0,0095581X^2$

Graph 4 The Beneficiaries of the Category Self-Employed Depending

Source: Authors

Graph 5 The Beneficiaries of the Agricultural Activities Category
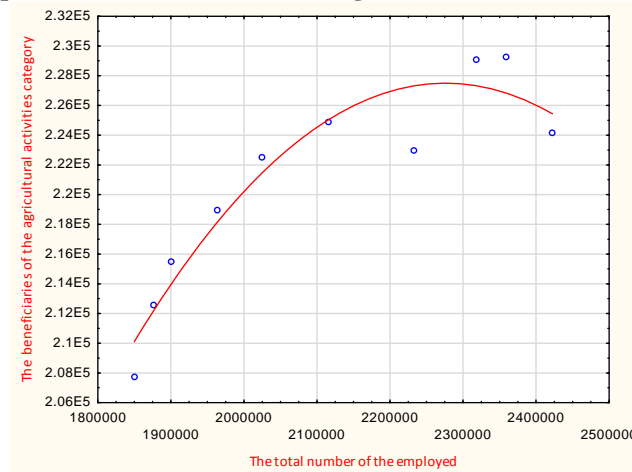
Source: Authors

Dynamic analysis

If the variations of feature values in the observed time series are such that they can be presented by continuous increase or continuous decrease in the feature value, then linear or rectilinear trend may be adapted to this time series. The general form of a linear trend equation reads:

$$Y = a + bx$$

X – indicates the time that may be a year, a quarter, a month, or it indicates an independent variable or argument.

a – indicates a parameter that shows the theoretical value of the linear trend if the value of the independent variable is x= 0,1,2,….. i.e. it shows the theoretical trend value at the origin, whereby the origin or the zero year may be any year in the observed time series.

b – indicates a parameter called the direction coefficient, and it is in fact the angle tangent closed by the linear trend function with the positive direction of the abscissa axis of the rectangular coordinating system. The parameter b shows the absolute increase of the observed phenomenon if b> 0, or an absolute decline of the phenomenon if b <0, provided that the value of the independent variable x increases by one unit of time.

The equation of a linear trend in the number of insured reads:

$$Y = 2106000 - 53266,9298X$$

It shows that the movement of the users in employing category, or the total number of insured persons, will decrease annually on average of 53,267 people.
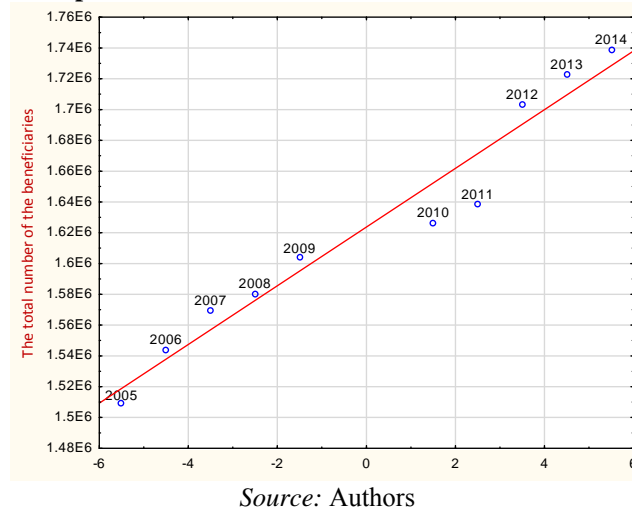
Graph 6. Trend of the Employed
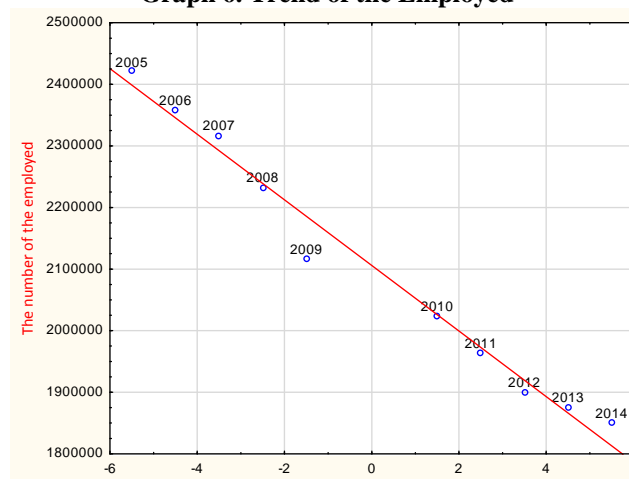
Source: Authors

The equation of a linear trend in the number of insured reads:

$$Y = 1623700 + 19069.5404X$$

It shows that the number of beneficiaries will annually increase on the average of 19,070 people. Thus, each year, the pension fund will have increased in the number of users in relation to the reduction in the number of insured, that is employed persons, for who the inflow in the fund is realized.

Graph 7 Trend of the Total Number of Beneficiaries

Source: Authors

The equation of the linear trend of the users from the category of employed reads:

$$Y = 1344500 + 17999{,}0842X$$

It shows that the movement of the user from the employed category will increase annually on average of 17,999 people.

Graph 8 Trend of the Beneficiary Category Employed
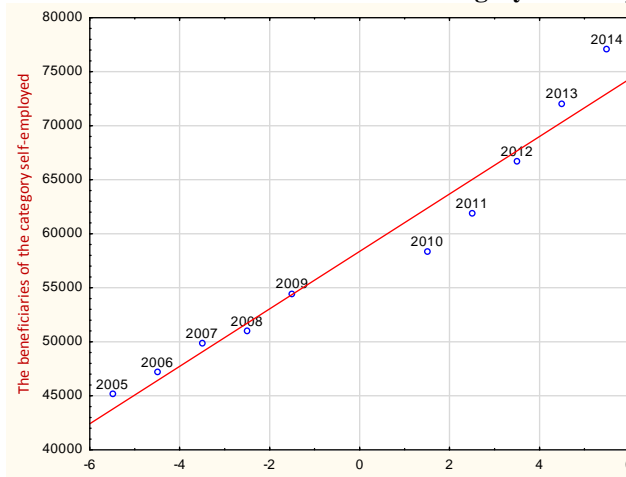

Source: Authors
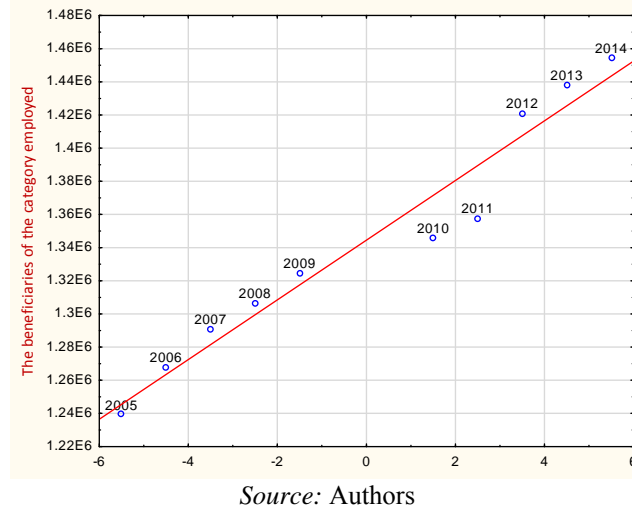
The equation of the linear trend of the users from the self-employment category reads:

$$Y = 58370,7 + 2659,2035X$$

It shows that the movement of the user from this category will increase annually on average of 2,659 people.

**Graph 9 Trend of the Beneficiaries of the Category Self-Employed**

Source: Authors

The equation quadratic trend of the users from the agricultural category reads:

$$Y = 224030 - 1588,7474X - 228,4524X2$$

This means that the number of users in this category will annually grow for 228, which also presents the least burdensome category in the pension system.

Graph 10 Trend of the Beneficiaries of the Category Agricultural Activities
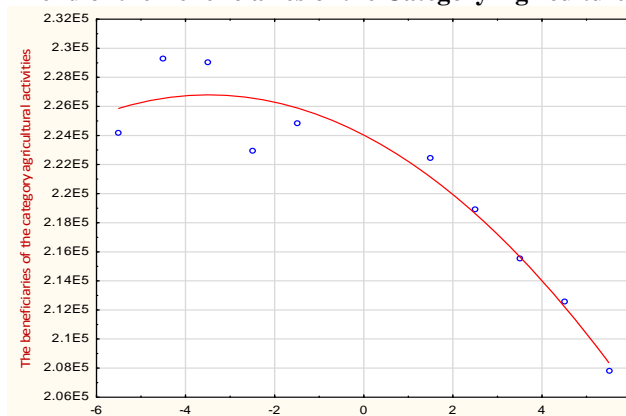
Source: Authors

How quickly have the workers retired in order to implement privatizations, and since the country was not afraid to send them all to the pension fund counter, is best illustrated by the fact that the independents have still preserved an extremely high ratio between their pensioners and their employees.

Namely, at the end of last year there were 72,036 pensioners coming from independent activities (self-employed), and as much as 221,031 craftsmen allocated contributions for them is. Therefore, the ratio between the pensioners and the employed there is 1 to 3.1. This "ideal" ratio that all of Serbia is missing for the pension system to be sustainable is recorded only with craftsmen; however, as in the past few years they have been sharing the fate of the entire pension system because their Fund has been merged to the single pension fund of Serbia, it does not mean anything to them as the announced reduction of pensions applies to them as well (www.pio.rs). The agricultural pensioners have the worst ratio in the pension fund structure. For each pension to the farmers, less than one contribution is paid into the fund, specifically 1: 0.8, and this is the reason for extremely low agricultural pensions, where the average fails to reach 10,000 per month.

In addition to these indicators and the situation in the pension system, it was necessary to seek amendments that followed by the Law on Pension and Disability Insurance of 1st January 2011. The requirement for retirement is 65 years of age and minimum 15 years of service, or 45 years of service for men. With this, one is entitled to a full old-age pension. The requirement for women was 60 years of age with a minimum of 15 years of service. The condition of 60 years of age was changed, adding 6 months for each year in the period 2014-2020, so that the requirement in 2020 will be 63 years of age. 45 years of service are unconditional to retire with the full old-age pension. The average age of all male pensioners is 63, and female is 59. Men's average service is 35 years, and women's is 28 years.

With the early old-age pensions, the age requirement for men has been increased from 55 to 60 with length of service of 40 years, and for women, it has been increased from 54 to 60 years of age with an increase of service from 38 to 40 years in 2015.

Deduction for early retirement may amount up to the maximum of 20.4%, while the monthly deduction for unfinished age for retirement under the law is 0.34% for each month.

According to the latest statistics of the Pension Fund, the pensioners at Zabar in the municipality of Pozarevac receive the minimum pension, where the average amounts to RSD 12,124.00, in Osečina13,185.00, Aleksinac 13,978.00, which is in the range from 100 to 115 euros per month. The biggest pensions are received in Belgrade, with the average of 29.120 dinars -Municipalities of Savski venac 35,483.00, Stari Grad 34,177.00 and Vracar 32,588.00. In Vojvodina the biggest pensions go to Novi Sad 27,808.00 and Pancevo 25,023.00 and the lowest to

Backa Topola 22,839.00. Most pensions are former employees of the Federal Ministry of Interior with 41.125 dinars on average and the Republic Ministry of Interior with 40,324 dinars, while the minimum pensions amount to about 22,474 dinars.

The constant shifting of the age limit for retirement of men and women is not the only reason why in December 2014about 40,000 more of them filed an application for pension in the Branch Office Belgrade, but this figure largely includes diseases as well according to the latest statistics of the Pension and Disability Insurance Fund.

Among the dominant diseases are the diseases of the circulatory system and the heart, due to which 28.6 percent requested retirement, while the second place is taken by various tumors that participate with as much as 28.5 percent in retirement. The good thing is that year by year there has been a decline in the number of mental patients who by their nature have to retire as disability pensioners, so that it does not exceed 10.5 percent, which is also the number of those seeking retirement due to muscle diseases.

Particularly striking is that the number of old-age pensioners is drastically increasing, and at the end of last year, their share in the total population was 59.3 percent. The number of disability pensioners has dropped from 30 to 19.4 due to increasingly strict requirements for retirement, while the number of family pensioners does not change although the requirements there have been changing from year to year. What pensioners are troubled with most is that their average pension in the average wage is constantly dropping and it is approaching the percentage of 43.3%.

Besides the disturbing data of the pension system in Serbia, an additional problem is the number of births compared to the number of deaths, which is annually reduced by about 30,000 on the total population that is slightly larger than seven million. Representatives of the pension fund should also take into account the steady outflow of the working-age population, which all affect the potential of the pension insurance. In December last year compared to December 2013, Serbia received 75,443 new pensioners, which is slightly smaller number than the total population of Uzice.

Some of the reforms that have been implemented refer to the load of extremely burdened economy. The reform law of 2004 provides that all injuries at work shall be borne by the employer and not by the fund. It even went to the extent that the Assembly voted on the motion, which was passed, that the route from home to work and back represents the workplace, in order for any injury during that time and in that space to be covered by the employer and not by the fund. This means that in case of injury at work, the employer shall pay contributions and salary to the employee for the overall duration of sick leave, and that the injured shall not burden the State Fund.

This procedure had even a legal basis and legal framework that businessmen were forced to comply with. What is negative and did not have a legal framework, where the Fund for health insurance of workers lost all disputes that were conducted by court procedures, is the effort of the Fund to shift the burden of treatment of occupational injuries on employers.

The reforms of 2014 prescribe further reduction in pensions, but not all. Beneficiaries whose pensions exceed the amount of RSD 25,000 shall be reduced. There are currently about 600,000 such beneficiaries with incomes above RSD 25,000. In particular, pension amounts from 25,000 dinars and up shall be reduced in the following way: pensions from 25,000 to 40,000 dinars, including a pension of 40,000 dinars, will be reduced by 22 percent, while for the pensioners whose income exceeds this amount, the part above 40,000 to the total amount will be reduced by 25 percent (The Official Gazette of the Republic of Serbia 116/14, p.1.).

Conclusion

Looking at the pension insurance system in our conditions, the economic and commercial space that we have and the crisis we are found in, as is the case with many others, the same factor (Daykin, 2009, p.16-17, 27) has an extremely bad influence on the operation of the pension system in Serbia.

Prospects for the future of the pension system in Serbia, and thus all current insures – future pensioners and current pensioners as well, could be briefly described as a *mission impossible*. Previous operation of the pension and social system as a whole can be regarded as happiness or skill at the expense of the budget, loading the external debt, when sources of income are shrinking, and thus the contributions paid by the employees, who are all the less compared to the number of pensioners, and the salary as the bases that are extremely low.

In addition to the ungrateful financial situation, the major problem is the demographic trend, the age structure of the population and a high percentage of unemployment, as well as a good portion of unregistered workers.

A large demographic changes include the departure of young people, who just after having finished school, in search of work and a better tomorrow seek their livelihood abroad. In this way, a working-age citizen leaves the country and the real reasons are lack of jobs, low incomes and general safety. The case until now was that it was generally the young who have been leaving, but this is not the case anymore. We have a case of a city with population of 130,000 where over 20 people emigrated from weekly for the past two years, according to the official records of the Ministry of Interior.

Serbia is becoming a country with extremely high population age structure. Annually, 30 thousand citizens more die than are born, which is exceptionally unfavorable information as to the total population. Due to migrations – and is

known that the elderly and the retired do not decide to take that step, and with the aforementioned data, it is clear why we age. This has a negative impact on the revenues of the pension system.

A great number of factors affect the number of employees, on the number of compulsory insured persons in the pension system. These factors are of different origin. They indirectly through the interdependent relationship of the number of employed in relation to variables such as the number of total pension beneficiaries, beneficiaries from the employed category, self-employed and farmers, affect the stability of the pension system.

Number of employees, which are insured, directly affect the condition of the pension system. Their movement in relation to the movement of the number of pensioners, for all categories, has for the direct consequence the stability and regularity of pension payments.

Taking into account the number of unemployed and still a large number of unregistered workers, it is clear that certain potential of the pension system is hiding in there, but systemic reforms in society are necessary, which is very difficult to perform at the moment.

It is necessary to make parameter, system, functional and any other reform of the pension system in Serbia. The previous measures taken were just the beginning of some changes in the system operation. Introducing the third pillar of the pension system has not entirely given results because such a system cannot function in the economic situation of Serbia.

Introduction of the second pillar is entirely necessary as shown by the experience of all countries in transition. PAYG is in trouble, while the capitalization system is a possible alternative. It is impossible to make changes if the standard of living is not improved, however, financial stability and balance should then also be taken into account. Through the history of the economic system, complete impairment of all funds has already happened, and the citizens are suspicious of all such forms of capital accumulation.

Resolution of such messed up circle of the problems is difficult to see. Can savings imposed by the EU through tax increases and other measures yield results in the conditions of low living standard, high rate and a large number of tax bases, with a very large number of workers in administration as is the case with us, is the question all of us who live and work for the future in the state of Serbia.

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FUNKCIONALNA ZAVISNOST KATEGORIJA KORISNIKA PENZIJA U ODNOSU NA UKUPAN BROJ ZAPOSLENIH

Apstrakt: Stabilnost životnog standarda građana u velikoj meri zavisi od delatnosti osiguranja, posebno penzijskog osiguranja bez obzira da li je obaveznog ili dobrovoljnog karaktera. Penzijska politika je deo ekonomske politike svake zemlje. Penzijski sistem međugeneracijske solidarnosti već desetinama godina funkcioniše u svim evropskim zemljama, bez obzira na njihovo političko i ekonomsko uređenje i nivo razvijenosti. Broj zaposlenih u okviru jednog penzionog sistema zavisan je od velikog broja faktora ali isto tako je nezavisan u odnosu na kategorije penzionera i mogućnosti funkcionisanja penzionog sistema. Ukupan broj korisnika penzija direktno proizilazi iz broja zaposlenih u nekom ranijem periodu, dok mogućnost isplate penzija zavisi od trenutnog broja radnika. Pojedine kategorije mogu da se ponašaju različito u odnosu na ukupno zaposlene u jednom privrednom sistemu ali je funkcionisanje penzionog sistema zavisno od tog pokazatelja. U zemlji Srbiji već godinama broj umrlih je veći od broja novorođenih, velike migracije građana, napredak medicinske nauke kao faktor produženja životnog veka ljudi, veće stope nezaposlenih, duži radni staž do penzionisanja i neki drugi manje značajni faktori uticali su na disproporciju broja zaposlenih u odnosu na broj penzionera. To je rezultiralo veoma lošim stanjem penzionog sistema i izazvalo pitanje njegovog budućeg funkcionisanja.

Ključne reči: penzioni sistem, zaposleni, korisnici, osiguranje, funkcija.