FUNDING SOCIAL INSURANCE
– Theoretical Aspect –

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Abstract. In this paper, the authors have analyzed the problems of funding social insurance, which are particularly present in the circumstances of the enormous growth of social insurance expenditures in both developed and transition countries. Drawing upon the Bismarck and the Beverage models of social insurance, the authors discuss the legal nature of the social insurance contribution, a duty intended for financing social security. The authors have specifically explored the social insurance funding systems, such as: the pay-as-you-go system (PAYG system of adjusting contributions and bring them in line with the social insurance expenditures), and the funded system (based on capital accumulation), considering their characteristics and their capacity to adequately respond to the complex needs of the modern world.

Key words: social security, social insurance, social insurance contributions, social insurance funding systems.

INTRODUCTION

Social insurance is the most significant type of social security. It is funded from contributions paid by the insured persons and other persons (usually employers) but the state may participate in funding social insurance as well. As a rule, social insurance is compulsory but there are also different forms of voluntary and supplementary social insurance.

1 The concept of social security includes different forms of citizen protection provided by the society in order to preserve the citizens’ living standard, health and social standing. Public bodies of authority can make provisions for social security by means of: a) social insurance; b) subsidized budgetary payments (which do not entail the recipients' prior contribution payment nor their financial hardship or poverty; in some states, for example, everybody is entitled to equal health care regardless of their financial standing or whether, or to what extent, the health insurance contributions have been paid); and c) social assistance (which is also paid out of the budget but can be received only by the persons suffering financial hardship).

2 The compulsory social insurance is a modern institutional way of solving the social security needs of the employed family members and their dependants in cases when they are partly or entirely devoid of the flow of income due to the old age, disability, illness, pregnancy or unemployment. The supplementary social insurance is a form of security where an individual, on a private and voluntary basis, resolves his social security problems.
Social insurance is aimed at providing security both for the dependent (employer-reliant) and independent (self-reliant or "self-employed") employees working in the territory of one country, in all or some professional sectors. The compulsory social insurance scheme also covers the employees in public services who are subject to a separate type of insurance or a general insurance system equal for all employees. Taking into consideration the subject matter of insurance, the social insurance scheme covers both dependant and independent labour, thus falling into the category of labor-related systems. In many countries, it is the prevailing system but in some countries it is the only system available.

Social insurance contributions are duties imposed to provide funds for the operation of the social insurance system. The specific nature of these designated public revenues is stipulated by the nature of the insurance institute. Insurance is a form of collective solidarity where everybody pays contributions (invests into the insurance fund) while the funds are used by the person exposed to the insured risk (such as: old age, disability, illness, unemployment). Social insurance, therefore, comprises a number of areas: retirement and disability insurance, health insurance, and insurance in case of unemployment. Health insurance and insurance in case of unemployment are forms of short-term insurance (the statutory period of exercising these rights is limited only to the period when the insurance is valid). On the other hand, pension insurance is a form of long-term insurance. This fact has a direct impact on the choice of the social insurance funding system and plays an important role in its subsequent modifications, ensuing from the crisis in this area.

THE BISMARCK AND THE BEVERAGE MODEL OF SOCIAL INSURANCE

The Bismarck model of social insurance is a comprehensive model which includes three parties: employees, employers and the state. Established by Chancellor Bismarck, it was first applied in the German empire in the period from 1883 and 1889. Considering the fact that there was no legal framework for the workers receiving lower wages to obtain full security, this concept of social insurance was set forth to provide for the dispersion of risk. In the first few decades of the 20th century, the Bismarck model of social insurance expanded into most of the European countries in spite of being criticized by a large num-

1 Aleksandar Petrović, Socijalni sistemi – reforme i pravci promena, Radno i socijalno pravo, br. 1-6/2006, str. 415

4 Health insurance involves both a counterclaim – a financial compensation an insured person may obtain due to a risk of temporary incapacity to work, and a counter-service - a relevant health care service for the insured person and his/her dependants. Insurance in case of unemployment, likewise, involves a reimbursement for a period of temporary unemployment (proportionate to the length of the entire insurance period) and may sometimes include a counter-service of providing different kinds of qualification training, additional/further training and professional rehabilitation. In pension insurance, the counterclaim is provided after the contributions have been paid for a specific number of years. See: Predrag Jovanović, Radno pravo, Službeni glasnik, Beograd, 2000, str. 434-462; Dragoslav Neškov, Promene u sistemu zdravstvenog osiguranja, Radno i socijalno pravo, br. 1-6/2005, str. 529-540; Velizar Golubović, Determinante stope doprinosa za penzijsko osiguranje, Finansije, br. 5-6/2002, str. 329
ber of labor organizations. The criticism was based on the standpoint that the burden of social insurance should be borne by the employers and, possibly, by the state rather than by the employees of low income.\(^5\)

**The Beverage model** of social insurance, being partly a modification of the Bismarck model, was framed during the Second World War and a few subsequent years. This model is based on the concept that the social security should be funded in two ways: the health insurance as well as the maternity and child benefits should be budget-funded whereas pensions should be funded from compulsory contributions on the basis of the social insurance principles.\(^6\)

The OECD member countries have chosen to combine the Bismarck and the Beverage model. Thus, in their practice, there are combinations of these two models including the elements of both compulsory social insurance and budgetary subventions in the areas of pension insurance, health insurance and insurance in case of unemployment.

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**THE LEGAL NATURE OF SOCIAL INSURANCE CONTRIBUTIONS AND SOME OF THEIR EFFECTS**

Social insurance contributions are duties introduced by statutory legislation (or, in some countries, on the grounds of the positive law); they do not fall into the budget revenues but are rather designated to separate public bodies or organisations (social security funds). The purpose of these contributions is determined in advance: they are intended to guarantee that the insured person or his/her dependants are to receive a certain amount in case of an insured risk (such as: old age, disability, illness, unemployment), and they are to be paid only by those persons belonging to a social group whose members share a common economic or social interest (for example: employees, employers, self-employed persons).\(^7\) In the contemporary financial law literature, there is a standpoint that social insurance contributions should be treated as specific designated taxes\(^8\) because all persons (who under specific circumstances fall into a particular social group) are legally obliged to pay contributions; however, their benefit is still somewhat “abstract" because the insured person pays contributions on the regular basis but receives reimbursement only in case an insured event occurs.\(^9\) On the other hand, there is a standpoint that social insurance contributions are a specific kind of fiscal public revenues which, being different from taxes, are called para-fiscal revenues.\(^10\) The basic distinctive features of para-fiscal revenues are the following: their spending is designated in advance (unlike tax revenues which

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\(^{5}\) Dejan Popović, Nauka o porezima i poresko pravo, Institut Otvoreno društvo/Institut za ustavnu i zakonodavnu politiku, Budimpešta i Savremena administracija, Beograd, 1997, str. 703

\(^{6}\) Ibid, str. 704

\(^{7}\) Dejan Popović, Teorijske osnove razgraničenja između pojedinih oblika javnih prihoda, Pravni život, br. 10/2000, str. 265

\(^{8}\) The OECD classification of taxes, which is one of the most complete classifications of taxation forms in modern market economies, includes the compulsory social insurance contributions which are paid into the public social insurance funds. This classification, naturally, does not include the contributions for voluntary social insurance, nor does it include contributions which are paid to the private (rather than public) social insurance funds. See: OECD Classification of Taxes and Interpretative Guide, OECD, Paris, 2001, str. 27-46

\(^{9}\) Dejan Popović, Poresko pravo (opšti deo), Cekos in, Beograd, 2006, cit. str. 6

\(^{10}\) Jovan Lovčević, Institucije javnih finansija, Sl. list SRJ, Beograd, 1997, str. 69-70; Miodrag Matejić, Finan-sije, Informator, Zagreb, 1982, p 84
are for the most part undesignated); they are not a budget revenue; and the duty of payment is imposed only on a circle of people mutually related by economic and social interests.

Quite a few theoreticians consider social insurance contributions to be closest in nature to taxes. A common feature incorporated in both contributions and taxes is the element of reimbursement (indemnity). However, the distinction lies in the fact that a tax payer can immediately rely upon a counter-service of the state (on behalf of which one pays tax), whereas a social insurance contributions payer is eligible to receive some benefit only upon acquiring some social insurance right (such as the right to receive pension).

Contributions are different from taxes in so far as their payment has not been initiated by the contribution payer but rather by the state (which is the reverse in paying taxes); in addition, contributions always entail a benefit – a financial service (such as health care) or monetary payment.

Social insurance contributions make provisions for settling formerly designated (transferable) public expenditures in the area of social insurance. Both in the Bismarck and in the Beveridge model of social insurance, as well as in their subsequent combinations instituted in the OECD member countries, social insurance contribution rates are, with no exception, proportional – up to a particular salary amount, beyond which they are usually regressive (i.e. they are not paid).

Contributions are paid on the insured person's salary base; they are a burden imposed both on the insured person's salary (contributions are an integral part of the gross salary, just like the income tax) and on the employer's payroll fund (contributions are part of labour costs and expenses). Such a choice of social insurance funding sources (burdening the participants in labour relations) is a logical result of the fact that it is the employee who is being secured against certain risks (old age, unemployment, temporary or permanent loss or diminution of the working capacity, etc). The salary base applied in calculating the contribution rate is also used as the basis for calculating the social insurance reimbursement, which makes contributions psychologically acceptable in contrast to other possible sources. The downside of linking the social insurance funding sources to salaries is that it artificially makes the effective work more expensive, distorts the price of labour and capital, and is altogether detrimental to the labour-intensive branches of industry. It also has an adverse effect on the labour market. To a certain extent, the previous objec-
tion may be alleviated by taking into consideration that the salary tax (as an important part of the citizens' income tax) is also correlated to the salary amount.

In most modern counties, social insurance expenditures have grown to such huge amounts (particularly in the area of pension insurance) that they cannot be covered by the means secured by applying the current contribution rates. The state, as a guarantor of due liabilities, has to introduce subventions to cover for the deficient funds. Concurrently, the fiscal policy is faced with a dilemma: to further increase the social insurance contribution rates, or to increase the participation of the state in funding social insurance? In such circumstances, there is the important issue of funding social insurance and its further prospects, including the change of the existing social insurance funding system. 16

SOCIAL INSURANCE FUNDING SYSTEMS
– ADVANTAGES AND DISADVANTAGES

Social insurance contributions may be secured in two ways, by applying the pay-as-you-go system and the funded system. 17

The pay-as-you-go system (PAYG), which implies current (annual) adjustment of contributions with social insurance expenditures, provides resources for financing social insurance in cases when the period from the moment of designating funds to the moment of exercising the insurance right is relatively short (a year or less). These are "short-term benefits" on the basis of the social insurance and insurance in case of unemployment. The contributions are paid directly from the insured persons' current salaries, as well as from the employer's current payroll fund, and they are used for financing current (short-term) social insurance benefits.

The pay-as-you-go system may function rather well in the disbursement of pensions, which are viewed as "long-term social insurance benefits" but only in the circumstances of favourable demographic and economic developments in the society. 18 However, if the dependency ratio (the proportion between the number of pensioners and the number of
contribution-paying citizens) increases, the contributions paid on current salaries and on payroll funds are insufficient to meet the expenses of the ever-growing pension benefits. The problem may be solved in two ways: either by allocating a portion of the budget revenues into the compulsory pension funds in order to cover for the deficit or by establishing the pension funded system (based on capital accumulation). The former is of an *ad hoc* character while the latter implies a strategic activity embodied in the intrinsic reform of the pension funding system.

The essence of the funded system is to invest the assets from the collected contributions in order to obtain a relevant interest or dividend return. In this system, by paying contributions, each employee "saves for the old age", and the person's financial assets are not used to cover the pension expenditures of others. The funded system generates an increase of the savings rate and the total accumulation, and enhances the economic growth in the society. In this course, an essential prerequisite is a successful investment of the contribution-collected assets. The assets from pension insurance funds are best protected from devalorisation and most effectively increased by securing investments through banks or stock exchanges. The practice of many modern states (where the total number of pensioners on the steady increase in proportion to the total number of employed citizens) demonstrates that the system of accumulation of assets from pension insurance contributions is a more efficient way of securing sufficient funds for the disbursement of pensions.

In principle, depending on how individual pensions are calculated, there are two types of funded system schemes. In the method of *defined contribution*, pensions are calculated on the basis of the accumulated sum of contributions paid by the insured person. These assets come not only from the compulsory and the defined contribution on salaries but also from investment returns. In this system, it is the pensioner who (upon retirement) is to bear the inflation risk and the risk of a variable income rate on the capital invested from the pension fund. The uncertainty may be relaxed either by envisaging guaranteed minimal pension income payable from the compulsory public pension fund, or by enabling the pensioners to buy annuity insurance policies from a portion of the disbursed pension assets.

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19 There is a number of reasons for increasing the dependency ratio: early retirement, a fewer number of contribution payers, population aging (and extension of the human life span), and slow demographic growth. In Serbia, for example, this system has been subject to reconsideration because the coverage of the total expenditures by the overall revenues collected from contributions has been on the steady decline. The coverage amounted to 94.1% in the year 1987, 78.58% in the year 2000, and 58.55% in the year 2004. The pension fund deficit is covered from the budget of the Republic of Serbia. See: Vesna Stojanović, Predgovor za Zakon o penzijskom i invalidskom osiguranju, Službeni glasnik, Beograd, 2006, str. 9

20 The pension system reform is an important economic, social and political issue. The costs of this reform should be viewed as an investment, not as a redundant expense. Even though these substantial investments may produce moderate short-term results, they are likely to yield good long-term effects in the long run.

21 The control of investing the assets from the pension insurance fund should be given special consideration. Thus, in investing money from these funds, the pension fund managements in the USA are requested to exercise: a) *reasonable investment judgment* (to reach a reasoned investment decisions in such a way as it would be done by a prudent person of professional competences), and b) *loyalty* (there cannot be a conflict of interests). The statutes often prescribe the form of investment, under the provision that investments should be versatile. The statutes also determine the maximum level of investment in certain business areas (short-term, mid-term and long-term investments, real estate, different securities, national and foreign international arrangements), which promotes the so-called *investment diversity*. See: Zvonko Burić, Penzijski fondovi, Ekonomsko politika, br. 2490, Januar 2001, cit. str. 16

22 Dragana Gnjatović, Financije i finansijsko pravo, str. 91
sets. In the method of defined benefit, the amount received by the pension recipient depends on the total number of years of insurance and the insured person's salary amount within a specific number of years. In this case, the employer bears part of the risk due to the fluctuation of investment return rates on the invested pension capital.23

The transition from the PAYG system onto the funded system is not a simple process. One of the difficulties present in the transition countries is the underdeveloped financial market. Another typical "transition problem", present both in the developed and in the transition countries, in effecting the change from the pay-as-you-go system onto the capital funded system is how to finance the pensions of senior employees who, at the moment of introducing the capital funded system, have a substantial number of years of employment but no accumulated capital because the contributions they have been paying in compliance with the PAYG system have been used for the disbursement of current pensions.24 For example, Chile, as a country where the population majority is rather young, solved the problem of financing the transition from the PAYG system to the funded system by using the assets from the privatization fund of its major industry (copper mining). The state issued bonds, thus securing the amount which had to be paid into the senior employees' bank accounts.25

It is necessary to point out that there is another possible organization model in funding pension insurance. The World Bank, the most powerful international financial organization, has recommended that a more realistic and the most acceptable solution is the three-tier model of pension insurance, which is a combination of the PAYG system and the funded system.26 The first tier would be the compulsory public funding – the current state-supported model of financing pension insurance based on the principle of solidarity and redistribution of collected funds. For the purpose of protecting the senior citizens from poverty, this tier would ensure the same guaranteed minimal pension sum for all persons having an equal number of years of employment, irrespective of the salary amount received and the contributions paid during the period of employment. The second tier would be a compulsory private insurance based on the principle of individual capitalized savings – as a form of compulsory supplementary funding. The third tier would be a voluntary private pension insurance, subject to each citizen's free choice.27

However, there is a number of presumptions underlying a successful operation of each tier (pillar) in the three-tier pension insurance model.

The first tier calls for redefining and introducing stricter terms and conditions for retirement, defining uniform age limits for obtaining the old age pensions (which should dif-

23 Mileva Andelković, Poresko pravo – Teorijski aspekti i poreske reforme, cit. str. 259-260
24 Dejan Popović, Doprinosi za socijalno osiguranje – Iskustva razvijenih tržišnih ekonomija i praksa u Srbiji, str. 719
26 Comparative experiences, as observed by the World Bank, show that the pension system cannot be stable if it relies only on one pillar (tier, source) of financing. Multiple tiers of financing pension funds provide for the dispersion of risk and a greater stability of pension funds. Three-tier funding model has proved to be efficient in a number of developed countries (such as: Australia, Switzerland, and Denmark). See: Velizar Golubović, Potrebe i način organizovanja obaveznog javnog penzijskog osiguranja u savremenim uslovima, str. 117
fer only in the length of retirement period), reducing the ratio between the pension and the salary (which serves as the base for calculating pension), and reducing the contribution rate. The first tier provides for the basic protection and vertical fairness.

The second tier is a supplement to the guaranteed basic public pensions; it presumes a developed capital market, trust in the new funds and saving, stimulating personal preferences towards prospective spending, and political determination of the government to carry out a comprehensive reform of the pension system. The development of compulsory supplementary funding is actually preconditioned by macro-economic stability, stimulating fiscal policy, adequate legal and institutional infrastructure, and political stability. The second tier enables the redistribution of individuals' income exclusively for their own benefit in the period when they are no longer labour-active.

The third tier presumes relevant legal regulation and control in order to provide maximum protection for potential insurance policy holders. This tier would allow the individuals to express their personal preferences in view of obtaining higher pension benefits.

In practice, the World Bank concept of financing pension insurance has proved suitable for the countries whose economies are in the process of transition towards market economy. Although their demographic characteristics are similar to those of the developed counties, owing to the more lenient requirements for obtaining the pension right and the unemployment rate which is significantly higher in comparison to developed countries, transition counties have a considerably higher contribution rate and a more significant participation of pension-designated public expenditures in the social product. For those reasons, the three-tier model is the right choice in instituting pension insurance reform.

Hungary and Poland were the first among the transition counties that embarked on developing the three-tier model of pension insurance in 1998. Croatia entered the same process in 1999. The greatest problems in instituting insurance on the basis of individual capitalized savings were the inflation rate and the high administrative costs and expenses (for correspondence, advertising, and inclusion of prospective policy holders). It does not come as a surprise considering the fact that each change in the pension system is reflected upon the pension recipients' social standing. In addition, reforms are frequently accompanied by resistance to change (particularly from older citizens) and high expectations. For these reasons, we are of the opinion that it is necessary for all changes in the pension (and social insurance) system to be subject to public debate and objective scrutiny; the general public should be aware of the consequences of postponing changes or failing to enter the reforms in this area. In addition, all changes should be duly promulgated and supported by relevant argumentation, and gradually implemented (which has proved to be important not only for the popularity and success of the reform but also because the labour market needs some time to adjust to the new social circumstances). Besides, it is practical to envisage some transition solutions in the system.29

CONCLUSION

Compulsory social insurance has been a significant insurance institution for over a century. In real life, it has proved to be an important factor in ensuring citizens' working capacity, their individual and economic security, and served as an incentive for social and economic development.

In the past ten years, the problem of funding social security has become prominent worldwide. It is the focal point of interest of citizens, experts, politicians and the media. This is primarily because the attained level of public social insurance is not just an individual privilege but also a prerequisite for further social development and progress.

Social insurance funding based on the current payment of contributions has become ineffective as it does not provide satisfactory social security for the insured persons. The oscillations in the rate of economic growth and the total number of employees have been directly reflected in the effects of this type of funding. Consequently, there are efforts to solve the existing problem either by transferring to the funded system or by introducing the so-called three-tier insurance model. Some good results have already been achieved through the process of re-examining (and reducing) the scope of rights to which the insured persons have been entitled so far and rationalizing the spending of the available assets from the public social insurance funds.

FINANSIRANJE SOCIJALNOG OSIGURANJA
- Teorijski aspekt -

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U ovom radu je analizirana problematika finansiranja socijalnog osiguranja. Ona je naročito aktualna u okolnostima enormnog rasta rashoda ovog osiguranja u razvijenim zemljama i zemljama u tranziciji. Autori, najpre, ukazuju na Bizmarkov i Beveridžov model socijalnog osiguranja, a potom na pravnu prirodu dažbine za finansiranje socijalnog osiguranja – doprinosa za socijalno osiguranje. Posebna pažnja je posvećena sistemima finansiranja socijalnog osiguranja (sistem tekućeg uskladivanja doprinosa sa rashodima socijalnog osiguranja, sistem akumulacije kapitala), njihovim obeležjima i kapacitetu da adekvatno odgovore kompleksnim zahtevima savremenog doba u kome funkcionisu.

Ključne reči: Socijalna sigurnost, socijalno osiguranje, doprinosi za socijalno osiguranje, sistemi finansiranja socijalnog osiguranja