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The New Polish Pension System: An Example of a Non-orthodox Approach to Pension Reform

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1. Introduction

Social security, the pension system is a part of, plays an important role all over the world. The role is focused on social goals. Societies deeply internalised existence of pension systems. They internalised not only the goals but also the design of these systems. To some extent applying particular methods became perceived as identical with goals themselves.

In majority of countries pension systems were established long time ago, typically in the first half of the twenties century. Design of systems was developed in a way that suited social, economic and demographic characteristics of situation typical that time. These characteristics have dramatically changed. Traditional design of pension systems ceased to fit demographic structure of population. However, for a long time the demographic change was not reflected in any adjustments within social security. Other way around, the traditional design of the pension system – even being inefficient – turned into a firm part of institutional structure in majority of countries all over the world. Social policy experts, politicians and the general public as well internalised the assumption that giving up the methods meant giving up social goals. In consequence, endless arguing on social-economic trade-off dominated activity within the area of pensions instead of discussing how pension systems can become efficient again.

For a number of years the inefficient pension systems were maintained without major problems since it was relatively easy to hide effects of systems' inefficiency. Pension system debt arising due to running the inefficient systems used to be neglected by financial markets even when it reached levels exceeding the scale of countries' GDP.¹ Nowadays economic growth is slowed down and unemployment pressure is increased due to large tax wedges caused by ever increasing costs of maintaining traditional pension systems. Financial markets do perceive the pension debt especially if it cannot be serviced without subsidisation financed from general revenues. Ignoring the pension debt proved to be no longer possible. This triggered the need of a pension reform.

The Polish pension system is an interesting example of recent tendencies in thinking on social security. Until late 1990s the situation in Poland was qualitatively similar to the situation typical for continental European countries, quantitatively it was much worse since the Polish pension system belonged to the most expensive ones in Europe.² Moreover projections clearly show that if the old system had not been terminated it would have reached the level of costs substantially exceeding ability of the society to cover them (see Table 1).

Table 1. Old pension system In Poland (closing situation and hypothetical projection)

	1998	2050
Old-age expenditure (percent of GDP)	5,75%	11,42%
Contribution rate needed to cover expenditure (percent of the wage base)	24%	48%
Current deficit (old-age pensions only) (percent of GDP)	0,98%	5,50%

¹ Pension (social security) debts reached very high level in majority of OECD countries. See Roseveare et al. (1996).

² See Dang at al. (2001). Data on pension expenditure are also presented in Table [...] later in this text.

Pension expenditure (percent of GDP)	12,79%	17,32%
Current deficit (all pensions) (percent of GDP)	2,18%	7,47%

Source: Chłoń-Domińczak (2002).

The strong increase of costs is line with previous tendency that has been observed for the last 25 years. In order to balance pension system's revenues and expenditure the contribution rate had to be constantly increased over that period (see Table 2).

Table 2. Social security contributions increases over the recent 25 years

Until year	1981	1982	1986	1987	1990	1992	1998
Contribution rate (percent of individual wage base)	15.5	25	33	43	38	43	45

Developments presented in Table 2 have created devastating effects in the labour market. The increase of the contribution rate caused corresponding increase of labour costs and consequently high unemployment pressure. For the entire period since 1990 the unemployment rate in Poland substantially exceeded 10 percent.

2. The quest for pension reform

Since 1 January a new pension system has been in place in Poland. It substituted the previous system, which - although still viable to pay the due pensions for some time to come, from actuarial point of view was bankrupt. The introduction of the new system stopped the process of drawing liabilities by the system, which it would be unable to pay back thus putting the fate of pensioners at risk. Interruption of the operations of the old system was due to its doubtless inefficiency.

The problem which necessitated substitution of the old system was neither specifically Polish nor related to the economic transformation. On the contrary, this is a global problem which ensues mainly from a significant change in the demographic structure of the majority of societies. Traditional pension systems appeared to be incompatible with the new reality. What used to be an excellent solution - by this I mean the Bismarck system - became a burden to societies.

Disposing of the ballast and thus saving the pension system is not an easy task. In cases of many states - this refers mainly to the richest, European states - initiation of the forming of a new pension system is constantly postponed and the inefficient system is subsidised on a large scale. Instead of solving the problem this solely delays its adverse consequences. Less affluent countries facing the increasing inefficiency of their pension systems undertake attempts at their rationalisation. That is actually equivalent to cuts in expenditure and seeking new sources of income. The latter usually consists in straightforward raising the contributions. Until quite recently Poland used to be an exemplary field of such - otherwise necessary - operations. The problem is that no rationalisation of the system can remove the sources of its inefficiency and it only postpones the "moment of truth" when the Treasury turns out to be empty.

Formal state guarantees - which usually back-up traditional pension systems - are of no avail than. This is so because security of the pension system and its participant in the long-term ensues solely from the fact that the system is able to generate the moneys to pay out due pensions. State guarantees can only be limited to raising taxes or contributions (which - *nota bene* - in traditional systems are just a kind of taxes). In other words it means that if "we pay ourselves more, than we will have more" - which is quite a perverse mechanism.

Due to the disjunction of the relationship between contributions and benefits, the traditional pension systems seem to be attractive means of solving various social problems. Certainly this is done with the detriment to the main goal of the functioning of the pension system which is to provide a source of income to people at the old age. Much can be promised within such a system without a single thought given to whether such promises can be kept at all and if yes - then at what cost. Such actions are possible because there can be even a several-decade gap between the moment

when the promise is made and the moment when the costs of such a promise are to be paid. This is a dream area for manipulation and irresponsible social policy.

Therefore the old pension system needed to be substituted with a new one. This had to be done as fast as possible because every single year of delay increased the social costs of the operation. Awareness of this fact was common in Poland since early 1990ties. The remaining question was how to construct the new system and how to implement it. Answers to both questions were formulated in the programme “Security through diversity”.

The basis guidelines of the currently introduced pension reform “Security through diversity” have been much praised by international organisations including OECD, the World Bank and ILO. The only massively criticised element of the new pension system is that the original idea of the of the reform fathers, postulating equal minimum retirement age for both men and women at 62 was not implemented. The diversified retirement age: 65 for men and 60 for women was introduced instead.

Subsequent parts of the text will be devoted to a concise description of the new pension system and presentation of main premises for such construction of the system.

3. Three important theoretical issues³

In this paper I focus only on three important theoretical issues that are essential for the new Polish system design leaving aside a number of other issues discussed in pension economics. The issues relevant for the presentation of the Polish old-age system are:

- Proportion of GDP shared by the working generation with the retired generation;
- Social goal of the old-age pension system;
- Saving/insurance nature of a modern pension system versus tax nature of the traditional pension system.

³ The theoretical discussion as well as the form of presentation of the new Polish pension system follows much broader material presented in Góra (2003).

Sharing GDP between generations

Pension systems can be organised in various ways but in all cases they lead to a division of GDP between the working generation and the retired generation. The larger share of GDP is allocated to the retired generation the smaller share of GDP is left for the working generation. Consequently remuneration of production factors is also reduced which slows down economic growth. The decision on how large the share of GDP allocated to the retired generation (GDP^R) should be is subject to public choice. However, demographic trends cause that this part is growing. Weak growth observed in many countries all over the world, among them in some really affluent countries, can be partially explained by the sharp increase of GDP^R/GDP ratio.

Traditional pension systems are designed along the promise of delivering to an individual retiree a certain share of GDP ($GDP/L^R = const$). Given demographic trends, the promise cannot be fulfilled unless remuneration of production factors is reduced. Even if this can be achieved pensions are lower in real terms since the GDP being shared between the generations will be smaller.

The inefficiency built in into the traditional system can be avoided if the pension promise is defined in terms of the entire retired generation ($GDP^R/GDP = const$). In this situation individual share per retiree can be smaller but pensions will be larger in real terms since the GDP to be shared will be larger.

Social goal of the system

The general change of the demographic structure around the world has caused severe fiscal problems for many countries. This change can be seen also from the viewpoint of being able to achieve the traditional social goals of the pension system. In this regard, two important observations are worth mentioning:

- In the past, the minority – nowadays the vast majority – of those who pay contributions to the system as workers, afterwards receive benefits as retirees. This means that in the active phase of the individual's life, participation in the pension system is very similar to long term saving. As the goal is to provide for each individual, using the individual as the main accounting unit becomes a superior way to organize the pension system.

- In the past, the pension system channelled GDP^R to the very old people who were unable to earn a living and finance consumption on their own. Nowadays people who retire are still able to work and earn, and they – on average have many years of life left to live.

Savings/insurance versus taxation

Traditional pension systems are financed through taxation of the working generation. This contributes to tax wedges and cause tax distortions that slow down economic growth. The same share of GDP can be allocated to the retirees if the working generation saves for their own future pensions buying assets accumulated by the retired generation. This latter method of sharing GDP with the retirees reaches social goal of the pension system being at the same time much more efficient.

4. Design of the new Polish pension system

Polish pension reform “Security through diversity” is the original project developed by the team working on the basis of the Office of the Plenipotentiary for the Social Security Reform. The new pension system was designed with due consideration given to Poland’s need and capacity, and to all available world experience in the area of functioning and financing of pension systems. Those which proved most useful in the process of developing the Polish pension system are presented below.

Construction of the entirety of the new pension system takes advantage of experiences of many other countries which recently undertook the difficult task of reforming their pension systems. The Polish system is largely similar to the new pension system introduced on 1 January 1999 in Sweden. This refers particularly to the fundamental principle of the whole pension system of close relationship between the contribution and pension.

Although the Polish reform uses a number of techniques applied elsewhere, its design differs from the typical approaches. This section of the paper focuses on presentation of the new Polish system focusing on highlighting these elements of its design that are specific. At the same time less focus is put on technical issues that are more typical for pension systems elsewhere.

4.1. Basic principles of the new system

The new system principles can be summarised as follows.

- Focusing on the mandatory part of the pension system;
- Separation of the old-age part of social security (OA) from the non-old-age part of social security (NOA);
- Termination of the OA part of the previous system;
- Creation of a new OA pension system, entirely based on individual accounts;
- Splitting each person's OA contributions between two accounts (first account – NDC, second account – FDC, see below);
- Annuitisation of account values (NDC as well as FDC) at the moment of retirement;
- Minimum pension supplement on the top of both annuities if their sum is below certain level (paid out of the state budget).

NDC (non-financial defined contribution) – individual accounts based on quasi-bonds (gov.) not traded in financial markets, bringing rate of return equal wage sum growth (GDP growth in long run).⁴

FDC (financial defined contribution) – individual accounts based on instruments traded in financial markets.⁵

Both accounts are annuitised at the same moment and play exactly the same role within social security.

Retirement age does not play any active role in balancing the new system. Retirement age is still important from the point of view of social policy and labour supply. For these reasons in the new system minimum retirement age is set at 60 for women and 65 for men.⁶ The system itself can be run at any retirement age.

⁴ There is a tax on yields (25%).

⁵ There is no tax on yields at the moment.

⁶ Initial reform project set retirement age at 62 for both genders. For political reasons this was not accepted. Hopefully this will be possible in the future but up to now no decision has been taken.

4.2. Individual accounts (both NDC and FDC)

The new system is based on the same contribution inflow as the previous one. The main change is changing the way in which retirement obligations are defined.

Table 3. Mandatory contributions in Poland before and after implementation of the new pension system

	Total	NDC individual account	FDC individual account	Other elements of the system
before 1-Jan-1999				
Mandatory contribution	36.59 ^a	--	--	36.59
since 1-Jan-1999				
Mandatory old-age contribution	19.52	12.22	7.3	--
Other mandatory contributions	17.07	--	--	17.07

^a Equivalent of 45 percent (after grossing-up).

From the individual perspective, the new system is a method of life cycle income allocation.

- Contributions based on a fixed percent of individual earnings create account values.
- Account balances from the close of the preceding period earn a rate of return based on the growth of the sum of paid contributions.
- Accumulated account values are annuitised at the time of retirement
- Annuities are calculated on the basis of accumulated capital and life expectancy at the age of retirement.
- Technical (demographic) reserves are created.

From macroeconomic perspective the system is a method of sharing GDP between generations. The key feature of this system is stabilisation of the share being transferred to the entire retired generation.

4.3. Phasing-in

Starting from 1 January 1999 the entirely new system replaced the old one for all people born after 31 December 1948. Participation in the new system was not subject to individual choice. The new system automatically covered the entire group of people born after that date. There was no switching. However, a group of participants took decisions on choosing one of two versions of the new system. Decisions were taken in the period until 31 December 1999. Table 4 provides summary of the procedure.

Table 4. Introduction of the new system (age groups)

New system (people born after 31 Dec. 1948)		Old system (people born before 1 Jan. 1949)
People born after 31 Dec. 1968	People born before 1 Jan. 1969	
<u>Automatically</u> covered by the new system; OA contribution <u>automatically</u> split between two accounts [NDC+FDC]	<u>Automatically</u> covered by the new system; OA contribution either split between two accounts <u>or</u> paid into one account [(NDC+FDC) or NDC]	Stay in the old system (<u>no possibility to switch</u> for the new one); <u>no accounts</u>

Offering people the opportunity to take decisions is usually well received. However, the idea of universal system means not only universal coverage but also universal rules. Choice is an illusion in a mandatory system, which can impose problems. Choice is appropriate for voluntary partial programmes.

There were two major exceptions from the procedure presented in Table 4. Agricultural workers kept being covered by a special pension scheme. The so-called uniform services (army, police) were covered by the new universal system but that concerned only those who started their servicing after 31 December 1998, while the rest of this group stayed in their special pension scheme.

4.4. The Polish system and other approaches

Comparative analysis of pension systems goes beyond the scope of this paper. It is, however, very informative to present a couple of features of the Polish system “Security through Diversity” as compared to typical three pillar pension system design. There are a lot of similarities between the two. Similar are ideas behind them; similar are also technical approaches used in particular parts of them. However, the Polish system can hardly be called a typical three pillar system since in fact there is no element of this system that can be attributed to the term first pillar. Table 5 provide some useful hints on what is the essence of the specific design of the Polish system compared to the three pillars.

Table 5. Alternative approaches to pension reform

Typical “three pillar” reform	Security through Diversity
<ul style="list-style-type: none"> ➤ Rationalised old system (redistribution; anonymous participation) „first pillar” ➤ New part of the system based on financial individual accounts run by private asset managers „second pillar” ➤ Contribution split between the old and the new system ➤ Promotion of various forms of additional savings „third pillar” 	<ul style="list-style-type: none"> ➤ Splitting social security into OA and NOA ➤ Termination of the OA part of the old system ➤ Creation of entirely new OA part of the system (individual accounts of two types; annuitisation on retirement; no redistribution) ➤ Contribution split between two accounts ➤ First account – non- financial; rate of return determined by GDP growth; publicly run (possible privatisation) ➤ Second account – financial; rate of return determined in financial markets; privately run ➤ Annuitisation of account values (both accounts) ➤ Promotion of various forms of additional savings

5. Expected effects of the reform

Effects of implementation of the new pension system can be illustrated the best by presenting OECD projections of pension expenditure and costs of servicing pension debts in member countries. Due to implementation of the new system in Poland OA pension expenditure will substantially drop from one of the highest levels now to one of the lowest in the OECD area in 2050. Low costs generated by the need to service the pension debt will let Poland grow quicker than it would be the case if Poland had to cover costs at the level similar to majority of other countries of the region. Table 6 provides summary of information.

Table 6. Projected effects as compared to other OECD countries

	Dependency ratio			Pension expenditure (%GDP)			Primary surplus required (%GDP)	
	2000	2050	Change	2000	2050	Change	Debt constant	Debt reduced
Australia	20.4	47.0	26.6	3.0	4.5	1.5	..	..
Austria	25.2	58.2	33.0	9.5	11.8	2.3	..	..
Belgium	28.1	49.5	21.4	8.8	12.1	3.3	4.2	5.3
Canada	20.4	45.9	25.5	5.1	11.0	5.9	3.7	4.5
Czech Republic	21.9	57.5	35.6	7.8	14.6	6.8	1.6	1.8
Denmark	24.2	40.3	16.1	6.1	8.8	2.7	3.7	4.0
Finland	25.9	50.6	24.7	8.1	12.9	4.8	2.5	2.1
France	27.2	50.8	23.6	12.1	15.8	3.7	5.9	6.6
Germany	26.6	53.2	26.6	11.8	16.9	5.1	4.3	4.7
Hungary	23.7	47.2	23.5	6.0	7.2	1.2	..	..
Island	20.3	44.0	23.7	..	..	..	..	..
Ireland	19.7	45.7	26.0	..	..	..	..	..
Italy	28.8	66.8	38.0	14.2	13.9	-0.3	4.9	5.9
Japan	27.7	64.6	36.9	7.9	8.5	0.6	3.6	4.1
Korea	11.3	45.4	34.1	2.1	10.1	8.0	3.9	3.5
Netherlands	21.9	44.9	23.0	5.2	10.0	4.8	6.1	6.6
New Zealand	20.4	48.3	27.9	4.8	10.6	5.8	2.9	2.9
Norway	25.6	41.2	15.6	4.9	12.9	8.0	4.6	4.0
Poland	20.4	55.2	34.8	10.8	8.3	-2.5	-1.0	-1.0
Portugal	26.7	50.9	24.2	8.0	12.5	4.5	3.4	3.4
Spain	27.1	65.7	38.6	9.4	17.4	8.0	4.8	5.2
Sweden	29.4	46.3	16.9	9.2	10.8	1.6	1.0	1.1
Switzerland	25.1	45.3	20.2	..	..	..	..	..
UK	26.6	45.3	18.7	4.3	3.6	-0.7	0.8	1.2
USA	21.7	37.9	16.2	4.4	6.2	1.8	2.7	3.2
OECD (avg.)	23.8	49.9	26.1	7.4	10.6	3.2	..	..

Source: OECD. See Dang et al. (2001).

Notice: If only pension expenditure is taken into account then the required surplus needed in the case of Poland is even more favourable (-2.8% GDP).

Unemployment

Unemployment has reached a very high level in Poland. Many causes for this state of affairs are discussed - while fittingly more often immediately proposing various cures, they seldom bring up one of the most important factors determining high unemployment in Poland. Meanwhile, this old system of social insurance has led this phenomenon to grow to such great proportions. This has occurred in the following manner.

The old system was not actuarially balanced, which means that the debt it generated rose in an uncontrollable way, at a pace exceeding the pace of growth of the contribution base. This necessitated the raising of ZUS contributions. From an economic viewpoint, these contributions were simply taxes. In the course of twenty years these contribution-taxes rose from a level of 15.5 percent to 45 percent in 1998, which was still not enough to cover the costs of the system. This brought about an enormous rise in the size of the so called tax wedge, from which arises a substantial increase of tax distortions slowing down the growth of the economy, and with it, the possibility for job growth.

The old pension system created the possibility and outright encouraged early retirement. From an individual's point of view, to go on retirement as early as possible was fully rational. Hence, people went on retirement at the earliest possible moment. They paid contributions for a corresponding shorter period of time, whereas received pension payments correspondingly longer. The proceeds to the system fell, while simultaneously, the expenses grew, placing an enormous additional burden on the pension system (the so-called tax wedge grew). If it were not for this, the premiums would be approximately 12 percentage points lower; meaning a few million potential jobs.⁷

The old system also encouraged the hiding of income. In many cases, it permitted outright an easy, legal way around paying contributions. Making use then of this possibility, caused both the contribution base to be lowered and necessitated increasing the rate of contributions. This in turn increased further the motivation for avoiding paying premiums. The tax wedge grew; payments were made from a lower

⁷ See Chlon et al. (1999).

premium base, it was necessary to raise the premium rate, further high unit costs of work and unemployment. A precise analysis of the results of this phenomenon is difficult to evaluate; however, there are a few million lost jobs in the legal economy.

All of this taken together puts the old pension system first among the factors behind high unemployment in Poland. We remember that, regardless of current fluctuations, unemployment has already previously been set at a high level. The latest 3 - 4 percentage point rise would be merely unpleasant, in total a small problem, if it had started at a level of 5 – 6 percent, and not as it did from 11 – 12 percent. It is this 11 – 12 percent that was brought about by the old system.

The factors discussed here behind such a highly increased level of unemployment are not solely specific to Poland. On the contrary, they are typical causes of the generally high unemployment of Europe. This results from the fact that the majority of European pension systems are in a very bad, often blatantly tragic state. This generates enormous costs, the covering up of which increases the size of the tax wedge. It is worth mentioning that, even rich countries such as Germany cannot further increase the size of the tax wedge. This means equally that they cannot indefinitely increase the scale by which they subsidize their pension system, of which already 20 percent of its expenses must be hidden under various allocations (part of the so called eco-tax, 1 percent of VAT and others).

The activity undertaken in Poland with the objective of counteracting unemployment in the 1990s was not impressive. By the end of this period, however, an unusually difficult undertaking was managed: a profoundly rebuilt old-age pension system. We reiterate – the entire old-age pension system, because this is not limited only to the so-called second pillar. The new old-age system in its entirety is based on individual accounts.

Such a pension system structure causes a reversal of the factors discussed in the introduction generating high employment. This happens because:

- a) The new pension system is actuarially balanced, that is, it does not generate debt exceeding that, which it can finance without the necessity of raising contributions and/or taxes. In this way, the new pension system tends to improve the long term economic growth potential, and, hence, also the growth of jobs.

- b) In the new pension system, the individual decision of retirement is neutral to the system. This eliminates an enormous part of the burden on the pension system. Additionally, the elimination of early retirees causes huge savings in the period of retirement of the first cohorts covered under the new system.
- c) Finally, the most important thing. In the new pension system the entire old-age pension contribution, that is 19.52 percent ceases having the character of a tax. For persons, for which the contribution is paid, it becomes an element of their savings. It is significant that the contribution is no longer part of the tax wedge. Its value is that it is strongly reduced (almost 20 percent!), and with this comes the essential lessening of the effect of the strongest factors generating unemployment.

The change of the economic character of the old-age pension contribution from tax to savings is the main effect of the replacement of the old pension system with the new system introduced in 1999. The effect of these changes will be very strong, but its manifestation, however, will take some time. At this time, everyone must receive regular and accurate statements of their two accounts.

On the whole, immediate problems are handled more easily and quicker than strategic questions. In the case of the Polish labor market, we paradoxically have the opposite situation. The long-term question is in a large part resolved. The perspective is good. What remains, however, is the immediate challenge of conquering high unemployment.

6. Economic stabilisers of the pension system

Considerations concerning the problem of pension system stability and self-sufficiency makes sense solely in the long-term. Good current condition of the pension system facilitates its management but in no way does it guarantee to contribution payers security of their contributions and thus the security of those concerned as pensioners-to-be.

The new pension system is resilient to many factors which could cause its long-lasting deficit. This is quite contrary to the old system, whose susceptibility to development of deficit was an indispensable part of its functioning. Resilience of the new system is not a declarative feature. On the contrary, it ensues from its very construction. This is so because as a matter of principle it does not draw any liabilities towards its

participants which would not be covered by its future incomes. This is the foundation of the security of the pension system. Thus a pensioner-to-be when paying the contribution does not run a risk that when they need their money at the old age the Treasury will turn out to be empty. If that were the case no guarantee could be of any use. The genuine guarantee is the ability of the system to generate the means required to pay the liabilities.

Resilience of the Polish pension system to deficit-generating factors ensues from the use of the following stabilisers:

- Individualisation of the participation in the pension system - everybody pay contributions into their own accounts, which will finance their pensions.
- Distribution of risk between two pillars of the basic pension system, that is between two markets - labour market and capital market.
- Valorisation of the account balance in the first pillar of the pension system is done with the use of index related to the pace of wage-fund growth i.e. the total of all income in the economy on which contributions are charged.
- Use of actuarially neutral formula for the calculation of pension amount, and in particular adoption of the life tables as the main system parameter. This distributes the risk among the insured without violating actuarial neutrality.
- Elimination of virtually all capacities for acquisition of pension eligibility without payment of adequate contributions.
- The existence of the Demographic Reserve Fund which absorbs the system surplus - if one appears - and support payments of due pensions if the current system income does not suffice to cover the payments of pensions.
- Existence of the cascade of legal and economic securities in the second, privately administered pension funds. Those include in particular: separation of the assets of the pension fund from its administrator i.e. a universal pension society; introduction of the principle of the minimum rate of return and establishment of reserve accounts in each fund and the guarantee fund for the whole of the second pillar.
- Elimination of the moral hazard in all system elements.

Security of persons covered by the new system will ensue from the operations of the above-mentioned stabilisers. It must be indicated here, however, that all positive results of those stabilisers will appear gradually and simultaneously with the disappearance of the old pension system. For persons born in 1949 and later that system was closed on 31 December 1998. However it still exists for the elderly people, which generates instability of the whole system. The situation will change dramatically only when with time majority of pensioners will be receiving their benefits from the new system.

However even now, and at worst starting from the moment when first statements from pension accounts under the first and second pillar are received, it will begin to be evident that under the new system the contribution is no longer a form of tax, which it used to be under the old system. Everybody covered by the new system became owners of their contribution in such meaning that it is paid into their individual account, multiplied on their behalf and paid to them in the form of the lifetime pension after their decision of retirement.

Such construction of the pension system will counteract any attempts of manipulating the system - now it is not any longer the “common pot” but specific money of each of us. It will also have several outcomes ensuing from behaviours of system participants and influencing the macroeconomic characteristics of the pension system. The most significant among them are: an decrease in the so-far strong incentive to conceal the genuine income and development of a strong incentive to delay the moment of retirement.

7. Microeconomic characteristics of the new pension system

The new pension system will also cause beneficial effects at the micro level. This effects will make the macro effects discussed above even stronger. The main effects I highlight here are reduction of the shadow economy and postponement of retirement decisions.

Declaration of income

Under the traditional pension system financed with taxes there is a very strong motivation to conceal the income on which contribution is paid. Under the old Polish system of social security this motivation was particularly strong. When considering

the reason of the existence of the so-called grey zone one thinks mainly of people concealing their genuine income to avoid paying taxes. Such motivation does exist but it is not dominating since an average tax rate is equivalent to not more than half of the contribution. Hence, if an employee works illegally they do it rather to avoid paying the contribution than to avoid paying the income tax.

In the old system the paid contribution is - from the individual point of view - "lost" money. Whether one paid the contribution or not had none or hardly any consequences for the pensioner-to-be. That fact was an unambiguous incentive to avoid paying contributions.

In the new system contribution ceases to be a form of tax. Any possible cases of avoidance of contribution payment are now of different character; different is also the scale of the phenomenon. Its character can be reduced to the difference between the individual discount rate the rate of return from the pension system. This difference can still have negative value and hence the motivation to conceal income does not necessarily disappear in the new system. However, it is certain that the scale of this phenomenon is definitely smaller.

Decreasing the scale of concealing the income will result in an increase of the contribution base which - at the fixed contribution rate - will increase the income of the system. As a consequence it will make lowering the contribution rate possible. System income can be then maintained at the same level at the lower contribution rate. The lower contribution rate will result in another decrease in the motivation to conceal the income and - what is even more important - in a decrease of labour costs.

Incentive to delay retirement

Early retirement is one of the fundamental problems of traditional pension systems. Virtually all countries experience this problem. Globally universal financial inefficiency of traditional pension systems is largely caused by that phenomenon. People work (and thus pay contributions) shorter, but on the other hand they live (and receive pensions) longer. As a result smaller funds are available to finance larger expenditure. Hence a growing system deficit is unavoidable.

In Poland average retirement age is much lower than one provided for by the law (60 for women, 65 for men) at 55 for women and 59 for men. The scale of this phenomenon is quite devastating for the social security system. If it were not for this

fact, the contribution necessary to finance the social security system could be 12% lower than it is currently and would be equal 33% instead of the current 45%. This cost is huge and senseless.

It has been known for long that in Poland - like in most other countries - the actual retirement age must increase. However, this is not a simple task. The problem has two aspects, which appear in different countries with varying force. On the one hand there is the income effect. In rich countries of the European Union people have the tendency to choose leisure time instead of extra income. Why work longer if finding the time to spend the money is a bigger problem than earning the money. In poorer countries one could expect an opposite situation, that is domination of the substitution effect. That would prolong the time of professional activities in lifetime. However, this is not so. The trend for earlier retirement is universal regardless of the relative affluence of societies. This is so because traditional pension systems, still dominating the world, flatten pension amounts and longer work either does not at all or very slightly increases the amount of received pensions. Therefore delaying retirement does not make sense. One works longer, pays contributions and has no time for recreation while receiving virtually nothing in exchange. In Poland this effect is additionally enhanced by the easiness of receiving pension while keeping to work. In other works it is beneficial to retire and continue to work. In this situation pension is just an extra income - why not take it? The earlier one has the access to the money coming from the "common pot", the more of it one gets as a result. Such situation is a game which individual contribution payers play with the system, i.e. with all contribution payers. But nothing is for free. Before we get our hands on the money from the common pot, we pay extremely high contributions necessary to finance the game played by previous generations. As a result we simply increase the costs of the system which we must bear anyway. That obviously does not make any sense. However, poorly constructed systems encourage such behaviours.

The new pension system is constructed quite differently. There are no tax-financed pensions and no "common pot". Everybody gather means for their own pensions on their individual accounts (first and second pillar). Participation in the pension system – including the decision to retire – is now a transaction we deal with ourselves. Any delay in the retirement will result in a significant increase in the amount of pension received. According to the formula for calculating the pension, longer work means

more capital (numerator in the formula) and higher age and hence – on the average – shorter period for which the accumulated capital is to suffice (denominator in the formula). Thus an increase in the pension value due to a career prolonged by one year amounts to 7-10%. The new system – quite contrary to the old one – definitely motivates to delay retirement. The whole “profit” of the system ensuing from delayed retirement of a system participant is given to that participant. This game one plays with themselves does not influence the situation of other system participants. The pension system distributes the risk among the insured – however it does not create the moral gambling which is so widespread in traditional pension systems.

On the margin of those considerations one can ask the question: if the system is actuarially neutral why set up any minimum retirement age at all? Yes, the system could operate without a definite retirement age. Everybody would retire when they choose to and get from the system what is due. However the minimum retirement age in the new system plays a different role than the statutory retirement age under the old system. It is not a parameter which conditions system solvency. System solvency is a function of the above-described economic stabilisers. The minimum retirement age in the new system is an element of the policy of counteracting poverty. The idea is to protect people against too early retirement, when the pension would soon appear insufficient to lead a normal life.

6. Concluding remarks

The new pension system introduced in Poland in 1999 is a kind of investment that will generate very beneficial long-term effects. It will provide workers with security of their participation in the system. The new system will also contribute to reduction of unemployment and stronger sustainable economic growth. These will contribute to narrowing the gap existing between Poland and the most affluent countries.

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