József Botos – Katalin Botos

A possible solution to the reform of the mandatory pension system: point system and demography

SUMMARY: It is obvious that the pension system needs long-term reforms. We are suggesting a pension system based on so-called points, which may contribute to the solution of the long-term financing problems. The essence of the system is that the points collected during the insured period, the average wage prevailing at the time of retirement and the estimated life expectancy constitute the basis for determining the pension amount. This system clearly shows how much one has paid for the elderly generation's pension and what pension amount one can expect, taking account of bringing up children and the time and money the individual has spent on it. The system is only sustainable if every active person has a descendant, that is minimum one child who pays pension contribution by the time of his/her retirement. It is also necessary to include incentives in the system that ease the financial burdens of parents while bringing up children. The current system of family allowances covers only a smaller part of the costs related to bringing up children. However, the provision of pensions built up this way will only be modest. Therefore, the voluntary "second pillar" will continue to be absolutely indispensable.

KEYWORDS: pension system, social security, point system, willingness to have children, demography
JEL CODES: J00, J12, J13, J14

The pension system needs long-term reforms. Hungarian experts realised this fact many decades ago. It was in this spirit that changes were made to the social security system following the democratic transformation. [*József Botos* (1999); *Borbála Prónay* (2011); *László Gerencsér* (2010)]

It soon turned out that these attempts did not bring the expected results. Setting up local social security authorities proved to be a failure. It entailed extremely high costs and did not bring any material improvement. Therefore, after 1998 the two funds were returned to government control. Although the system of voluntary pension funds established on the basis of the law adopted in 1993 continues to operate to this day, it failed to reach a level of development that would allow it to be considered a complementary source of pension for the increasingly aging population. (From the outset, we wish to make it clear that further development of voluntary pension funds has to be supported in every way.) Another major reform urged by international institutions (IMF, WB) *was the establishment of mandatory private pension funds*.

REFORM COMPULSION

József Botos, the then President of the Private Fund Council, expressed his contrary opinion as early as the the preparatory works of the system; he deemed the scheme unfeasible. Other economists, including *Sándor Kopátsy*, as witnessed by blog entries, were of the same opinion. Moreover, *Mária Augusztinovics*, one of the most prominent scientific experts was not among the adherents of the private pension fund either. Critical voices were heard in international professional circles as well. For example, in an OECD study, the English retirement insurance expert *Nicholas Barr* (2003) called attention to the fact that in established pension systems the transition from the pay-as-you-go (PAYG) system to the pay-as-you-earn (PAYE) systems imposes a significant burden on the budget of the given economy. However, decision-makers in Hungary failed to take this issue into consideration. As the authority of the aforementioned international organisations was convincing, the leaders of the Hungarian economy undertook the establishment of the second mandatory pillar. In addition, this was in the interests of the financial sector as well. The efficiency of the system has often been criticised during the 10 years since its introduction. (Schlett, A., 2008) The operation of the system is very costly, and the payers can hardly practise any real control over it. The operation of the funds was strongly shaken by the 2008–2009 financial crisis, and for those who are just retiring there is no guarantee of reaching even the level of the state pension.

Today, the majority of experts realise that at the level of the national economy this great change *has not created net national wealth*, as *the budget had to become indebted* in order to facilitate the accumulation of private wealth. Public debt (!) was the source of private property.

Of course, such situation might not arise if "room is made for" the amounts transferred to support the social security pension system among the expenditures of the budget by reducing other items. Or, as a result of an increase in revenues, the budget does not drift into deficit. Regrettably, however, the budget – irrespective of the pension transfers – has had a significant deficit in recent years, until the present day. Consequently, further indebtedness of the general government was unavoidable. *Therefore, the need for the parametric and paradigmatic reform of the system arose.* (*NYIKA* – Pension and Old Age Round Table, 2009) (Parametric reforms mean those minor changes that do not affect the foundations of the functioning of the system; e.g. the extension of the retirement age. A paradigmatic reform changes the operating principle. An example of this was the partial transition to the pay-as-you-earn system; another is the point system pension, the solution recommended in this article.)

We can cite numerous Hungarian economists who have dealt with pension reform, including, but not limited to: Mária Augusztinovics (2007/1, /2), *András Simonovits* (2009), *Gyula Pulai* (2010), *Iván Róbert Gál* (2003) and *János Kun* (2010). International literature is also exhaustive. (OECD, 2003; Burgert, 2011) Analytical works were conducted within the framework of the Pension and Old Age Round Table (NYIKA, 2009) upon the request of the Gyurcsány government, but one may encounter other comprehensive analyses as well. (Botos, J. – Botos, K., 2009; 2010; Botos, K., 2010). Some of the works argued for continuation of the reform (Holtzer, P., 2010), while others did not go further than emphasising that demographic processes render change essential. (Kovács, E., 2010)

One of the directions of further development of private pension fund reform would have been to put the fund into private hands. However, in the period of the Bajnai government the relevant motion was not adopted by Parliament. The fundamental aspiration of this reform proposal was to open the opportunity of foreign investments to the funds. (Holtzer, P., 2010) The funds had urged the liberalisation of the investment policy earlier as well, as investing in government securities does not earn a high yield. The obvious basis of this idea is that due to its younger age composition and growth dynamics the developing world offers investment opportunities that are favourable for Hungarian pension funds, and thus their members' pensions seem much more secured than in a situation when they can only think in terms of domestic investments. Those who embraced this argument hardly thought of the disadvantageous macroeconomic consequences that this kind of capital export entails in a country struggling with a shortage of capital and balance of payments problems. Although it is true that such private insurance would be less dependent on the economic policy conducted by the government in Hungary (Péter Holtzer's argument), the economic policy of the country could not at all be independent of the policy of the pension funds. It is enough to think of the pressure on the exchange rate. Not to mention the existing shortage of capital in the economy. Accordingly, the economic management (primarily the Central Bank) would be compelled to take steps to protect the exchange rate, as long as foreign-exchange reserves last, then apply strict restrictions to neutralise inflation, which would be growing as a result of the falling exchange rate.

At the moment this issue does not seem to be timely, as the private pension fund system has shrunk to the minimum. However, if we consider that such attempts to ease regulations may also arise in the investment policy of voluntary pension fund systems, it is better to make our position clear from the outset. *We do not recommend it!*

If we concede that the partial reorganisation of the established pay-as-you-go system to the mandatory pay-as-you-earn system (i.e. the introduction of the private pension funds) imposed such heavy budgetary burdens on Hungarian public finances that the latter were unable to endure under the present economic circumstances, the change initiated in December 2010 is understandable. The actual deficits caused by the pension system could not be exempted from the EU regulation, although nine (mostly East European) countries supported this request. Consequently, even if the budget deficit can be financed from the capital market "at a good price", the EU regulation enforces the reduction of the deficit in any case. Moreover, financial markets themselves are also driving Hungary in this direction, as they rated our country, which has had to face a difficult situation because of the crisis, into a debt rating category that does not allow the maintenance of the deficit indicators and the debt ratio at the 2010 level. They have to be reduced in every possible way. It is to be noted that the markets want to see that the adjustment is not a one-off measure, but will bring a permanent solution. Of course, everybody knows that the mass return to the state pension system, which took place pursuant to the statutes adopted in December, does not yet signify a material reform that ensures sustainability. That is a next step. Although it is a fact that via "nationalisation" the government at least ensured that the value of the pensions of those retiring will not be lower than it would have been in the state system, as the pensions are calculated in line with the rules in the state system, it is precisely these rules that cannot remain unchanged over the long term. Namely, unless material changes take place, by the middle of the century the current system will certainly become unfinanceable as a result of demographic processes.

It has clearly been pointed out by the works of the Pension and Old Age Round Table. Their 2009 report pronouncedly emphasised that they only undertake a technical presentation of the possible models. Decision-making is the responsibility of politicians. Accordingly, the necessary political decisions have to be taken by responsible governmental forces, and without delay. The decision cannot be put off any longer, because the inertia of demographic processes is great. If the unavoidable paradigmatic reforms are not implemented now, the subsistence of the next generations will be seriously jeopardised. The burdens that would be put on the shoulders of today's youth – i.e. the middle-aged people of tomorrow – would make them uncompetitive, adding to the tensions between generations. Reforms need adequate time to succeed, especially if they are related to demographic processes. Social security is a lifelong contract. The credibility of its operation can only be guaranteed if an adequate time horizon is provided. The matter in question is that a choice has to be made from the systems outlined by the Pension and Old Age Round Table. Moreover, new versions also have to be considered. Namely, during the work of the Round Table, the experts did not expect the discontinuation of the private pension fund system and also did not take into account that the demographic trend might change.

It is worth noting that of the alternative versions of the Pension and Old Age Round Table the so-called *point-based pension system* enjoyed the highest level of support. This is (one of) the reason(s) we believe that this version should be taken as a basis for development.

INDIVIDUAL ACCOUNTS – WITH A POINT SYSTEM

In line with the above, we are proposing a pension system based on so-called points, which may contribute to the solution of the long-term financing problems.

In addition to the old-age pension, there are many other pension-like allowances in the present pension system. (Mészáros, J., 2005; Gerencsér, L., 2010). Approximately one third of the contributions collected today serve the purpose of covering disability pensions and other pension-like allowances, such as widow's pensions, orphan's allowance, parental allowance etc. Only two thirds of the contributions cover actual old-age pensions. It is advisable to treat the aforementioned issues separately. Their solution is important and is also related to the pension system, but all social problems cannot be squeezed into the old-age pension system. We agree with the effort to reinforce an insurance approach in the pension system. Therefore, below our attention is focused solely on the old-age pension system. By persisting to seek a relationship with demography, we do not contradict our fundamental objective at all, as it is precisely the sustainability of the system we are striving to ensure, which is the basis of any insurance approach.

What is outlined below, is not the outcome of a work, but its beginning. Since these thoughts were not taken into account in the modelling work of the Pension and Old Age Round Table, if the concept is accepted, it should urgently be forwarded to a capable and suitable institution, requesting it to run a more or less precise model.

In fact, this would mean setting those things right that were turned upside down, i.e. carrying out the detailed calculations *after* taking the poli tical decision that allows the actual work. The grounds for the concept to be outlined, which can most probably result in a solution to our serious problems, can be understood in a logical way as well, based on the following thoughts.

Since 1988, each employed Hungarian citizen's income from employment has clearly been kept on record under his/her name. (It means income based on which personal income tax and *contribution* have been paid, which latter is a decisive factor in this analysis. This also allows the tracking of what percentage of this amount was spent on old-age pension. Moreover, certain data are also available for the pre-1988 period. If such data were not available, the data series for that period can be completed back until the start of employment, using approximate calculation.)

Consequently, there is no obstacle to assigning a so-called *individual pension account* to each insured person. An account that accumulates actual payments is not the only possible form. There is another version as well, where the *old-age pension points* obtained in the given year and calculated as described below *are kept on record*. This "individual account" constitutes the basis for the pension system proposed by us. [Rudolf Borlói – János Réti: *A pontrendszeres nyugdíjrendszer* (*The Point-based Pension System*). In: NYIKA, 2009, pp. 248–266]

The essence of the system is that the points collected during the insured period, the average wage prevailing at the time of retirement and the estimated life expectancy constitute the basis of determining the pension.

Solidarity between generations is perfectly realised in the point-based pension system. In the current system, contribution payments serve the purpose of covering the pensions of the present pensioner age-group. In fact, one's payments only mean a blank title that social security will provide *some kind of pension*, the calculation of which may depend on changes in legislation. By contrast, if we commit ourselves to the point system, it can clearly be determined how much one has paid to ensure the previous generation's pension and what pension amount one can expect to receive. *According to the system proposed by us, the money and time spent by the individual bringing up children would also be taken into account in the calculations.* This would be our proposed deviation from the point system concept of the Pension and Old Age Round Table (Borlói – Réti). In other words, the system takes into consideration whether one has a descendant who will pay the contribution for his/her parent.

At present, the contribution is expressed as a percentage of the gross wage. Projected to the net wage, this rate of contribution is of course substantially higher.

In the proposed system, the current average wage in the national economy means one point.

According to the prevailing rules and rates of contribution, the extent of the contribution for the old-age pension is 37 per cent of the average wage, i.e. 0.37 point. (The pension amount paid for old-age pensions is 68 per cent of the total amount spent on provision. Accordingly, 68 per cent of the 24 + 10 per cent = 34 per cent pension contribution paid on the gross wage, i.e. 23.1 percentage points, is the actual old-age pension contribution. The whole-economy gross average wage in 2009 amounted to exactly HUF 200,000. The old-age pension contribution paid on it equals HUF 46,200. This amount is 37 per cent of the average net monthly earning of HUF 124,000 in the given year.)

This 0.37 point appears on the pension account of the insuree with average earnings.(This value differ from the above in the modelling. For a logical deduction, this is our starting point.)

For each year in service – or more exactly for each insured year – it can clearly and easily be determined on the basis of the personal income tax return how much the individual's net wages amounted to compared with the whole-economy average wage. For example if the individual's net wages are twice the average, twice 0.37 points, i.e. 0.74 points will appear on his/her pension account.

Accordingly, for each year of the insured period there are points on the pension account. Every year, these points can be added to the points attained in the previous years, i.e. they can – and have to – be added up, and this total score shows the equivalent of how many years of whole-economy average wage the individual has paid to the pension fund during his/her insured period until the given date.

When the individual retires, this total score is divided by the number of years the person is expected to live at his/her age. (Every year, the CSO reports the life expectancy at the given age.) The indicator calculated accordingly expresses what percentage of the current whole-economy average wage the individual will receive as a pension. For example, if the indicator is 0.7, he/she will be entitled to 70 per cent of the *current whole-economy average wage*. This means the complete implementation of pension valorisation. There is no need to look for an interest rate or calculate inflation. Inflation will be reflected in pensioners' income to the same extent as wages were able to follow it. The incomes of active people and pensioners move together.

HAVE SOMEONE PAY THE CONTRIBUTION FOR YOU

What do population statistics show?

At present, the distribution of the female population in the 15–49 year age-group according to their number of children is as follows:

0 child	43 per cent,
1 child	20 per cent,
2 children	25 per cent,
3 or more children	12 per cent.

Accordingly, not more than 1.11 children are assigned to this age-group. (CSO, 2009) (The total fertility rate of 1.34 disclosed by the CSO is higher because it also takes account of the children of women over the age of 49, projected onto this age-group.)

In order for this indicator to reach the desirable figure of 2, the following distribution according to number of children would be needed:

0 child	10 per cent,
1 child	10 per cent,
2 children	50 per cent (or 60 per cent),
3 or more children	30 per cent (or 20 per cent).

Consequently, what should be achieved is a point system that acts as an incentive to attain similar ratios. This does not seem completely impossible, as surveys suggest that Hungarian families *would indeed like to have two children* on average. Obviously, however, this requires an adequately secure livelihood and complex financial incentives.

The point-based pension system could *even allow the* points of those who have more than two children *to be doubled*, "against" the points of those who do not have children or only have one child. (A more modest but positive correction for those retiring people who have more than one child could be possible even now. The message such a correction conveys would be important.)

However, as we have mentioned, the system is only sustainable if every active person has a descendant, that is minimum one child who pays pension contribution by the time of his/her retirement. Using a demographic technical term, the gross reproduction rate has to reach the value of 2.1. This means that each woman who is able to give birth to children should be willing to have 2 children on average. (Or 2.1, if the mortality rate is also taken into account.)

However, the current *total fertility rate* is only 1.34 (based on 2009 statistics). This means that as a whole-economy average, only 0.67 contribution payers will replace one retiring person. Therefore, for pensioners to receive their future pensions, i.e. to prevent the system's collapse and its becoming unfinanceable, a brutal increase of the contribution would be necessary. However, this would greatly impair Hungary's international competitiveness, and would contradict the government's intention of increasing market competitiveness.

Another possible solution is a uniform reduction of pensions. This means that only 67 per cent of the attained points could be taken into account upon determining the pensions. In other words, the amount to be allocated for pensions would be one third lower.

It is also reasonable to differentiate the allocation of this amount individually, using the points. If parents bring up two children until the age of 18, their pensions will be calculated on the basis of the points collected in their respective individual accounts. For parents bringing up only one child or couples that do not bring up any children, 75 per cent and 50 per cent of the points, respectively, will serve as a basis for calculating their pensions. (These percentages are only examples; from time to time they could be adjusted to the reproduction rate.)

The other part of the reduced points would be placed in a national pension compensation fund, from which the pension points of those with three or more children would be increased, based on family policy considerations. The allocation system depends on social policy consi derations. Namely, it would be sensible if the pension system also included incentives for optimal families with two or three children.

What should happen to those receiving child benefit or maternity leave payment or who undertake to be full-time mothers? A possible solution would be to credit their accounts with the points based on the current whole-economy average wage.

THE SITUATION OF TODAY'S PENSIONERS

As far as today's pensioners are concerned, since the present retired population and those who will retire in the coming years – quasi – *have already met the* social security *expectation to provide one contribution payer to replace them*, and have already brought up two children on average (as on average it was typical of this age group that the actual number of children for real or virtual pairs of parents was around two), for this age group it is not necessary and not even justified to differentiate the number of points attained by contribution payments. Accordingly, if the system proposed by us was introduced as early as in 2013, for the age-group of the 58–62 years of age pensions would be determined on the basis of the "individual account" pension points, without differentiating according to the children points. However, it bears consideration that it cannot be expected that large numbers of the population that have already reached the age of 40 are going to give birth to and bring up the number of children deemed to be desirable by the system. It is not excluded, but cannot be expected. Therefore, although bringing up two children on average is probably not going to happen, the points without differentiation would apply to them as well. In principle, the underlying reasons are that requirements cannot be determined retroactively, and the extremely high uncertainties of subsistence in the period following the democratic transformation may also have contributed to the fact that the number of children born has been lower than desirable. (The reason why we do not propose differentiation according to the number of children, which would otherwise be possible, is because people cannot retroactively change their decision regarding their willingness to have children.) *Therefore, differentiation according to the number of children would be taken into account in calculating the pension of those who retire after 2032.* This would give citizens sufficient time to organise their way of life and retirement savings in line with these conditions.

However, as the points strongly follow the actual wage relations, the pension ratios of the next twenty years would also much better reflect the actual contribution payments, i.e. there would be more room for the insurance approach than today, acknowledging individual performance.

It is justified to raise the issue that the points collected by those who do not have children (for various reasons) would entail a very *low pension* for them. One of the solutions for a citizen would be to pay more to the social security pension system, thus achieving a higher number of points, or, as another solution, to choose from the existing forms of individual retirement savings, e.g. the voluntary pension fund system. Seemingly, the point system unfairly afflicts those who do not have children *through no fault of their own* but, one has to admit, this does not change the fact *there is no contribution payer behind them*. And if they do not have to spend on children, theoretically they have the opportunity to save using voluntary schemes. It is precisely this fact that shows how important the institutional system of private savings is. Therefore, it has to be emphasised that social security reform does not at all make individual savings for pension and the operation and development of voluntary pension funds unnecessary.

It may also be brought up that motivating with the hope of a future pension is not intensive enough because of the time spans involved. This aspect is relevant, so it is also necessary to include incentives in the system that ease the financial burdens of parents *while bringing up children*. The current system of family allowances covers only a smaller part of the costs related to bringing up children. The introduction of a more generous support system depends on what the budget allows. Obviously, the development of the system of assistance through the tax system and the system of direct, targeted subsidies is a further task, beyond the scope of the social security system. (There were proposals for a solution that would address the issues of the two "funds", the provision for the elderly and support for children in a combined manner. However, due to its comprehensive nature, this matter requires very thorough analysis and investigation, and would impose burdens on the budget at present.)

However, what can be implemented within the social security system as well is the incentives for job creation for entrepreneurs, *through a reduction of the contribution burden in a differentiated manner*, if they employ employees with a family and children. The expectation of the modern era is to let women who have an aptitude for being a mother and having a profession take a job. In addition, the compulsion of making ends meet also incites most families to follow the two wage earner model. It poses a great difficulty for women to find a job following the period of giving birth to and staying at home with children. It would also be important if fathers with more than one child could enjoy increased benefits in the field of employment, as they have to take care of a larger family. Accordingly, all this would justify an incentive system as outlined above. Of course, as this would result in a loss of contribution payments, the government should make up for this loss by paying *from budgetary funds* to the social security account. *Assuming a role* by the budget may become temporarily necessary even in the model proposed by us, because, as a consequence of recent demographic developments (few children and an increasing number of pensioners who live longer), *it will become self-sustaining over the longer term only if the demographic structure becomes balanced as a result of the proposed model.* (This, inter alia, is also the consequence of the fact that we could not apply the differentiation to the forty plus age-group, i.e. to those who will retire in the coming 20 years.)

Creating a sufficient number of jobs in the country, in turn, *should be the first priority of economic policy*, as a sufficient number of children are born in vain, if employment opportunities are scarce.

At the same time we emphasise that the wheels of time cannot be turned back, and one has to take into account that technological progress saves on labour. And if job-creating investments stemming from the above-mentioned savings are unable to keep up with this, as is the case in developed countries on a global scale, then Hungary too will have to count on a special course of employment. It tends to be possible to increase employment, *without* a simultaneous *decline in the wage level*, only through shared and part-time jobs. Of course, this double adjustment is a challenge for the capital-owning strata. This raises sociophiloso phical issues that point well beyond the pension system and cannot be swept under the carpet.

LONG-TERM APPROACH

It seems that for the near future our pension system proposal only differs slightly from the government's plans that are currently taking shape (pension system with individual accounts). It is not only not a problem, but it goes to serve the feasibility of the proposal. However, as a further development, it is of *utmost importance* to change over to the point system in the individual accounts. Namely, it eliminates much of the unfairness experienced nowadays. Yet, it does not mean that we would perhaps keep putting off the announcement of the differentiation principles of the demographic point system, considering the difficulties of having it accepted by the society. As we have already emphasised, a pension system that is *sustainable in the long run* requires a *balanced social structure*. And the correction of the demographic distortion requires the span of a generation.

If we are unable to consider such time horizons, we will unavoidably impose the burdens outlined in the introduction on the generations of our children and grandchildren: in the long run, significant funding from the budget, relevant tax burdens and restrained economic growth, or old-age poverty for the now active age-groups. Systemic steps have to be taken now in a way to prevent their future material modification by the election driven government will. It is a long-term national interest that requires the consensus of society as a whole.

The proposed reform poses a serious challenge for the economic policy, as its success requires material changes in many areas. These areas include employment policy, housing policy and social policy. In fact, an increase in the level of wages is essential for its success. A fundamental condition of the willingness to have children, which may result in the demographic adjustment, is that it should not at present condemn families to poverty.

Compared to the current low level of wages, which serves people's current livelihood, our long-term proposal seems almost insignificant. "Who knows what will happen by then ..." But we must not succumb to this attitude, if we want to be worthy of the name, *homo sapiens*.

In the long run, it is not possible to set up a self-sustaining social security system without the reform of the pension system outlined above. If we do not do it, we will have to face a serious migration phenomenon, the social-economic problems of which would probably exceed the ones that the present change may entail.

It has to be made clear in any case that these reforms serve the future, and give today's active age-groups enough time to adjust. However, one must admit that, quoting *Ferenc Deák*, if a waistcoat is buttoned up the wrong way, it has to be rebuttoned. Therefore, reregulating the system, which has become too generous, is absolutely justified.

Further analyses and a *decision* as early as possible *are required* whether the individual account system should be a "plain" one or should be based on a point system, which, as we have seen, is also proportionate to payment performance, and which may include points that serve demographic incentives. The projected demographic data indicate that the public system based on contributions *will, in any case, be unsustainable* without our proposed modifications, which would result in demographic changes, and will require significant budgetary funds in the future. Therefore, *the parametric changes should also be incorporated into the future pension system*. However, as a result of the paradigmatic reform, it is possible to expect that demographic indicators may change in a positive direction. This may improve financing and makes the excessive tightening of the parameters avoidable. Western European experience suggests that family-friendly measures have had an impact on demographic trends. However, one must take account of the fact in any case that social security pensions will only ensure modest provision in the future. (One must not forget: the burdens of today's entrepreneurial contribution benefit the pension account of the future! Its effect could only be offset by extremely dynamic economic growth.) Therefore, as we have emphasised, there will continue to be a burning need for *the voluntary "second pillar"* to ensure a dignified livelihood for the pensioners of the future.

Literature

AUGUSZTINOVICS, M. (2007): "Elmulasztott lehetőség Nyugdíjreformok Közép-Kelet-Európában" ("Missed Opportunity, Pension Reforms in Central East Europe"). In: Csaba Lentner (ed.). *Pénzügypolitikai stratégiák a XXI század elején* (*Financial Policy Strategies In The Early 21st Century*). Akadémiai Kiadó, pp. 245–256

BARR, N. (2003): "Myths, Truth and Policy Choices". In: Reforming Public Pension Sharing the Experiences of Transition and OECD Countries. OECD, Paris, pp. 99–227

BORLÓI, R. – RÉTI, J. (2009): "A pontrendszeres nyugdíjrendszer" ("The Point-based Pension System"). In: NYIKA, pp. 248–266

BOTOS, J. – BOTOS, K. (2010): "A reform reformja" ("Reform of the Reform"). *Polgári Szemle,* pp. 16–25

BOTOS, K. (2010): "Demográfia és nyugdíjrendszer" ("Demography and Pension System"). *Polgári Szemle,* pp. 46–55

BURGERT, CS. (2011): "Occupational Pension in Germany". PhD dissertation, manuscript

GÁL, I. R. (ed.) (2003): *Apák, fiúk, unokák (Fathers, Sons, Grandsons)*, Osiris Kiadó, Budapest, p. 210

GERENCSÉR, L. (2010): *Ismerd meg a nyugdíjrendszert!* (*Learn About the Pension System*) URBIS, p. 256

KOVÁCS, E. (2010): "A nyugdíjreform demográfiai korlátai" ("Demography Restricts Pension Reforms"). *Hitelintézeti Szemle.* pp. 101–112

MÉSZÁROS, J. 2005): "A társadalombiztosítási rendszerek, mint közjószágok" ("Social-insurance Pension Systems as Public Goods"). *Közgazdasági Szemle.* pp. 275–288

PRÓNAI, B. (2011): Társadalombiztosítás Magyarországon 1891–2005 (Social Security In Hungary 1891–2005). Szeged, Jatepress manuscript, under publication, p. 224

SIMONOVITS, A. (2009): "Népességöregedés, TB-nyugdíj és megtakarítás. Parametrikus nyugdíjreformok" ("Population Aging, the Public Pension System, and Savings: Parametric Pension Reforms). *Közgazdasági Szemle,* pp. 297–321

SCHLETT, A. (2008): "Mítosz és valóság. (A magyar nyugdíjreform 10 éve.)" ("Myth and Fact. (10 Years of the Hungarian Pension Reform.)") In: Globális lendkerekek (Global Flywheels), *Tiszatáj,* pp. 245–259

CSO Yearbook, 2009, p. 47, Table 228

OECD (2003): Reforming Public Pensions, Paris, p. 333

"Report of the Pension and Old Age Round Table" (NYIKA), December 2009, On-line: http://nyugdij.magyarorszagholnap.hu