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Double Coverage for the Pension Scheme – Pensions Require Both Children and Wages

Summary
The authors have elaborated a model to correct the false demographic message of the current pension scheme, as the latter suggests that a stable pension scheme can be maintained without having children. In this model, parents are entitled to a pension supplement for their jobholder children. In order to finance this scheme, an appropriated child-to-parent pension fund is proposed: a specified part of jobholder children's tax payments are contributed to it, and when their parents reach the specified age, their pensions are supplemented from this fund. Following the income and outflow of payments by the various generations, the proposed pension fund would thus create a kind of a generational finance within public finances. With the adoption of the child-to-parent pension element, the generational approach becomes part of both family budgets and public finances. The expression "child-to-parent" lends a symbolic power to the particular amounts, as it suggests that children represent a coverage value. According to our calculations, already the partial enforcement of the generational budget approach we propose will result in a 3 to 4 percentage point economic growth in the next few decades.

Journal of Economic Literature (JEL) codes: J11, J13, H55, H75
Keywords: pension scheme, public finances, parenting, pension reform, demographic risks, child-to-parent pension scheme, child-to-parent pension fund

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Method

Due to constraints on length, we have dispensed with the discussion of other concepts about recognising parenting in pension.[1] Three methodological novelties of this study should be highlighted:

– One of them is its vectored approach (demographic curves, labour market line, parenting trajectories etc.)

– The other is the financial application of this vectored approach, i.e. a vectored financial balance sheet is given as an example.

– And the third one is a re-orientation proposal applied to the specific features of a country based on the theoretical results, simultaneously with monitoring family and public finance balance sheet correlations.

The expected impacts of the proposal are estimated on a 30-year horizon, for Hungary. In our calculations, the headcount in the cohorts of the interactive population pyramid published by the Central Statistical Office of Hungary and included on the payment side were multiplied by the employment rate and reduced by 6-8 per cent for people employed in Western Europe. In respect of reduction in the number of working age people, the data published by *The 2018 Aeging Report* on Hungary were taken into account (EC, 2018).

On the payment side the number of people above the age of 65 was determined on the basis of the interactive population pyramid published by the Central Statistical Office of Hungary. Then the number of women who had children was calculated[2] and the number of men who had children but the mother had died was estimated. This was followed by the application of a 0.85 per cent multiplier to our estimate, as we presumed 15 per cent of the children of the number of people older than 65 not paying any contribution (because they have left for Western Europe, do not have jobs or have died). Thus the expected number of children providing child-to-parent supplement (up to 2050) was obtained. In the first few years, parents would receive an allowance of HUF 20,000 for 1.9 million children, and the number would only reduce slightly, below 1.8 million, after 20 to 25 years.

Introduction

Highly civilised societies are suffering from a severe demographic imbalance. Due to the mode of action followed by developments for several decades, the absence of a demographic balance remained unrecognised for a long time. The outstanding population growth called baby boom after World War II and then the significant number of children born to those born during the baby boom increased this hiddenness. For a considerable time, this double population boom provided input for the layer of jobholders. Economies were granted additional resources “free of charge”, and moreover, due to savings in the pension scheme, in addition to the labour market, these resources also appeared in public revenues through pension contributions. In the bubble of these processes, hardly any attention was paid to the demographists and economists who noticed deterioration in population growth and the fact that the total fertility rate had systematically dropped below the reproduction requirement of the population also in Hungary. In the period of excess resources a warning of population decrease sounded like Cassandra's prediction. The professional circles taunted and shut them out. Enjoying the positive resources, many thought that a balanced pension scheme was also possible even if the number of children decreased. The absence of a replacement in the labour market by a new generation when they leave the active age was not perceived as a problem.

Family – business – state: generational trajectories and trajectory periods

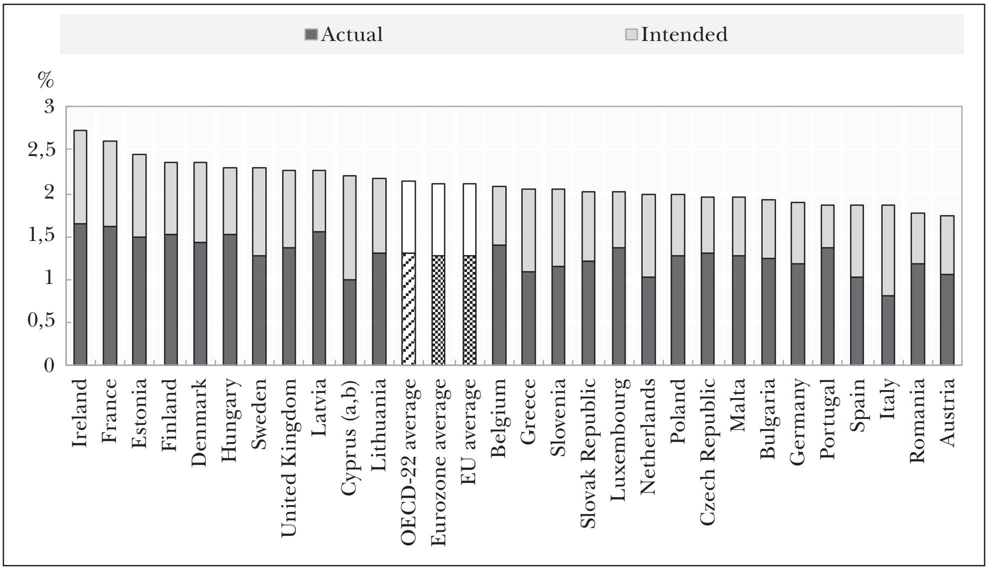
Previously, public thinking was predominated by an exclusively financial approach. It was rightly emphasised that while in the active age, a generation should provide for its own existence after retirement. However, one consideration was completely bypassed: namely that the coverage for the amount saved for the years of retirement should also be ensured. In other words, money only has purchasing power if there are goods to purchase. Therefore, if a skilled generation suitable for production grows up and enters the labour market. The world of virtual money blurred the correlation that the pension scheme is unsustainable without children.

What happened at the level of families? As we know, in most European countries parenting remains considerably below the reproduction requirement. These are facts that show the actual number of children born. This is an important indicator. However, it is also important to look beyond the indicators. This is what an OECD study did: it compared the intended number of children and the number of children actually born to mothers between 24 and 49 years of age. This test revealed a significant difference between the intended number of children and the number of actually born children. This is conspicuous because these statements were not dim future concepts, they were made by people who were actual parents, and so the intended number was based on experience. In their case the intended number of children should have been close to implementation, however, this was not what happened. The OECD study considered it as an important warning that the desired number of children is considerably below the actual number of children suggests that childbearing (starting a family) is hampered in OECD countries.

The diagram shows the intended and the actual number or children, and the significant difference between the two (Chart 1).

As demonstrated in the chart, even on the average of the European Union, the desired number of children exceeds the reproduction requirement (the latter is above 2, and in this respect, Hungary is ranked the upscale sixth among the presented 27 countries). Thus on the level aspirations, demographic behaviour does not yet suggest population decrease. But the number of actually undertaken children does. This suggests that compulsive obstacles take place and prevent the birth of the desired number of children. One of the authors of this study, Szilvia Szegő, pointed out one

Chart 1: Mean ultimately intended family size, 2011. Mean average actual and intended number of children, women (25-39)



a) Footnote by Turkey: The information in this document with reference to « Cyprus » relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognizes the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of United Nations, Turkey shall preserve its position concerning the "Cyprus issue";

b) Footnote by all the European Union Member States of the OECD and the European Commission: The Republic of Cyprus is recognized by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Sources: Eurobarometer 2011: Fertility and Social Climate

of such obstacles in several of her essays (Szegő, 2002, pp. 59–83; Szegő, 2004). With the help of analyses revealing the various labour markets and parenting trajectories, she demonstrated that a kind of a "solution" for conflicts between the different trajectories is that a number of the intended children are not born. The time schedule of childbearing is also distorted. The first child is delayed, and childbearing is finished "early" in comparison to the course of life of a person with several children.

Thus parents' childbearing period has significantly reduced within the courses of their lives. Due to the shorter childbearing period, a lower number of parents will have a shorter time on his trajectory to have children. One would conclude that as a complementary event, the time spent at work will then be longer. But this is not what happens. Actually, it is the reverse. In practice, similarly to the childbearing period, the time spent at work also becomes shorter. The jobholding period also starts late and ends early. It follows from this that the two trajectories do not adapt to each other;

rather they compete for each other's periods.[3] This situation is rendered even more difficult by an increase in the period of parenting. For this reason, parents are compelled to expect a long course of parenting as a result of childbearing.

A serious paradox follows from all these. A relatively long and – if schooling is included – more expensive parenting period is established while the parents' employment becomes increasingly unfavourable as they grow older. The income available for the late education of their children may decrease.[4] We have come to the conclusion *that despite increase in the life expectancy, the periods of childbearing and jobholding are on the decline, while the period required for raising children until they start work has increased considerably.* As an inevitable outcome, a significant number of the intended children will not be born, unless adjustment is made.

Although there are significant experiments towards family-friendly businesses, companies' responsiveness to their employees' family obligations remains rather low. The childbearing age, especially in the case of women, is an *ab ovo* disadvantage.

A problem that is even more serious than the conflict between family versus business trajectories is that companies fail to consider the employee's entire course of life. Companies do not finance human walks of life; they only take account of and calculate with the human period spent with them. As GDP, the recognised performance is produced by the company, this approach is not only characteristic of companies, but also of the society. For a long time it may seem that the performance of the economy is independent of the number of children families undertake to have. It was thus fair to assume almost as a matter of fact that for a long time pension was considered to be independent from childbearing. When it became clear that the demographic structure of the population deteriorated at a rate that was hardly rectifiable during the next generation, emphasis was placed on long-term thinking. While the one-time advocates of the Cassandra prophecies were not allowed to speak up, when a significant deterioration in the demographic resources became inevitable, suddenly it became trendy to deal with the worsening composition of the population. It was made a research topic and – with ample support from the World Bank and other rich institutions – all of a sudden the pension reform thought started to spread. Proposals were made one after the other about the reform of the pension scheme. These recommendations revealed many things, but unfortunately, they failed to tackle one important factor: the fact that pension payment required children, to put it simply, and moreover, jobholder children.

The pension reform proposals seemed to reveal that the failure of the so-call pay-as-you-go scheme, gaining ground after World War II caused the drying up of the resources for the pension scheme. The pay-as-you-go system was contrasted to the proposed full funding scheme. Instead of the current employee wages and the amount contributed by them to public finances, a fully funded resource should be allocated to pensions. In simplistic terms this meant that the pension scheme had to be included in the capital investment system, and savings were managed as investment functioning as competitive capital. In other words, in this approach pensions are based on the capital gain on pension contributions. The investment time horizon needed to be at least 40 to 45 years, i.e. the entire time spent in work – and this was less highlighted. Over such a long time period, risks already include developments in the demographic resources. And this exceeds the risk management period of capital investments by a period comprising several generations. When the demographic problem kicked in, the attention was again drawn to state assets.

In an analysis of companies and families we have got to the state. Although pension reforms had been granted huge amounts of support and ideological orientation through state contribution, they actually wanted to oust the state from the resources of the pension scheme, while implicitly shifting the generation-related risks to the state. The latter is the risk we are currently facing. They intended to re-channel the amounts saved by generations to a private capital flow scheme. In this approach, the new generation is also "absorbed" the population in the same way as companies can take up the available workforce. Unfortunately, the research underlying these reforms failed to study the correlations included in generational relations, for example the ultimate party to assume the demographic risks. By now it has become clear that the demographic crisis that has evolved cannot be solved by the "marketization" of generational savings. The problems of demographic imbalance and the resulting pension security issues necessarily rose to the level of the level of the state.

This article is not supposed to analyse the two different kinds of pension schemes, we merely wished to outline the approach that failed to include the need to relay between generations, at least to the extent of raising the problem, in the efforts made at a reform. In Hungary, deterioration in the structure of the population will remain unstoppable for a long time, as any correction can improve the structure of the population in about 20 to 30 years. It is already clear that the former population peaks we could enjoy have kicked back in the pension scheme. The children of the populous generation of the 1950's will soon retire. *To date they have functioned as a kind of a "free" demographic resource, but soon they will cause a deficit in economic growth and in the pension scheme.* This will also have its impact felt in public finances. Those who have increased public revenues due to their relatively high numbers (in times when high unemployment counteracted it) will soon retire and increase the number of pensioners. (This situation is further exacerbated by the complex effect of work abroad, which reduces labour supply.)

In addition to children, the pension scheme requires wages

By now it has become clear that the previous approach that children are not needed for the pension scheme needs to be changed urgently. But even more is needed. Children can only provide coverage for the pension scheme if their performance is sufficient for this. This means that in addition to the number of children, the number and wages of employees are also important if we endeavour to have a financially balanced pension scheme. The pension payments relative to the low level of average wages have been adjusted in recent years in Hungary. For example, in 2018 the net average wages increased by 11 per cent, and this had a favourable impact on income from pension contributions. However, it should also be taken into consideration that the predictable increase in the average wages is still insufficient to offset the reduction in the number of employees to take place within a few years. No matter how high the average wage may be, if the age composition of the population deteriorates and an increasing number of pensioners must be supported by a decreasing number of employees.

Due to the ageing population, within a few years the pension scheme will face a severe problem in Hungary. Between 2018 and 2037, the number of people between 23 and 64 will drop by three times as many as the increase in the number of those in the retirement age. These drastic effects will be felt in the generational composition in no more than the next 20 years. For this reason it is crucial to find a quick solution to cover *the payable pensions by an appropriate amount of wages* in the period ahead of us.

Pension scheme adjustment may not rely solely on childbearing, as the expected amount of earnings in the times to come is a similarly important issue. However, the question raised this way leads back to the demographic correlations. There is no more waiting. We need actions to encourage having the desired two children per family.

Pension requires double coverage: pension contribution and children

The pension scheme is covered by contribution payments (whether social contributions or other kinds of pension savings) and by demographic coverage, in other words, the replacement of the retiring generation by their children. The current pension scheme unduly depreciates the role of children in actual pension payments. Approximately one to two per cent of the total amount of the pension serves to recognise that the pensioners had made significant efforts for the child-to-parent coverage of pensions. Those who raise children invest in the demographic security of the pension scheme. Recognition of the investors in the pension scheme – by a kind of a child-to-parent element – would acknowledge this performance and would appreciate having children. Instead of containing childbearing, this new element in the pension scheme would recognise it.

As a historical heritage, women shoulder considerably higher burden by undertaking parenting than men, and this is especially spectacular in women's labour market trajectory. Their lower average wage is partly due to this. Thus in the form of a pension contribution, they have less pension coverage than men. In order to lay the demographic basis of the current pension scheme we need to correct these distortions. A more realistic reflection of the value proportions between childbearing and employment in the pension scheme would have an important moral message.

For the acknowledgement of parenting in the pension we have elaborated a possible child-to-parent pension scheme built in the current scheme. Without changing the current pay-as-you-go scheme, we only propose to add a supplementary pension element to move the message inherent in the pension scheme in a more positive direction: to show that pensions do depend on the performance of children born and raised to work.

The principle of family reciprocity – in a child-to-parent pension scheme

The pension scheme essentially does not acknowledge the significant amounts spent by families on raising children (it only pays 1 to 2 per cent for the children), despite the fact that raising children demands significant financial expenditure and household duties. Seeking a solution, we prepared a family budget applied to Hungarian conditions. This clearly revealed that – including both work and financial costs – raising two children required parents at least amount of money equal to the amount of contribution they pay to the pension funds that secure their generation's pension during the years they work.[5] The size of parenting burdens is also shown by the fact that parents who undertake to raise two children immediately consume 30 per cent less than childless couples under otherwise equal conditions.

In essence, our current pension scheme dispenses with the principle of reciprocity. In other words, they consider their pension and the future of their generation independent of whether or not they have children. It is all mental. If families think along these lines, they will act accordingly. This is a typical regulatory failure. In order to remedy this failure, the model has been built to allow families realised the correlation between the pension scheme and having children. In this model, this is the purpose of paying a child-to-parent pension supplement in consideration for their investment made into children. *The investor parents should also share in the yield earned by a jobholder child.*

Currently, parenting is more penalised than acknowledged in the pension scheme. The small amount that appears in the pension under the title of parenting is insufficient for even the minimum compensation, despite the fact that these people have given up a lot for their children. This is to say the current pension scheme is not only unjust but also sends a false message. Part of the message is that parenting is not worth, and the other part is that the state is able to devise a future image without considering the number of children born and raised, including employment in the domestic market. For a long time it was thought that a country's performance can develop independently of the way the generations follow their ascendants. The flawed messages have had severe consequences: deterioration in the demographic structure of the population and weakening the foundation of the demographic pyramid.

In order to alter the false message of the pension scheme, we have elaborated a system that would provide a perceptible pension supplement to parents for their children. The parents would have a share in the proposed pension supplement in proportion to their respective contribution (60 per cent by the mother and 40 per cent by the father). The term "supplement" is used in order to emphasise that the intention is not the change the current, practically pay-as-you-go scheme. We do not wish to reduce the pension payable to childless people. We recommend the recognition of having children in the parents' pension by an amount of money that gives weight to the child in the pension if expressed in forint. The symbolic significance of the child-to-parent pension element is even more important than the amounts involved: it calls a spade a spade, i.e. this pension element sends the message that *pension payment requires children.* (It is important to note at this point that in the proposed amount, both the load-bearing capacity of the central budget and the expected favourable labour market effects had to be taken into account. This is explained by the fact that in contrast to distorting messages, demographic messages offer parents the option of making an expected more favourable decision.)

The amount of the child-to-parent pension we have elaborated would increase to about 12 per cent of the total paid old-age pension from the current approximately 1 or 2 per cent. At the level of the families affected, the proposed amount would represent *a rise of about 15 per cent relative to the average pension up to the end of the parents' lives.* This is already an equitable amount, and would have a favourable impact on the approach that has caused the break off of the pension scheme from generational relations and has pushed the principle of reciprocity into the background.

Pension in the family budget

Our proposal puts the above considerations into practice: after the age of 65, retired parents would be paid child-to-parent pension in the amount of HUF 20,000 per month per every jobholder child or offspring in addition to their regular pension. This amount would increase the two parents' aggregate pension (calculated on average) by nearly 15 per cent (if they have to children): by nearly 20 per cent for the mother and 10 per cent for the father. This difference would in part adjust the unfair underrating of women in their average pension. The pension paid to a parent for any reason would be 30 per cent higher.

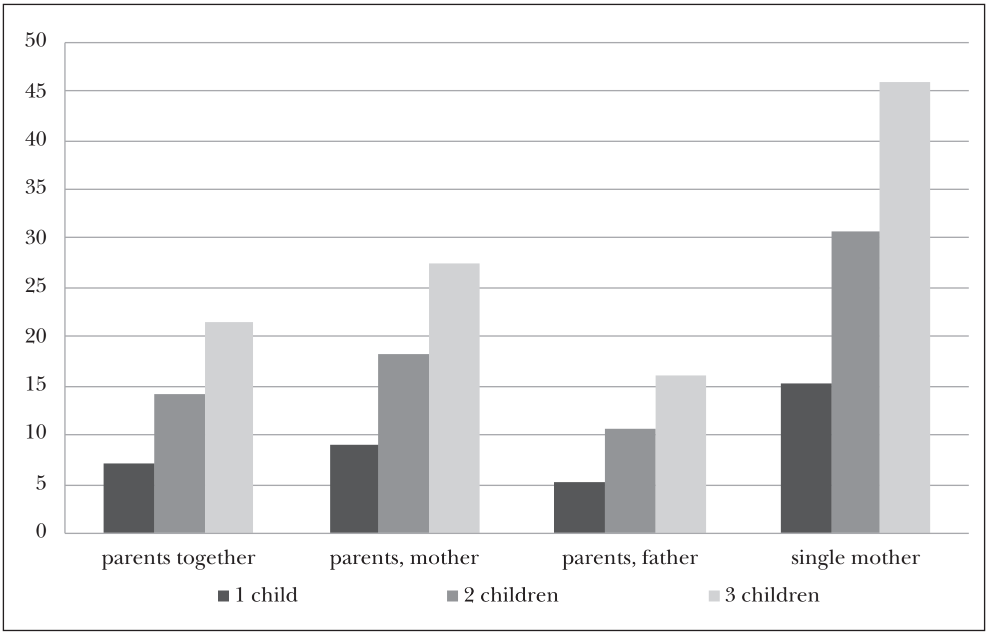
As an important consideration, the supplementary pension element should assimilate into the values already accepted in the pension scheme: the simultaneous enforcement of performance and solidarity. In this case this meant that the supplement paid for children was not made proportionate to pensions. This would not have made any sense as this supplement is not compensation. In our proposal we do not intend to radically change the current values manifest in the pension scheme. We only wanted to emphasise the principle that children are also required for pension. For the purposes of sending a message of this principle, we selected a pension supplement that is big enough in size to represent genuine value compared to the current minimum amounts. Thus the amount of the proposed pension supplement basically intends to transmit a message about values to the society, the family and to individuals alike. We also considered it important to have a pension supplement that was manageable at the level of public finances and that did not undermine the efforts made at maintaining balance in public finances.

Another important consideration included the requirement that the basis of the pension supplement should be the child's performance. This is because the generational reciprocity is not limited to the birth of a child. On retirement, parents need genuine performance. Resources are needed for supplementing pensions. And this resource comprises the payments made by jobholder children, thus a part of their earnings, to the central budget. Thus our proposal significantly differs from those that recommend the payment of additional pension simply on the basis of the number of children.

Our principle was to manage demographic considerations in agreement with the financial procedures. In other words, in our model it is not the child or offspring, but the social contributions paid by them that provide a legal basis for a child-to-parent pension. For this reason, a part of the taxes payable by children would be earmarked for payment to the parents at a later date. In addition to the number of children, parents would also be entitled to supplementary pension on the basis of the child-to-parent pension fund maintained by these children. Such a child-to-parent pension would be established from (a part of) the taxes payable by children and the fund would be used as coverage for pension payments to parents.

The recommended amount – i.e. HUF 20,000 per month per child – would increase the pension payable to retired mothers by a considerable amount, to adjust the current unjust undervalued average pension paid to women. The following chart depicts the amounts parents could have access to according to the number of jobholding children and family status.[6]

Chart 2: Additional income (to the average pension) including the child-to-parent pension supplement, in a breakdown by the number of children and family status, %



Source: Authors' own calculations based on HCSO, 2018

If the parents' pension depends on the offspring's performance, this also means that *pension is included in the family budget.* Part of a jobholder offspring would be returned to the parents. The value of wage would be appreciated by the family, as it would become income that can be used at a later date.

Thus, in addition to the above, our proposal also has another business management innovation: *the family budget becomes a public matter,* and thus the individual work trajectory (or career) would also be managed as part of the family budget and would be discussed. Later on, we will endeavour to enforce this approach in public finances. Developments in the family budget and the events affecting the various generations at the level of the family would become important considerations in public finances. The reason is that they would have financial consequences in the model we propose.

Coexisting generations in public finances – the new child-to-parent pension fund model

With the child-to-parent pension fund, pension is included in the family budget. A matter of principle, namely that pension requires children, is put into practice. For adult, jobholder children it would thus be made obvious that, through a new, state-administered pension fund, part of their wage would increase their parents' pension. Below is a discussion of public finances. At the level of the state, we also endeavour to enforce the principle of coverage by the next generation, complete with a model of generational finances. We made efforts at the elaboration of a financial scheme suitable for monitoring whether or not a next generation replaces those who retire from work. For this reason, we endeavoured to set up, within the budget, a scheme that monitors the financial relations between the coexisting generations at any given time. To this end, we recommended the setting up of an appropriated child-to-parent pension fund, which collects payments from the affected age-groups of jobholder children, and pays pension supplements to the relevant age-groups of the parents.

Thus, just as in a family, *the coexisting generations work and contribute to the fund,* and just as in a family, *the coexisting generations are paid pension supplement from the fund.* In this case, the social organisation of the budget is not the family but the state institution of coexisting generations and the fund appropriated from public finances that transacts payments and withdrawals. Thus the proposed pension fund is a system capable of monitoring the "household" of generations through the collection and outflow of liquid assets in the pension scheme. The amount of payments depends on the headcount and average payment of the working generation, and on the transfers made from the, while the amount of disbursements depend on the headcount and performance of the generation of the retirement age. The HUF amounts display whether the contributors' performance (the number of the contributing generation of children and the amount of payments they deposit in the state budget) satisfies the pension requirement by the beneficiary generation of such payments vis-a-vis the proposed budgetary pension fund.

We followed this logic in the child-to-parent pension fund we proposed. This fund would operate in close relation to but separately from the state budget.

By the establishment of a child-to-parent pension fund, we intend to modify the previous approach, which focussed on the fiscal balance and failed to monitor the effects of demographic resources in the budget. Thus during the period of the baby boom, a demographic surplus appeared as temporary additional resources, and it did not predict that over time, decrease in the number of children would cause a shortage of demographic resources in the central budget. *Thus in addition to the pension scheme, the deficiencies of the demographic approach also caused a problem in the system of public finances.* Generation fluctuations disappear in the fiscal system broken down into years and year lines. For this reason we consider it important to apply a financial structure suitable for monitoring funds flows between generations. The scheme we propose, i.e. the child-to-parent pension fund may be suitable.

The question arises when and how to adopt such a system. Obviously, the sources of payments will be the children's contributions paid to the state. It follows from this that for a long time resources are generated but they may only be used, i.e. paid after a period comprising several generations. The question is the matching of the incoming and outflowing funds in time and amount. The absence of a pension fund previously appropriated in the budget for retired parents should also be considered as granted. If we want to adopt an equitable pension supplement also for these people, we need to look for stop-gap measures. This is the reason why we apply a basic scheme launched in the form of payments, and disbursements are made only after the entitlement has been obtained. Furthermore, we apply a stop-gap scheme to pay the current generation of pensioners, as no such pension fund has been set up for them. As the latter scheme is short of funds, the basic scheme has been compiled in a way that its excess funds (the subsequent disbursements) should cover the pension supplements disbursed under the stop-gap scheme.

The basis scheme of the proposed appropriation is the following. Part of the contributions paid by young people to the state budget would be transferred to the appropriated child-to-parent pension fund in the first 4 years of their employment. The contribution would only be deducted and transferred from HUF 225,000 of the child's wage, and transfers from any amount above that would be made to the usual state budget. This cap was set in an amount to allow sufficient funds for the parents' pension supplement. This amount (HUF 1,300,000 per annum) approximately corresponds to the disbursements parents would receive after the age of 65 – on average for about 15 years – as a supplement for their jobholding children. As an important consideration, payments should be made in time, i.e. children should pay the four-year payment into the pension fund by the age of 25-28 (depending on qualifications).

Thus in the structure of this pension fund, as an important criterion, in addition to the number of children, parents would also be entitled to supplementary pension from the social contributions on the basis of a child-to-parent pension fund maintained by these children. The assets side of the pension fund includes the payments made by the jobholding children or other offspring, while the liabilities side comprises the pension supplements due to parents after their children.

The amounts accounted in the assets and liabilities sides of the pension fund would clearly show the changes that took place in the succession of the generations. Such a fund would also show if, for example, during permanent and mass unemployment, the topping up of pensions by the next generation is lost.

Thus in our proposal the successive generations are interlinked in the financial balance and the performances displayed in their respective employment. For this reason in the proposed pension fund, any demographic shortage and underemployment as well as the resultant budget deficit (or the opposite, which may arise from a demographic surplus resource) could be monitored. Through establishing a child-to-parent fund, the logic of the financial balance would get closer to the logic of social institutions, including families, the latter term meaning the "large family" of the successive and coexisting generations and their generational household under the government's umbrella.

The specific facility of the child-to-parent pension fund – or the model of generational public finances

The proposed basic scheme is the following. Withdrawals from HUF 225,000 of the monthly earnings of an employed child would be transferred to the child-to-parent pension fund. This would add up to HUF 1,300,000 per annum. This is performed for the first 4 years of the child's career, but up to the age of maximum 25 (or 28 if in tertiary education). This contribution would only be paid for 4 years, and then terminated. (HUF 5 million is collected in 4 years, and this amount is sufficient for paying HUF 20,000 per month to mothers and partly fathers above the age of 65 for the rest of their lives.)

Management of the transitional period was also important in this proposal. This is because we consider it equitable to pay an allowance to currently retired parents for their children. Obviously, at the moment there is no appropriated resource in the central budget for such a contribution. For this reason, the resources are naturally insufficient for the payments to be made from the pension fund. This situation could be improved if the first 4 years following commencement are considered as margining.[7] In other words, during this period transfers would not only be made to the state pension fund of this scheme from the wages of young people newly entering the labour market but all employees younger than 42. After four years, they would no longer contribute to the facility. Subsequently, only those contributors would remain in the scheme who had been unable to pay the required amount within 4 years. They would be given two additional years for making the required payments. Then these contributors would also leave the system. In the period after the initial four years, payments by those who leave the scheme would be uninterrupted because the new entrants to the labour market would continue paying the contributions.

Thus the parents of people below 42 could only be paid pension supplements from the fifth year after the commencement of the facility, i.e. from 2025 in our proposal, provided that they are entitled. Initially, the number of beneficiaries will be low, as parents need to reach the retirement age.

Thus in the first few years after the commencement of the scheme, payments made by large masses of people below 42 would be transferred to the pension fund, while nobody would be entitled to receive pension supplement for four years. Subsequently, for a time their number will remain low. Thus the pension fund would increase by more than HUF 2600 billion per annum, and this surplus would serve as coverage for the subsequent payments to be made by the pension fund.

Under this facility, these funds would be transferred from the general liabilities of the state to payables to pensioners in consideration of their children, covered by the working generations.

Thus the first four years of the child-to-parent pension fund can be considered as a basic margining period. This is why the following chart shows outstanding amounts among the revenues of the pension fund. Then payment starts, and the revenues raised by the pension fund will be sufficient for fulfilling them up to 2042, when a deficit of HUF 60 to 120 billion evolves between annual incoming and outflowing funds. This is the point where the financial scheme devised by us evidences that it is capable of mapping demographic developments, because the mentioned deficit is caused by deterioration in the demographic composition. In other words, from the fact that the number of children decreases in comparison to the parents' generation at any time, i.e. the elderly generation is not replaced. Instead of demonstrating the frequently emphasised absence of discipline in the state budget, this deficit reveals that irrespectively of financial discipline in public finances, a deficit develops in the budget if the population decreases.

This clearly reveals that *demography, or population developments, and more specifically, the composition of the population, are significant factors in the country's economic growth* or, in an opposite case, in its decrease.

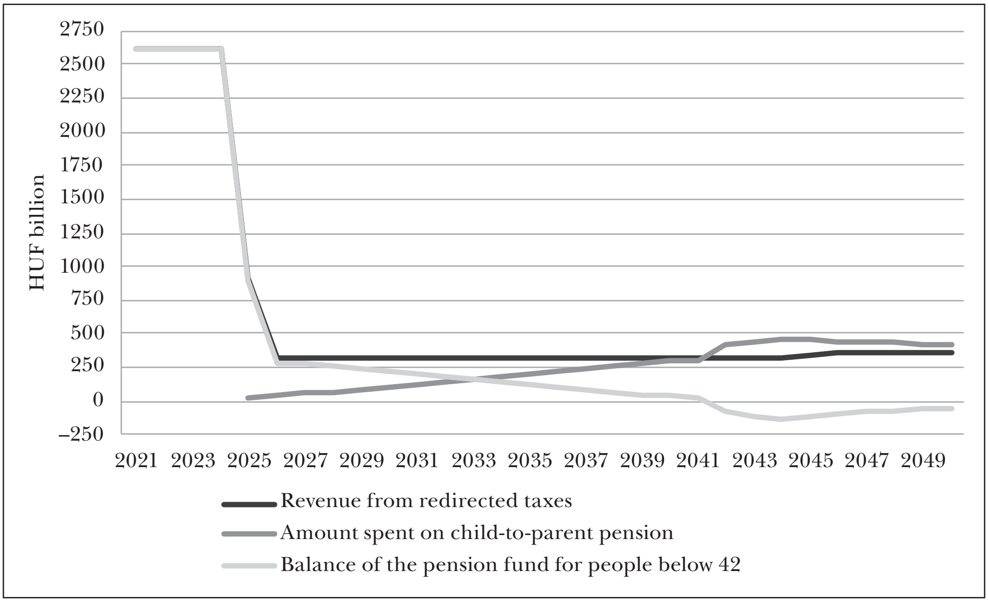
The Chart 3 depicts the proposed supplementary pension facility with payments and revenues in the age-group below 42.

The deficit shown in the chart after 2042–2045 can already be considered as a demographic structural deficit. This suggests that the child-to-parent pension fund is not merely a financing facility of numerous similar options; but it is a facility of a generation's financial management. In other words, in this case the calculated and depicted accounting deficit also highlights the economic demographic deficit of pensions.

Reclassification between generations in public finances – covered by the pension fund

The above is a discussion of payments made by people below 42 and developments in the headcount of the beneficiaries of pension supplement as well as their effects. The situation is different in the case of people older than 42, as the majority of their parents have already retired. An equitable solution should be sought for providing them access to a pension supplement for the children they have raised. An equitable

Chart 3: Revenue, expenditure and balance of the pension fund, 2021–2051, people below 42



Source: Author's own calculation based on HCSO, 2012; 2018; 2019

solution should especially be sought for elderly women, because they raised several children while simultaneously working, and therefore their pensions are considerably less than men's. An equitable pension scheme would acknowledge their performance after their employed children.

For this reason, we have also elaborated a facility meeting the above principles. The principle underlying this solution is also the securing of parents' entitlement to a child-to-parent pension by a 4-year employment in Hungary.

– As a fundamental requirement, people above 42 would be required to have worked at least 6 years in Hungary between 2010 and 2020. In this case the parents would be automatically paid the HUF 20,000 pension supplement due to them for their children. If this is not fulfilled, they should also evidence 4 years of employment within 6 years.

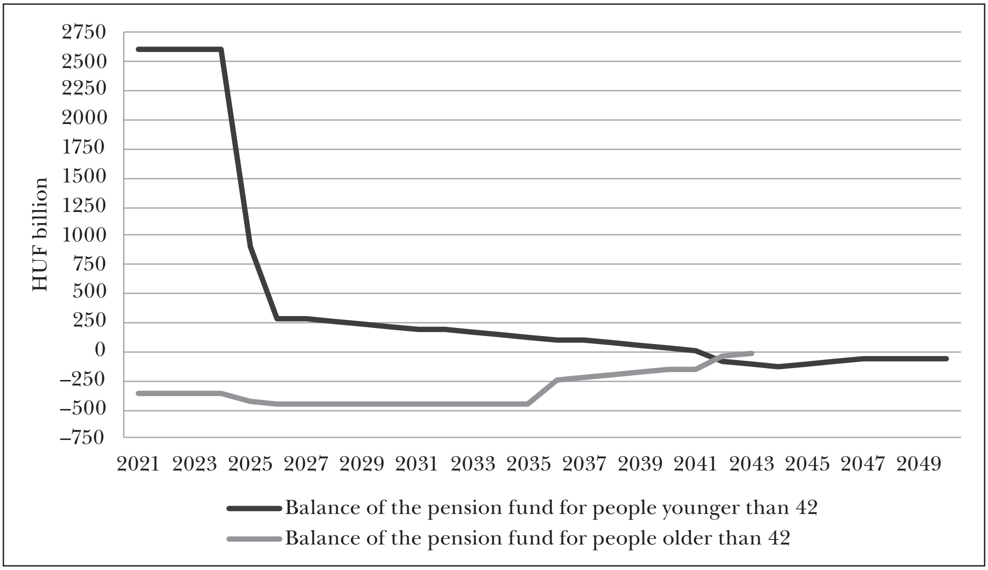
– People above 51 should prove to have worked for 12 years since 1988 or 6 years between 2010 and 2020. If these criteria are met, the parents are automatically paid the HUF 20,000 due to them.

– People above 60 should also be expected a similar performance for entitlement to the pension supplement. It is emphasised that in each case, provided that the conditions are met, the child-to-parent pension supplement would automatically be due to the parents.

Where will the money come from? We have not raised any funds. (No more than 4 to 5 per cent will pay subsequently.) It follows as a matter of fact that a significantly higher amount can be collected from people below 42, as shown above, exactly in the same years when deficit is to be expected in the case of people above 42. This allows for the option of a kind of reclassification between generations. In this case, this would mean that in the case of people above 42 the state, acting as an institution of generational solidarity, would undertake payment of the pension supplement to the current pensioners. Resources for these payments would be raised by borrowing the money deposited by people below 42 in the child-to-parent pension fund. This is essentially required up to 2045, because by that time this retired age group will not share in pension any more. On the other hand, by that time the pension fund of the currently 42-year-old will start making deficit, and so the redemption of the loan will come handy. It is also emphasised that the child-to-parent fund lends the money collected from payments by people below 42 with the intention to be repaid at a later date, in other words, it expects the state to hedge this amount. In 25 years this amounts to HUF 7.7 thousand billion. At that point things change. After this point in time, the pension fund does not lend any more, but it is repaid the loan it has granted. (Right on time because within 25 to 30 years, the parents of the generation currently below 42 will also require an amount of about HUF 350 billion for the monthly HUF 20,000 pension supplement.)

The Chart 4 depicts the option of generation reclassification, based on the difference between the annual incomes and outflows.

Chart 4: Annual pension fund balances for people below and above 42



Source: Author's own calculation based on HCSO, 2012; 2018; 2019

The chart clearly shows the point when the pension fund having a surplus turns into the negative, and the other fund does not generate deficit any longer. It is also clearly visible that the surplus generated from the payments made by people below 42 to the pension fund provides coverage for the state to take a loan in the form of domestic bonds for paying the uncovered pension supplements. This means that a kind of solidarity cross-financing can be established by various lending techniques between the two generations within the central budget.

Once the transitional period is over, the scheme's stable financing is ensured by young people's payments. As employment is nearly complete, the overwhelming majority of employees below 25 is expected to spend the first 4 years after commencement with work, and consequently, from the 5th year, no more reclassification would be needed from the taxes on their incomes into the child-to-parent fund. This would result in a drop of the number of payers to the level where each time the taxes on the incomes of a group of 20-25 years old people, i.e. a generation of 4 birth years, are reclassified. This comprises about 250,000 people year by year.[8]

When the HUF 5 million has been collected as a result of payments made during 4 years of employment, young people no longer contribute to the pension fund (say, at the age of 25) through the central budget. However, he or she is replaced by a new entrant, a 19 or 20-year-old person starting on a career.

For this reason, the child-to-parent pension fund is not merely a financing facility among numerous other similar options, rather, it is a facility that highlights the financial deficit incurred in pensions, calculated according to accounting rules and caused by demographic factors. However, after a few years, the number of people employed, and consequently, the amount available for financing pensions, will suddenly decrease.

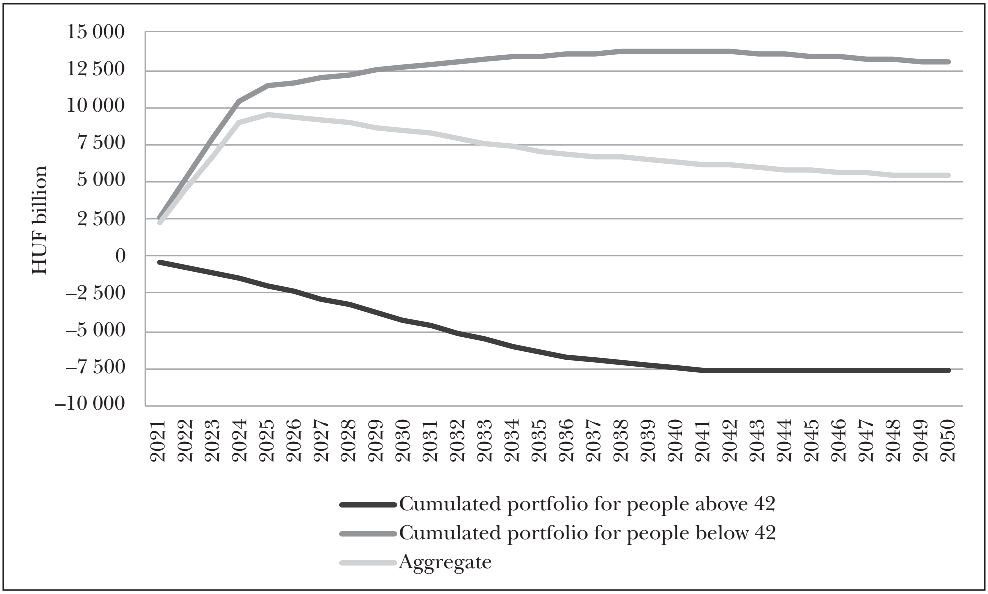
Effects on public finances

Running internal funds through internal bonds

Since at the start of the scheme payments into the fund would amount to 15 or 20 times the amount required for disbursements, it is advisable to allow the lending of the money left in the fund after disbursement to the parents for the purposes of financing the usual expenses incurred in public finances (e.g. the budget, the pension fund, the health fund etc.). This could be done, among others, by purchasing the internal fiscal bond (e.g. on the last day of each months, the amount available on the fund's account would be spent on this). Pension supplements would be financed from the child-to-parent fund. After these amounts have been paid, internal fiscal bonds would be purchased from the amount left in the fund (e.g. on the last day of every month). Only the child-to-parent fund would be allowed to purchase internal fiscal bonds. (Whether or not a real interest rate should also be imposed in addition to indexation for inflation, what maturity should be set for it and if it should be renewable remain open questions.)

The chart compares the high-amount surplus accumulated over the years from the payments made by people below 42 and the simultaneously generated deficits. The following chart gives a good illustration of the options available for using these resources in the internal budget. While annual surplus amounts and deficits are compared in the previous chart, this one shows the limits of growth for the accumulated surpluses and accumulated deficits, and the point in time when their direction changes.

Chart 5: Cumulated annual pension fund balances



Source: Author's own calculation based on HCSO, 2012; 2018; 2019

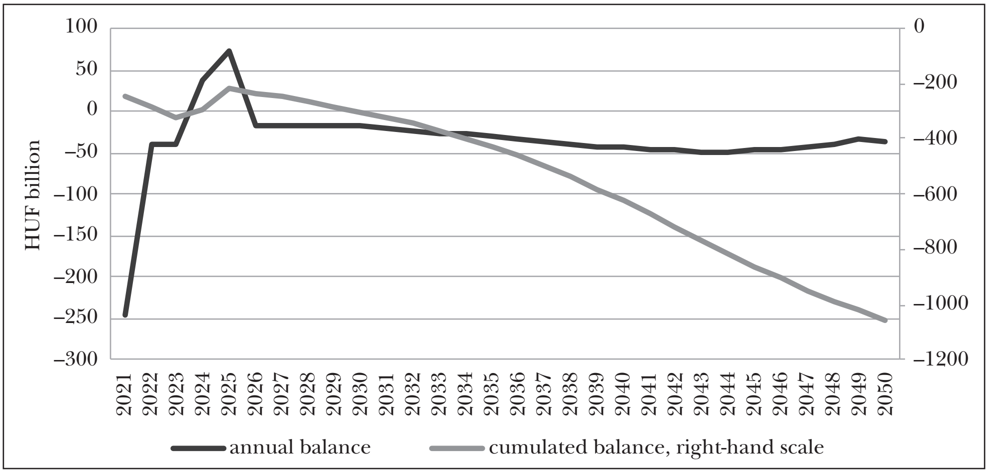
The chart reveals that while the pension fund surplus increases to HUF 13,000 billion, the government will have a deficit in the amount of HUF 7.7 billion from uncovered payments. This means that actually, such accumulated amounts should be expected when a financing facility is set up between the two pension funds. The government could issue bonds for this accumulated deficit and the child-to-parent pension fund could purchase such bonds.

A decision on the reclassification into the child-to-parent fund would be adopted annually, in accordance with the usual fiscal administration procedure, simultaneously with a decision on the amount of pension supplement payable next year and on the amount of internal bonds to be purchased by the fund.

Maastricht Criteria

Reclassification into the child-to-parent pension fund would remain a transaction within public finances. Thus only the child-to-parent allowance (HUF 20,000 per month per working child) would be included in the Maastricht deficit. The deficit caused would be reduced by the increased amount of taxes due to higher consumption resulting from the additional pension disbursements. The higher employment triggered by this model would also increase state revenues. A comparison of expenses and incomes caused by the proposed scheme discloses the actual public finance deficit, shown in the following chart.

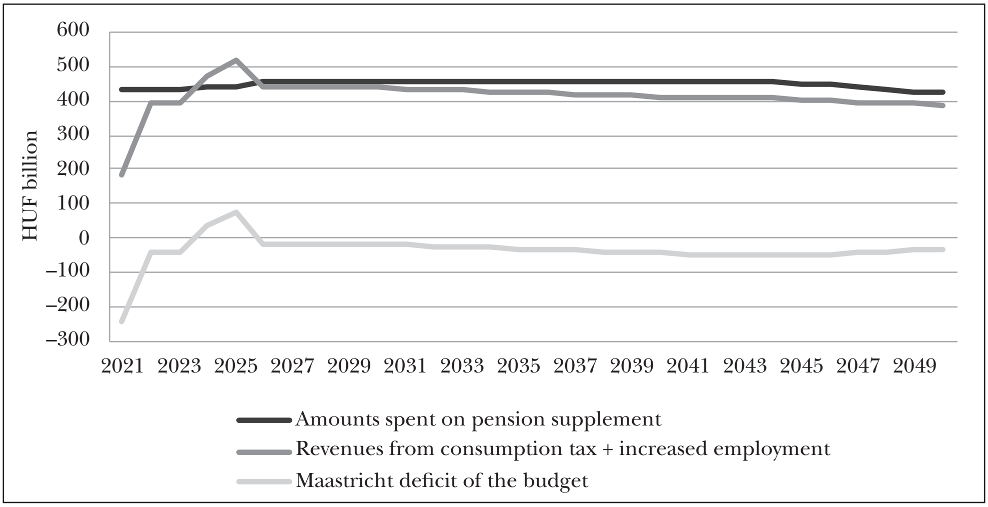
Chart 6: Expected government deficit, incl. the child-to-parent pension element, annual and accumulated Maastricht balance



Source: Author's own calculation based on HCSO, 2012; 2018; 2019

Developments in the child-to-parent pension fund and the details of their effects on public finances are depicted in a single chart.

Chart 7: Impacts of the child-to-parent pension on the government deficit according to the Maastricht criteria



Source: Author's own calculation based on HCSO, 2012; 2018; 2019

It is clear from the chart that the ultimate total (supplemented) net government deficit is only significant in the first year – approximately HUF 200 billion,[9] and then as a result of the proposed scheme, the deficit does not increase by more than HUF 20-40 billion per annum. The net amount includes the funds repaid to the state, primarily the increased amount of taxes due to consumption.

The obvious fiscal burden is, however, mitigated by the approach that the proposed model considers childbearing an investment that will subsequently reduce the demographic deficit. This also supports the actual birth of the number of intended children, since it makes obvious for everyone that an investment is made into his or her family's future. In our opinion, the proposed child-to-parent pension element also improves the accounting of the pension scheme, not in the lease due to the fund financing technique that also takes account of resources. Similarly important is the approximation of accounting and social values.

Expected effects on employment and on economic growth

The proposed child-to-parent pension model includes pensions in two of the country's important budgets: it will be integrated in family budgets and simultaneously also into the pension fund specifically established within the central budget for this purpose. This will give a clear message to young people to come home and undertake employment in Hungary, and will encourage the conversion of public finances according to demographic correlations. The demographic processes could be given higher emphasis in shaping public finances, for example, in predicting employment or in projecting economic growth. Thus the false message currently sent by the pension scheme, namely that the pension scheme can be made independent of parenting and of adult children's performances. The requirement of reciprocity between generations would represent an important value in both family budgets and public finances.

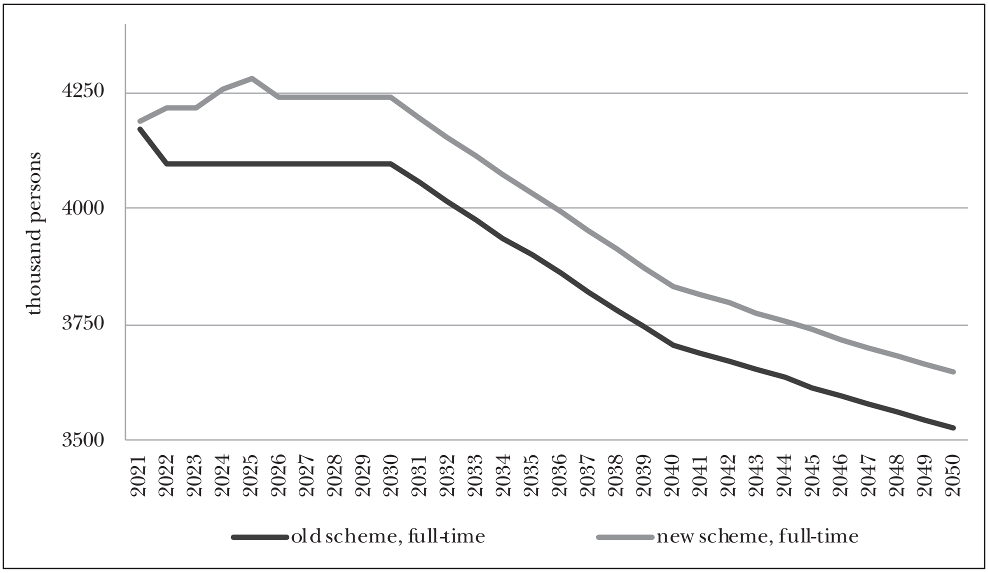
With the termination of the false message sent by the current pension scheme and with the establishment of relay system in the proposed scheme would gradually change the trajectories of families and of public finances: it will be worth both for families and for the central budget to have two children in every family. In such a budget, children are not seen as burdens but as investment; children are not considered as consumption limiting investment, but as an important factor of future economic growth. As a result of these incentives, the potential headwinds of parenting will become a tailwind in the pension scheme: in respect of both the number of children actually allowed to born and children's employment and especially employment in Hungary.

We expected the proposed pension element to increase the amount of family budgets (for the extended family) by EUR 350 per employed child for 4 years. For this reason work in Hungary would become more attractive than work abroad. (However, a minor part of those who return for this specific purpose would presumably return to the West after the 5th year.) Its favourable impact was taken into account through expecting an earlier than the current start of employment for young people. (At the moment young people in Hungary undertake employment at a later date than those in other European countries, and moreover for at least a year they neither work nor study.) This has a particularly favourable impact on skilled workers' employment in Hungary,[10] as it will be less profitable for them to work abroad. Increase in the employment was estimated with a view to the above factors.

Employment needs to be encouraged so much the more as by 2050 the number of employees will have dropped significantly, primarily due to depletion in the population. The reduction will be partially offset by the expected increment in employment. Essentially, this is due to the fact that with the new pension element, pension is partly fed back into the family budget and the requirement of "coverage by children", i.e. balance between the intertwined generation, is displayed in the central budget.

The following chart gives a good illustration of the fact that the number of employees is expected to decrease significantly, by approximately 500,000 in the period ahead of us, representing a 14 percentage point decrease. The adjustment only rectifies this by increasing the number of people employed by about 140,000 on average. In other words, decrease in the number of employed is moderated by this number. Growth in employment will starts slow, but due to the mass effect a spike may take place in the number of those who return to Hungary. Subsequently, the impacts of pension supplement will rather predominate. The unfavourable developments in the number of people employed and our proposal for their correction are shown in the following chart.

Chart 8: Expected developments in employment without (old) and with (new) the child-to-parent pension element



Source: Author's own calculation based on HCSO, 2012; 2018; 2019

Expected effects on employment[11]

Child-to-parent pension encourages expansion in employment. This will be felt in three respects.

a) In Hungary young people's employment in the period immediately following graduation is relatively low. Mothers are expected to increasingly encourage their children to undertake a job as soon as possible.

b) In the first few years the total wage cost (on the first HUF 225,000 part of their earning) will ultimately go to the child's family. For this reason, an employer's efforts at illegal employment will meet young people's resistance. If a young person has already started on a career, from he or she may be prompted to change shadow economy by legal employment.

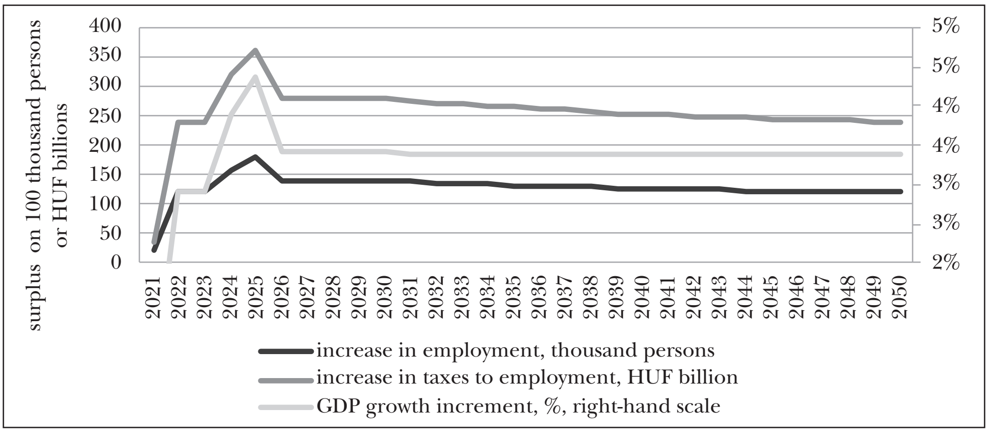
c) According to demographists, the number of people working in Western Europe is expected to grow by 10,000 each year. In contrast, in the proposed scheme mothers will encourage their children to prioritise employment in Hungary instead of western jobs.

According to our estimate, these three factors may increase the number of people employed in Hungary by about 140,000. Of this, number of returning people will be 90,000, and each 25,000 may be due to the other two factors, according to our calculations.

Increase in employment will have a favourable impact on economic growth. According to our calculations, the surplus of economic growth will increase growth by 3.4 percentage points as a result of the new pension element, but in certain years GDP growth may even reach 4 percentage points.

The Chart 9 shows the increase caused in employment, the resultant additional taxes and the growth increment expected in GDP. The chart clearly shows that the proposed model functions smoothly in social terms, and despite a global slowdown in the economy, it can offer a growth surplus.

Chart 9: Impacts of the child-to-parent pension fund on employment and growth



Source: Author's own calculation based on HCSO, 2012; 2018; 2019

Summary

In addition to improving fairness in the pension scheme, the adoption of a child-to-parent element in the pension is of symbolic significance. It alters the wrong message given by the pension scheme by including the generational approach as an integral part in both family budgets and public finances. To put it simply: it will be financially worth having children. Parents' pension increases by 15 per cent on average due to the partial transfer of the taxes on working children's earnings. This is performed by depositing part of the payments made by working children into the child-to-parent pension fund. With the help of this fund the central budget can also track generational developments. Revenues are raised from payments by the new generation, while expenditures comprise the pension supplement payable to the retired generation who have raised the working children.

With the adoption of the child-to-parent pension element, the generational approach becomes part of both family budgets and public finances. In this scheme, the value of an offspring is not only to bring home bacon but also to mediate a moral code: that of reciprocity between generations. The expression "child-to-parent" lends a symbolic power to the particular amounts, as it suggests that children represent a coverage value. Already a small amount can become a factor that shapes the functioning of public finances. This has a double effect. On the one hand the gap between the number of intended children and actually born children may decrease considerably, and on the other, it will be more worth undertaking a job within the country. All this will have a positive impact on the headcount of employees in the country already in the near future (the number of employees is expected to increase by 140,000) and thus also on economic growth. According to our calculations, already the partial enforcement of the generational budget approach we propose will result in a 3 to 4 percentage point economic growth in the next few decades.

Notes

1 The referenced literature provides partial information of these.

2 The 2011 census data were used for this purpose.

3 A detailed analysis of these procedures is given in the above-referenced works by Szilvia Szegő.

4 South Korean analyses explain the low number of children exactly by expensive schooling. Parents wish to raise one child with an appropriately high schooling until adulthood. This is ruled out in the case of two children. This correlation has become a strict regulator in parenting.

5 See the studies by Giday and Szegő included in the references.

6 In the first few year, parents are expected to receive an allowance of HUF 20,000 for 1.9 million children. Naturally, depending on the number of years spent by the child at work (the relevant rules are not detailed here). It should also be emphasised that the word "child" does not denote the age but the family relationship in this study.

7 If the 4-year period starts in 2021, the period would comprise the years 2021–2024.

8 Except the 5th year, considered as a year of transition, when the headcount would still be 320,000 people due to subsequent return to Hungary or to 2 to 4 months of temporary job seeking. A new fund should also be established for this purpose in the state budget.

[9] This outstanding increment is due to the fact that the additional income realised from increased employment (people returning from abroad) is only partly offset by expenditures.

[10] Suppose a Hungarian skilled worker earns HUF 495,000 (EUR 1600) in Germany, because he would only earn HUF 270,000 gross (HUF 180,000 net) in Hungary. If the scheme proposed by us is launched, nearly HUF 110,00 would be contributed to the child-to-parent fund, and subsequently to his parents, of the monthly HUF 225,000 payment made to the state on his monthly employment. If the family meeting is convened, it is easy to calculate that although an employee can earns HUF 495,000 net per month abroad between 2021 and 2021, however, if employed in Hungary, the extended family earns HUF 290,000 per month. If the net amount earned abroad is reduced by the EUR 300 spent on housing and the HUF 240,000 per annum spent on returning to Hungary 5 or 6 times a year, no more than HUF 375,000 is left from the wage earned abroad. This is merely HUF 100,00 more than the HUF 290,000 the employee's family can get in Hungary. However, most of this HUF 100,000 would be used up by higher prices and commuting would also take 10 to 12 days from the life to such an employee. Thus at the mother's urging, the skilled worker in the example finally decides in favour of the more convenient employment in Hungary, and returns to German soil only after 4 years. True, during these 4 years, he would miss the EUR 350 savings he is used to, but in exchange the family will save nearly the same amount – although not collected in the pillow-case but on the appropriated sub-account of the child-to-parent fund.

[11] Numerous studies discuss the more pronounced role of mothers and mothers' culture in income effects and in the labour market successes of children. This explain why we consider mothers' role important in the timing and method of young people's commencement of employment.

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