

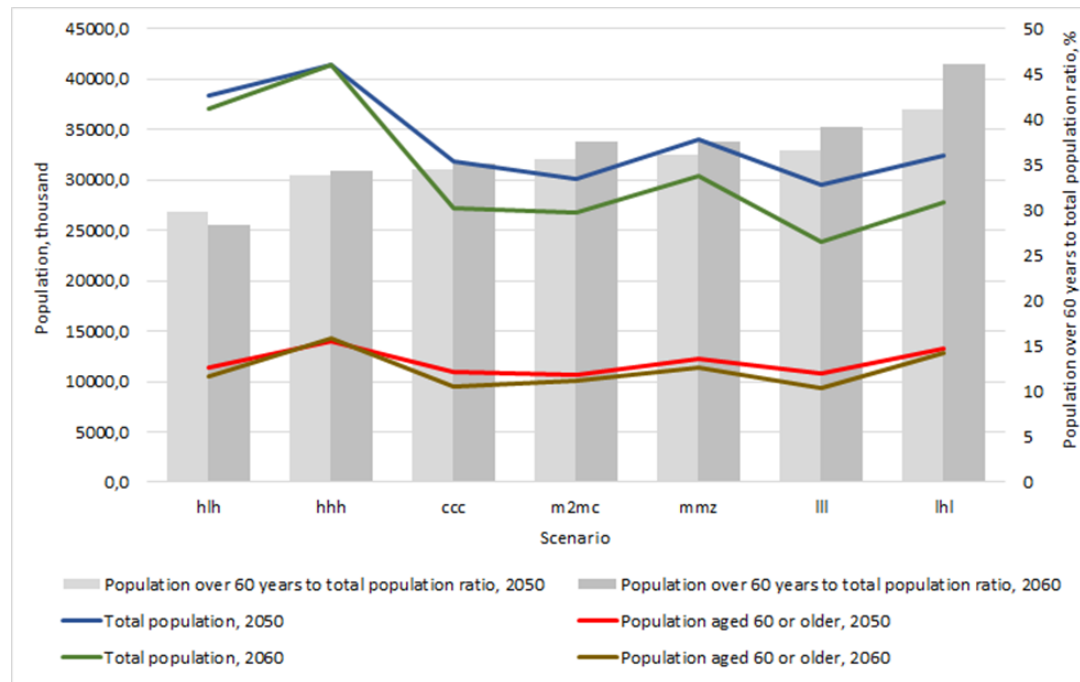
Anticipation of the contributory component adequacy in reforming the pension system in Ukraine

IMA 8th World Congress, Online, December 1st - 3rd 2021

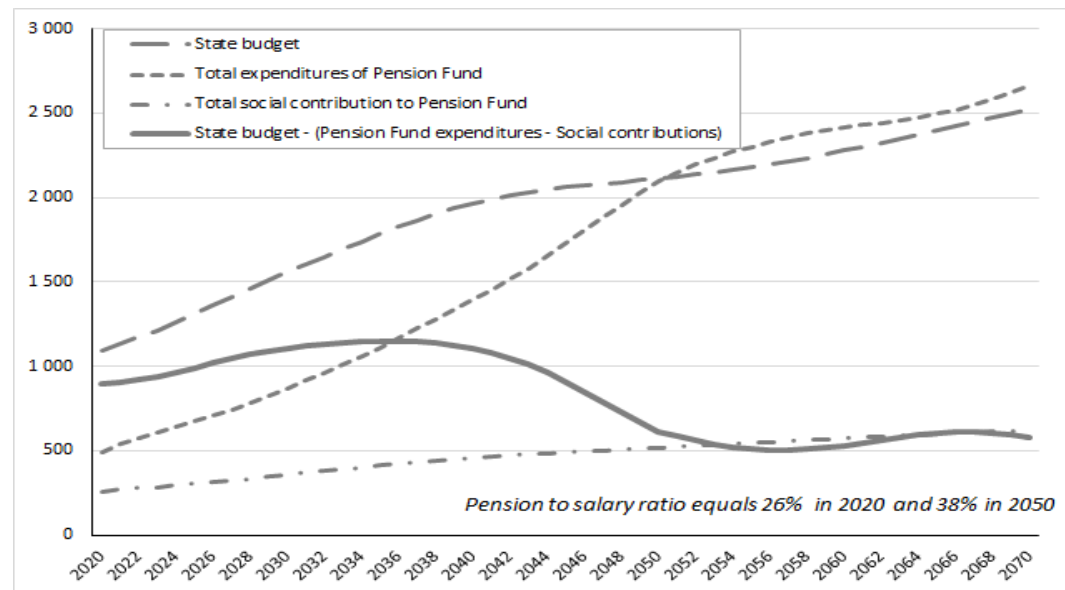
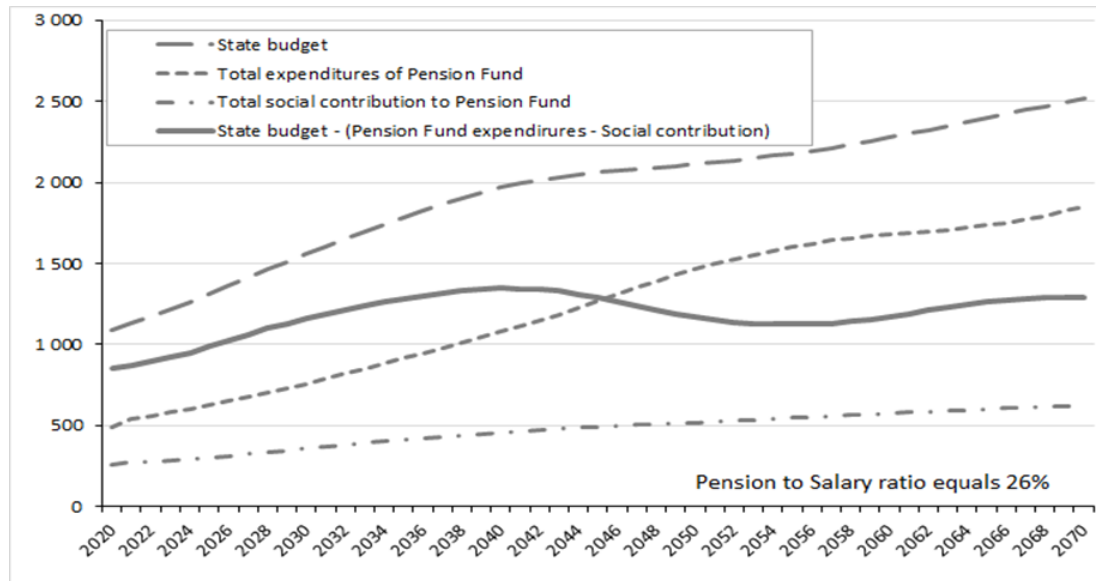
Volodymyr Sarioglo, Tetiana Lukovych
Ptoukha Institute for Demography and Social Studies of
the National Academy of Science of Ukraine

Problems (1)

A solidary pension system is currently functioning in Ukraine. In this situation increasing of the share of elderly population and the share of self-employed population according to actual structural changes in the economy lead to the fact that the shortage of the Pension Fund will inevitably increase over time. In this situation, the Government has several options for action: reduce the size of the pension, increase taxes, increase the retirement age. But these options not each separately nor all together do not provide a long-term result for sustainability of public finances. The fairness of pensions also suffers significantly in this situation. In Ukraine, it is planned to introduce a funded (contributory) pension system in the coming years.



Problems 2



Purpose of the study, data sources and methodological approach

Purpose of the study was to anticipate the consequences of introduction of a funded pension system (with different parameters) for various groups of employees, which differ in gender, salary level, seniority, etc.

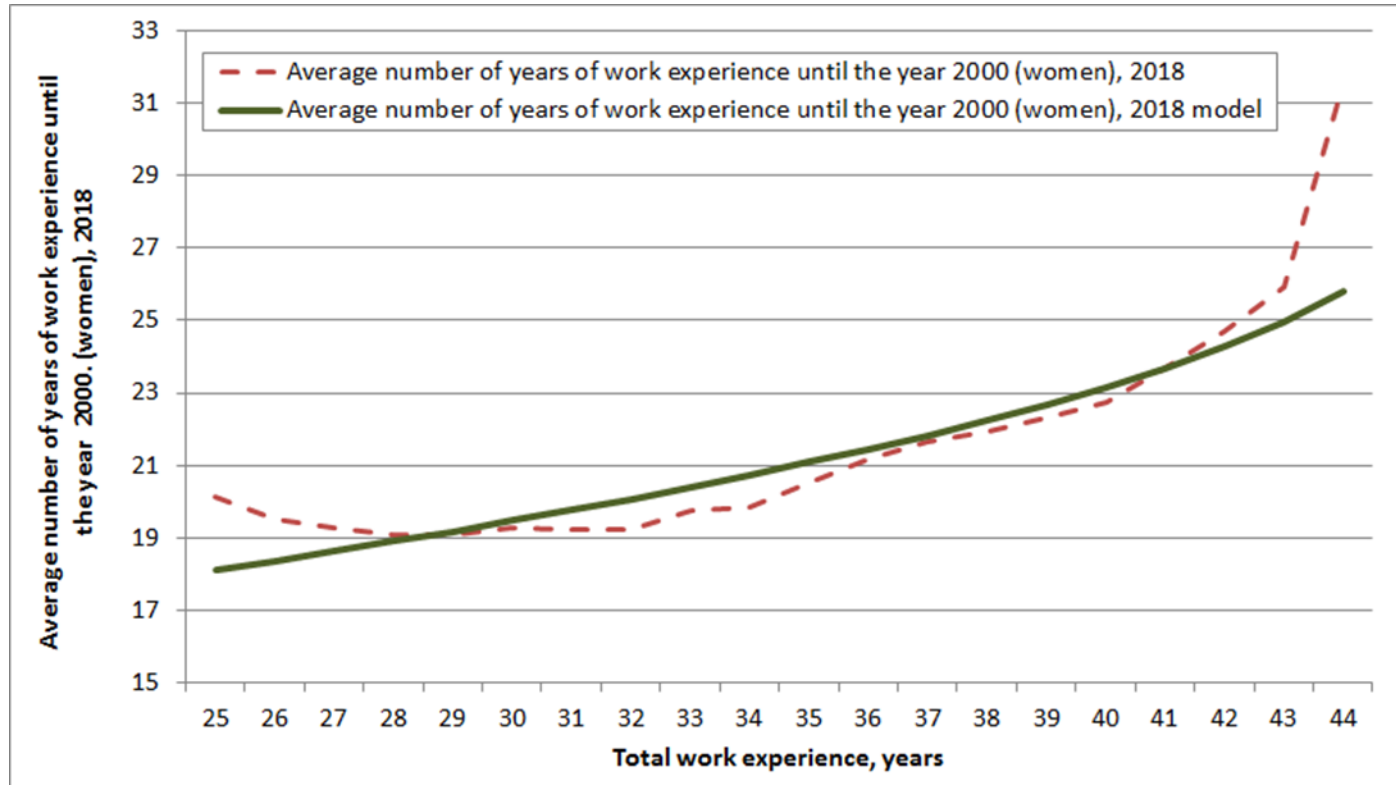
Main data sources:

- official demographic forecast of Ukraine
- microdata of state household sample surveys (Household Living Conditions Survey - HLCS and LFS)
- administrative data of the Pension Fund of Ukraine, Ministry of Finance and Ministry of Social Policy
- forecast of the development of the Ukrainian economy of the International Monetary Fund and the World Bank

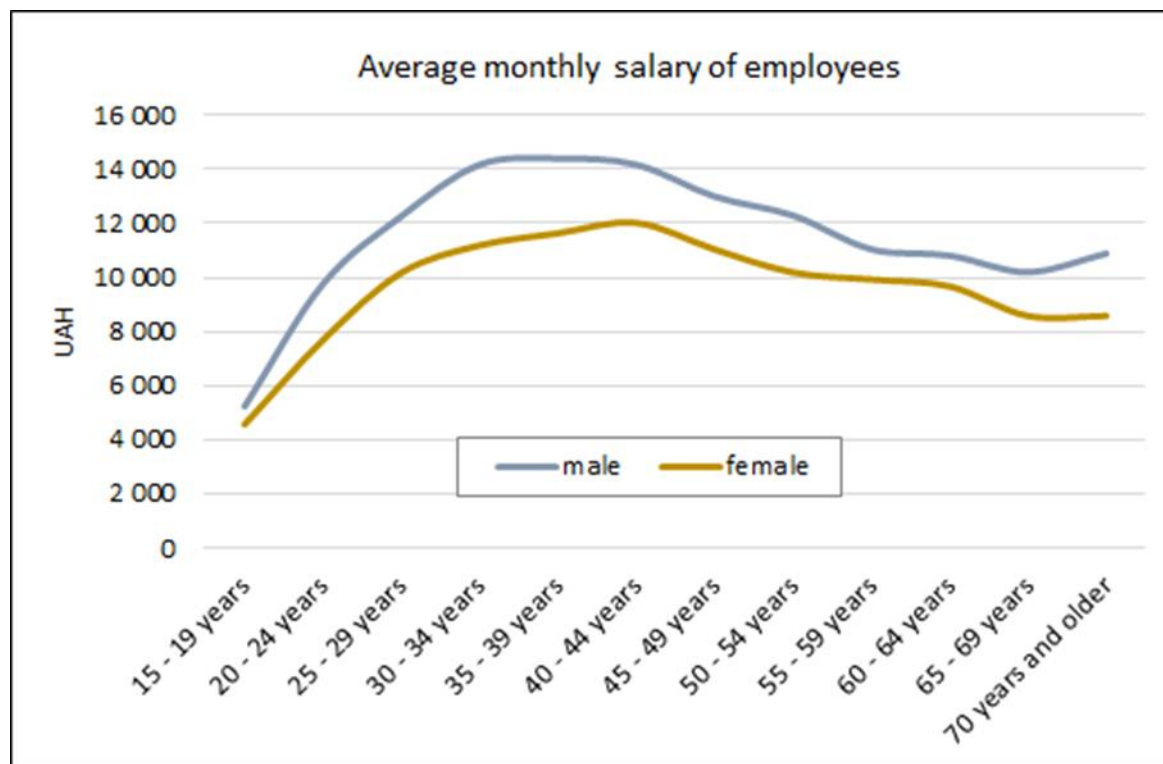
The methodological approach corresponds to microsimulation on base of "cross-sectional aging", which consists in reweighing the microdata set for each forecasting year according to the demographic forecast. So the main component of the microsimulation model is a representative model of the population of Ukraine, formed on base of microdata sets of HLCS and LFS.

The main characteristics of units in the microdata set are: region and living area type, sex, age, wages, compensation payments, cash and in-kind benefits, income from entrepreneurial activity and from independent labor activity; pensions, socio-economic status, statistical weight.

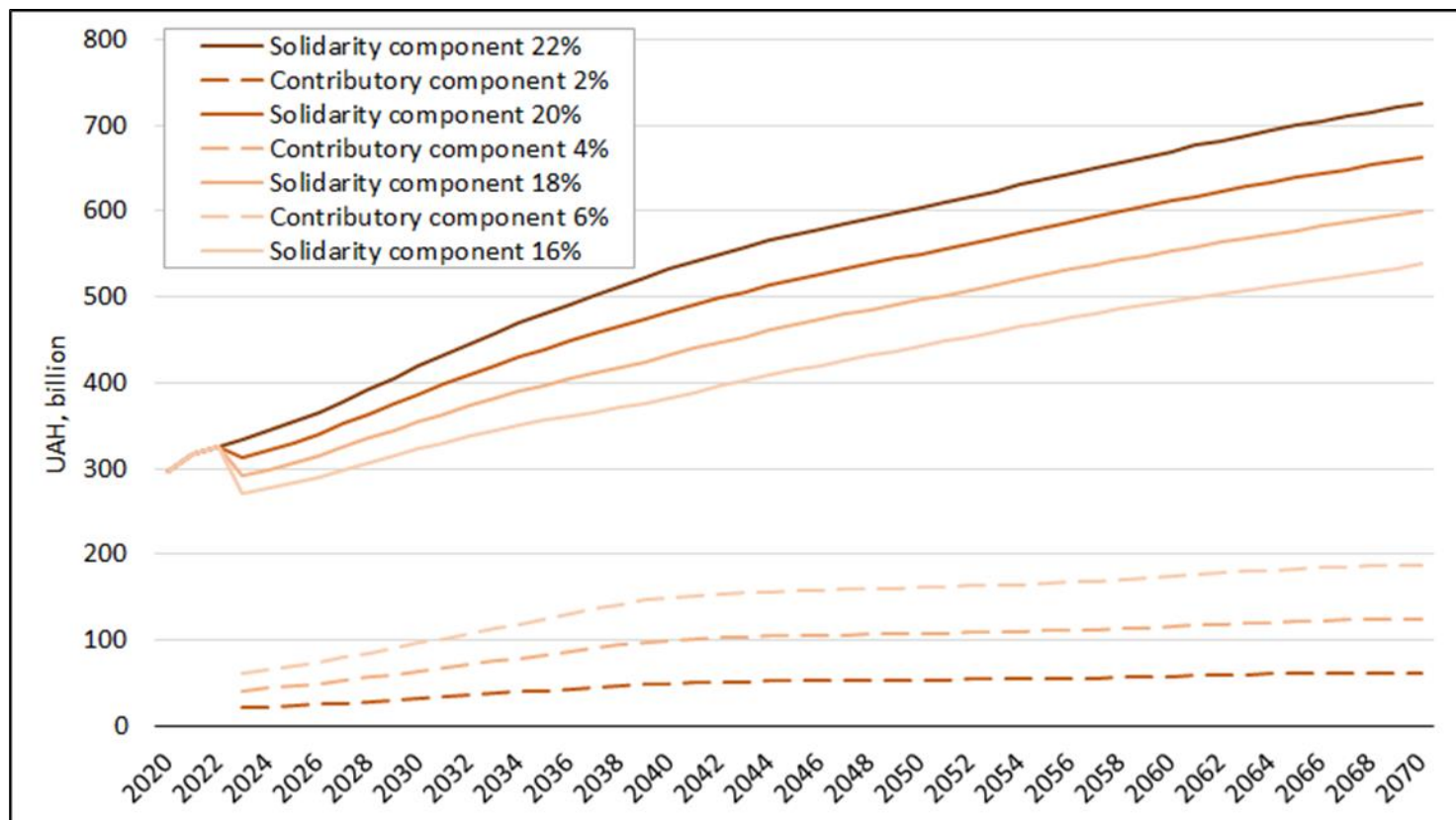
Comparison of estimates of work experience up to 2000, obtained according to the model, and actual data (women, 2018)



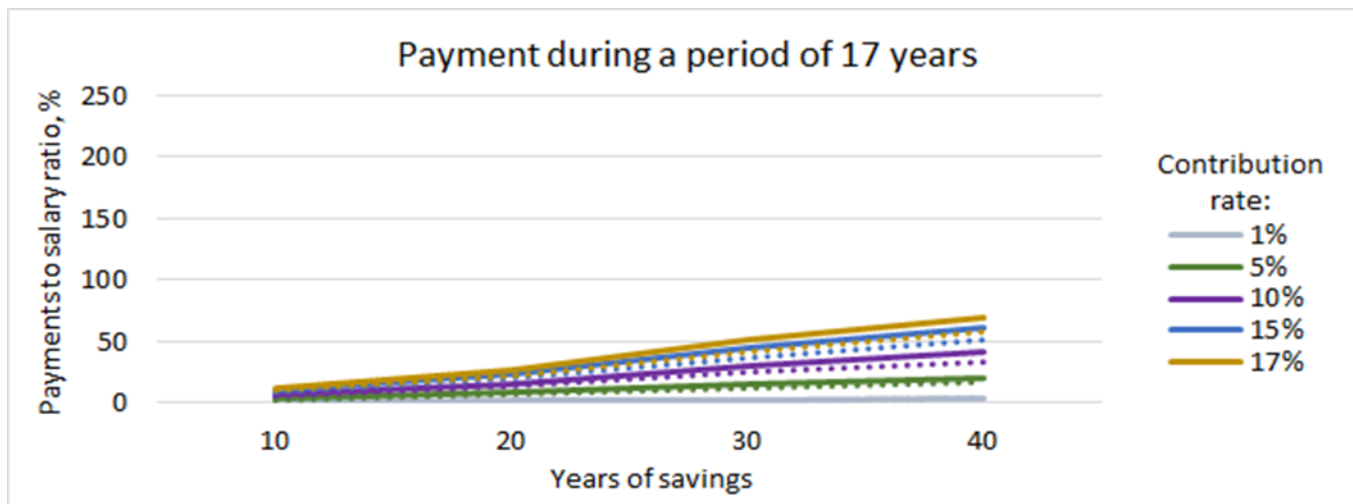
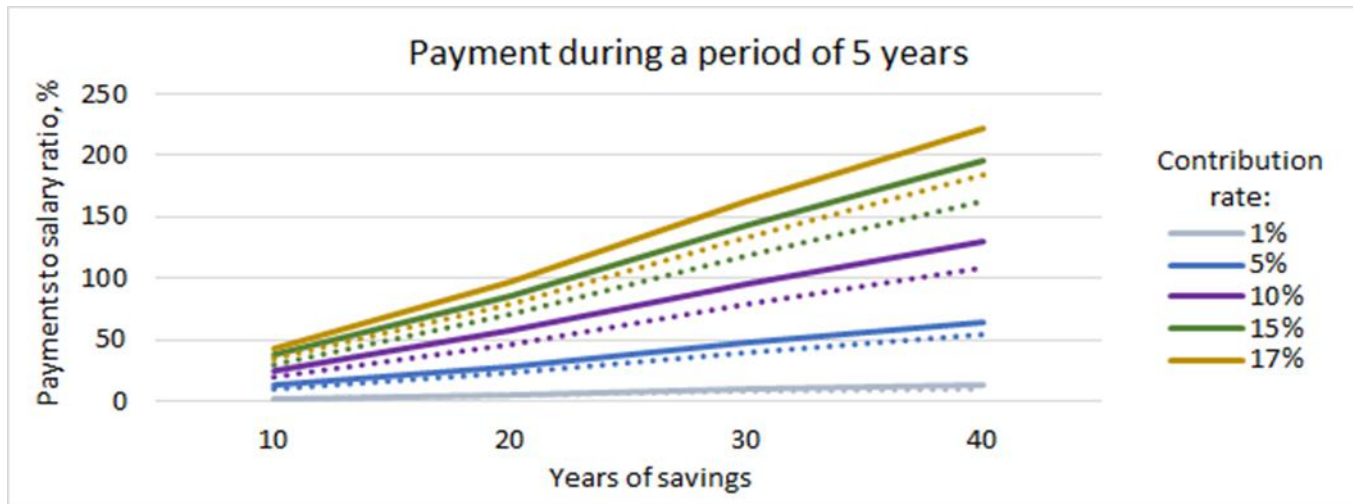
Average monthly wages of employees by sex and age groups in 2020



Anticipation of receipts of the Social Contribution (SC) to the Pension Fund by solidarity and contributory components at different rates of deductions from the SC to the contributory component



Estimation of pension adequacy for savings



Solid lines – men; Dotted lines - women

Conclusions

The simulation approach and tools for anticipation of the pension benefits with introduction of the contributory pension system in Ukraine has been developed. It gives an opportunity to anticipate the distribution characteristics of the Social Contribution (SC) payers according to the amount of earnings, seniority, potential retirement date, as well as distribution characteristics of pension recipients depending on sex, seniority, amount of savings in the contributory pension system, etc.

The key parameters of the contributory component of the Pension System were estimated. In particular it was found that participation in the contributory system for 35 years at deduction rates of 15% of the SC, investment income rates of 5% and pension benefits for 10 years after retirement about 30% of employees will not be able to accumulate the amount needed to receive a monthly pension higher than the anticipated subsistence level.

It is proposed to use the tools in the practice of the Ministry of Finance of Ukraine, other Ministries, government analytical groups - in order to prevent the asymmetry of information in the calculations when assessing different scenarios of pension reform in Ukraine.

References

Dekkers G., Desmet R., and De Vil G. (2010). The long-term adequacy of the Belgian public pension system: An analysis based on the MIDAS model. Working paper 10-10.

Dekkers G., Buslei H., Cozzolino M., and others (2009) What are the consequences of the AWG-projections for the adequacy of social security pensions? Enepri research report NO. 65 AIM WP4.

O'Hare C. Modelling defined contribution retirement outcomes: A stochastic approach using Australia as a case study.

Thank you for your attention!