

In the project, we conduct a comparative study of income adequacy, efficiency and redistribution for pension systems of over 20 countries. We also study the relationships between these categories as well as their diversification across pension regimes identified in terms of the relation between state and market in a pension system. However, we perceive this relation two-dimensionally, namely as the relation between public and private management/administration as well as between compulsoriness and voluntariness of participation in a pension system. On the basis of statistical data for studied countries we group them into three following regimes:

- the (I) regime of significant voluntary pension schemes, including United Kingdom, Ireland and Czech Rep.,
- the (II) regime of significant mandatory participation in private schemes, including Denmark, Iceland, Netherlands, Sweden, Switzerland, Slovakia, Estonia, Poland,
- the (III) mandatory public regime, including Austria, Belgium, Finland, France, Germany, Hungary, Italia, Luxembourg, Norway, Portugal, Slovenia and Spain.

We propose indicators to measure the adequacy, efficiency and redistribution of pension systems and use them in our empirical study. This allows us to draw many conclusions not only of scientific, but also of socio-economic importance. We show e.g. that the relation between state and market in a pension system does not determine the income adequacy, however affects its efficiency, especially in terms of the interactions with the labour market. This relation impacts also the redistribution which results mainly from different benefit formulas applied in different pension regimes. The examples of many countries prove that in order to improve the efficiency of a pension system and its interactions with the labour market the gradual increase in the pensionable age, linked to the growing life expectancy, is necessary. Moreover, the exaggerated domination of the state in a pension system is not recommended.

While studying the relationship between pensionable age and some labour market indicators in European countries, we observe that the higher pensionable age supports the longer duration of working life as well as greater employment rates among people at near-retirement age. Iceland, in which the pensionable age has been 67 for a long time, reports the employment rate in the age group 55-64 twice as high as in Poland, and in the age group 65-74 four times as high as in Poland. Iceland is only an excellent example confirming this obvious relationship as well as the conclusion that the overwhelming domination of the state in a pension system does not support its efficiency, especially in terms of the interactions with the labour market. Contemporary pension systems require the policy tools encouraging the extension of duration of working life which is consistent with the delay of retirement. This is an obvious and natural effect of the increasing life expectancy for both genders. Moreover, pension systems require also a greater involvement of people in the process of consumption smoothing through the appropriate scale of income allocation over the life cycle which supports the efficiency of a pension system.

The results of the comparative study of pension regimes in terms of income adequacy, efficiency and redistribution, together with the identified relationships between these categories, allow us to draw a conclusion that is important from the socio-economic policy. Namely, the criterion of income adequacy does not allow to indicate the best pension regime. This is the result of people's economic behavior – they get used to the pension system rules and strive for achieving the microeconomic goal which is the optimal consumption smoothing over the life cycle. If a pension system model is mainly based on the compulsoriness of participation and public management (III regime), the government supports people in making pension decisions (making them often on behalf of people). On the other hand, this means the limitation of the autonomy of these decisions e.g. through a greater public pension contribution which can decrease private savings). In the other case, if the state's role in a pension system is low (I regime) which means low public benefits, people are motivated to participate in private pension schemes on voluntary basis. Between these regimes is the II regime, in which the state and market cooperate to a greater extent than in the I or in the III regime.

The result of our project may contribute mainly to the pension economics as well as comparative social policy. In the case of the former, this contribution includes the development of the methodology of the measurement of income adequacy, efficiency and redistribution of a pension system as well as the study on the relationships between these three categories. In the case of the latter, the novelty can be found in the development of a new pension regimes typology which is based on the actual and empirical characteristics of existing pension systems. This two-way approach to the study on pension systems – from the pension economics and social policy perspective – allow us to notice some trade-offs in a pension system, however not in the scale of a given country, but on the basis of cross-sectional or panel data data for over 20 countries.