

## *Supplementary pensions: what can we learn from Czech, Spanish and Portuguese experiences?<sup>1</sup>*

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Received: 15 March 2018; Accepted: 24 March 2018; Published: 31 August 2018

*Abstract.* The aim of this study is to compare the Czech, Spanish and Portuguese experiences in the area of voluntary pension development. Although these countries are not included in the group of states with the greatest importance of supplementary pensions, they have already reached a considerable level of supplementary pensions expansion and have potential for further strengthening of their role. This paper analyses in a qualitative, as well as a quantitative framework the implemented solutions and their effects in terms of membership, assets, and contributions paid to the voluntary pension plans. It provides some findings with regard to the relationship between supplementary pension arrangements coverage and savings, as well as the efficiency of financial incentives for employers and plan members, or the impact of the design of a voluntary pension system on its development.

*Keywords:* voluntary pensions, comparative analyses, occupational pension plans, personal pension plans.

*JEL Codes:* J32, I38.

### **1. Introduction**

In recent years, a substantial increase in the role of private pensions has been observed. The pension funds' assets, both mandatory and voluntary, in the OECD countries have grown to USD 38 trillion, which is the highest level ever reported [OECD 2017]. To a large extent, this is a result of the growing importance of supplementary pensions, which are often seen by policymakers as a remedy for unfavourable projections of the adequacy of mandatory pensions in the near future. In the last two decades, many countries have undergone reforms of their pension systems in order to foster greater retirement savings in the form of voluntary pension arrangements. However, the efficiency of the measures taken varies. In the OECD

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<sup>1</sup> This work was supported by the National Science Centre (Poland) [grant no. UMO-2014/15/D/HS4/01238].

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area there are countries such as the United States, the United Kingdom, Canada, New Zealand or Ireland, where voluntary pensions are relatively highly developed [Marcinkiewicz, Chybalski 2017]. Some countries can be also distinguished, where the importance of supplementary pensions arrangement is smaller, however it is still growing. This group includes *inter alia* Austria, Czechia, Denmark, Iceland, Spain and Portugal.

Surprisingly little attention in the current literature is paid to this subject, and the majority of previous studies that discuss the implemented solutions focus on case studies of countries from the group in which supplementary pensions play a greater role. A study by Golinowska [1994] is one of the earliest Polish domestic works that deals with the issue of supplementary pensions development and the other countries experiences in this field. Pieńkowska-Kamieniecka [2016] analyses the participation of the young in the voluntary pension programs in Germany, New Zealand and the United States. Szczepański [2017] refers to the solutions developed on the basis of behavioural economics and implemented in New Zealand and the United Kingdom. Similarly, Bednarczyk [2017] focuses on the experiences of Canada and New Zealand.

The aim of this study is to compare the experiences in this area of some other countries that have already reached a considerable level of supplementary pensions development and have potential for further strengthening of their role. These countries are Czechia, Spain and Portugal. The paper analyses in a qualitative as well as quantitative framework the implemented solutions and their effects in terms of membership, assets, and contributions paid to the voluntary pension plans.

The study is structured as follows. First, it discusses the socio-economic conditions, as well as the labour market situation and current generosity of the mandatory pension systems, that can have a potential impact on the development of voluntary pensions in the countries studied. In the subsequent section, the paper provides an overview of the design of voluntary pension arrangements in Czechia, Spain and Portugal. This qualitative analysis is complemented by quantitative assessment. In the last section, the paper presents the main findings of this comparative study.

## **2. The background: socioeconomic situation, labour market and pension system generosity**

To conduct further comparative analysis regarding the importance of supplementary pensions in Czechia, Spain and Portugal, some insight into the socioeconomic situation, labour market conditions and adequacy of pension benefits from the mandatory pension system may be useful. Table 1 presents the aforementioned factors that can affect the unequal patterns in voluntary pensions development in the countries studied. All three countries are of a comparable level of GDP per capita, which is smaller than the EU average. However, Spain and Portugal are characterised by greater income inequality than Czechia. Savings in supplementary pension plans can be also determined by the labour market situation

in terms of unemployment and the scope of self-employment. Such factors can limit the access to occupational pension programmes, as well as negatively affect savings in pension plans due to their restricted liquidity. Among the three analysed countries, the highest unemployment is reported for Spain, whereas in Czechia it is very low. However, in Czechia the self-employment rate in the population 15-64 is the highest. With regard to the demographic conditions measured by the dependency ratio, the least favourable situation is observed in Portugal.

*Table 1. Socio-economic and labour market indicators (2012-2016 averages)*

	<b>Czechia</b>	<b>Spain</b>	<b>Portugal</b>	<b>EU-28</b>
GDP per capita (PPS)	23820	25220	21320	27840
Gini coefficient	24.9	34.3	34.2	30.8
Unemployment rate [%]	3.7	15.4	9.2	6.3
Self-employment rate [%]	11.5	9.3	9.7	9.2
Old-age dependency ratio [%]	44.5	42.4	49.3	46.2
Young-age dependency ratio [%]	35.4	35.2	36.6	38.7
Population with tertiary education level [%]	19.8	32.1	20.3	26.6

Source: Eurostat.

Table 2 presents replacement rates of the pension benefit adequacy indicators in the countries studied. The first one, i.e. the aggregate replacement ratio (ARR), is published by Eurostat and is defined as ratio of income from pensions of persons aged between 65 and 74 and income from work of persons aged between 50 and 59. It reflects the relative level of retirement income for the current beneficiaries (the elderly population). The second – pensions replacement rate (PRR) – can be considered as a benefit adequacy indicator regarding the current working-age population. It is a theoretical replacement rate developed by OECD [2015], calculated for a modelled agent under current pension system rules (as of 2013), with a set of assumptions regarding the career path of such an agent, his or her income from work, and other factors. Table 2 reports net PRR separately for an average income earner (1.0 of the average wage), as well as for a low-income earner (0.5 of the average wage) and a high-income earner (1.5 of the average wage). The generosity of the mandatory pension system determines the need for additional saving for retirement. Considered from this perspective, this factor may either foster or discourage individual old-age savings, depending on its low or high level. This can be reflected in the involvement of individuals in savings in voluntary pension schemes; however, this implication is not unambiguous. When benefits from the mandatory pension system are expected to be low, individuals may use long-term saving mechanisms other than voluntary pension plans. The other possibility is that they fail to save additionally, which results in undersaving for retirement.

Table 2. Pension system generosity indicators

	Czechia	Spain	Portugal	EU-28
Aggregate replacement ratio (2012-2016 average)	53.4	61.4	61.0	56.2
Pensions replacement rate (Low earner)	79.7	79.5	77.7	n/a
Pensions replacement rate (Average earner)	50.7	80.1	67.8	n/a
Pensions replacement rate (High earner)	40.1	79.8	68.4	n/a

Source: Eurostat, OECD.

Note: n/a – not available

As shown in Table 2, in Czechia the (relative) pension benefits of current retirees are lower than in Spain and Portugal, as well as the average in the EU. In Spain and Portugal, they exceed the EU average level. In relation to the current working-age generation in all three countries studied, the theoretical replacement ratio is comparable for modelled agents earning a low wage. Where in Spain and Portugal the benefits of other two income groups are similarly adequate, in Czechia the estimated PRR ratios for average and low-income earners are significantly lower.

### 3. Institutional settings for supplementary pensions

#### Czechia

In Czechia private pension programs were first established in 1994. As this country did not implement the World's Bank multi-pillar model [Holzmann, Hinz 2005; World Bank 1994], unlike in many other Central and Eastern European countries, the private pension scheme was designed as a solely voluntary one. It took the form of personal plans, however with the significant role of employers, who can also contribute to a plan. A serious reform of the Czech supplementary pension system was introduced in 2013. The existing voluntary pension plans were closed and renamed transformed funds (*Transformované fondy*). At the same time, a new kind of pension plan, called participating funds (*Účastnické fondy*) was established. There were several differences between the “old” and the “new” pension plans. These comprised of, among others, significantly lowered operating costs, as well as different options with regard to the payout phase (for detailed review see [Vostatek 2016]). In 2013, another reform also took place. The government introduced the 2<sup>nd</sup> pillar scheme embodied by so-called retirement funds (*Důchodové fondy*). Their establishment was preceded by a very long political debate [Adascalitei, Domonkos 2015; Loužek 2014]. Participation in this kind of scheme was set as optional: every insured person could decide whether her or his mandatory pension contribution would be transferred in total to the PAYG scheme (1<sup>st</sup> pillar), or whether it would be divided between the 1<sup>st</sup> and the 2<sup>nd</sup> pillar. However, retirement funds never gained considerable

interest, and, as a result, this pillar was terminated shortly after it started operation. Apart from the aforementioned pension plans, private pension insurance offered by life insurance companies is also available in Czechia. However, its importance can be assessed as marginal [Vostatek 2015].

From the very beginning, private voluntary pensions were intended to significantly complement the PAYG mandatory pension system. It was a result of the implemented pension model, which can be referred to as close to liberal one, with a low level of pension benefits. As a consequence, the state strongly encourages participation in the voluntary pension scheme. Individual contributions are subjected to the TEE regime<sup>3</sup>, whereas employer contributions are subjected to the EEE regime, respectively [OECD 2015b]. The magnitude of financial incentives is large. They include tax relief as well as state subsidies, which depend on the contribution of a plan member. The state matching contribution varies between CZK 90 and CZK 230 per month. The former is added to a minimum member contribution amounting to CZK 300, whereas the latter refers to the contribution equal to CZK 1000 or higher. Starting in 2016, the maximum tax deduction for the plan member has been doubled (the maximum tax advantage rose from CZK 1800 to CZK 3600). Additionally, the benefit for contributing employers is also increased up to CZK 5000.

### Spain

Pension benefits in Spain from the statutory social security scheme (PAYG) have been at a fairly high level so far. However, due to the threatened sustainability, in 2011 and 2013 new rules were implemented that are expected to gradually reduce pension benefit adequacy [Díaz-Giménez, Díaz-Saavedra 2017]. Nonetheless, the coverage of supplementary pension programmes, even before the reform, can be considered as large. As pointed out by Antón et al. [2014] this resulted from a favourable tax treatment of such pension plans in the period 1999-2007. In Spain, supplementary pensions function as private personal and private occupational schemes. The former are offered directly by financial sector institutions in the form of pension funds (*Fondo de Pensiones personal*) and in the form of insurance contracts (PPA - *Plan de Previsión Asegurado*). Only a member can contribute. There is also a special category of associated plans (*Fondo de Pensiones asociados*), sponsored by associations, which are, however, classified as individual [OECD 2009]. Similar to the personal schemes, occupational schemes comprise pension funds (*Fondo de Pensiones de empleo*) and insurance contracts in two forms (PPSE - *Plan de Previsión Social del Empleador*, as well as *Seguros colectivos*).

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<sup>3</sup> TEE abbreviation refers to the taxation rules in three subsequent phases of retirement saving: pension contribution payment, investment returns and pension funds withdrawal (pension benefit payment), where T denotes tax and E stands for exempt. The other taxation solutions employed in various countries with reference to private pension plans comprise of the following regimes: EET, ETE, TET, ETT, TTE, EEE [see Bravo 2016 for a review].

The tax treatment of the private pension plans is subjected to the EET regime. As a rule, occupational and individual plans are treated in the same manner. The cap on the total annual contributions amounts to EUR 8000 [OECD 2015b]. The maximum tax deduction is limited to 30% of aggregate income and cannot exceed EUR 8000.

### Portugal

The Portuguese pension system has undergone frequent reforms since 2000 in order to improve its sustainability and low levels of savings [Garcia 2017; 2004]. These have comprised also the legal environment for the private supplementary schemes. In Portugal, the pension system is similar in terms of its design to the Spanish system, and it includes the 2<sup>nd</sup> pillar of voluntary private occupational pensions, and the 3<sup>rd</sup> pillar of the voluntary private personal pensions. The former can be established by employers on a voluntary basis as open or closed pension funds (*Fundos de pensões*) or as collective insurance contracts (*Contratos de seguro de grupo*). Members of the occupational pension plans are subjected to auto enrolment, but they are not obliged to contribute. The employer contribution is mandatory. The latter comprises of personal plans in different programmes (PPR - *Planos poupança-reforma*, PPA - *Planos poupança acções* oraz PPE - *Planos poupança educação*) which can have the form of insurance contracts, investment funds, and pension funds. It is permitted to join an open occupational pension fund on an individual basis. The member contribution to the personal plan is mandatory, but an employer can subsidise it voluntarily.

In Portugal, the tax incentives for employers are more favourable than those for plan members. Member contributions are subjected to the TET tax treatment, whereas employer contributions are subjected to the EET tax treatment. The latter is tax deductible at different rates depending on the plan characteristics [see Bravo 2016]. In the most favourable variant, a full deductibility is granted. Individual contributions to both personal as well as occupational plans are tax-deductible at the level of 20% of contributions paid, with a maximum limit that depends on the member's age [OECD 2015b].

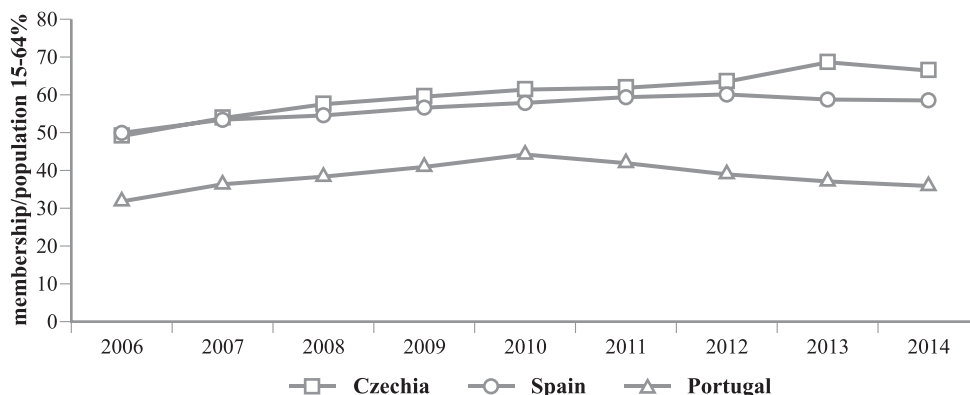
## 4. Quantitative assessment

This section presents quantitative aspects of the development of voluntary pensions in Czechia, Spain and Portugal. The reported data on the membership, contributions and assets accumulated in personal as well as occupational pension plans was obtained from local (country-level) sources. For Czechia, all the information is provided by the Association of Pension Funds of the Czech Republic (APS CR - *Asociace penzijních společností ČR*). The data excludes retirement funds (2<sup>nd</sup> pillar) and private insurance (which is of negligible importance). The data on the Spanish pension plans in the form of pension funds is delivered by the Association of Collective Investment Institutions and Pension Funds (INVERCO - *Asociación de*



*Instituciones de Inversión Colectiva y Fondos de Pensiones*), whereas the information on plans in the form of insurance contracts is provided by the General Directorate of Insurance and Pension Funds, Ministry of Economy and Competitiveness (DGSFP - *Dirección General de Seguros y Fondos de Pensiones, Ministerio de Economía y Competitividad*). The latter covers PPA, PPSE and group insurance contracts. Statistics for Portugal are presented on the basis of information reported by the Insurance and Pension Funds Supervisory Authority (ASF - *Autoridade de Supervisão de Seguros e Fundos de Pensões*). The data includes full information on occupational pension plans in the form of closed and open pension funds, as well as on personal pension plans in the form of open pension funds, together with pension funds under PPA and PPR schemes, and investment funds and insurance contracts under the PPR scheme. The data on plans in the form of investment funds under the PPA scheme is not available. Additionally, the data on occupational plans in the form of group insurance contracts is not included. However, this kind of voluntary pension plans is of marginal importance in Portugal.

Figure 1. Membership in voluntary pension programmes among the working-age population

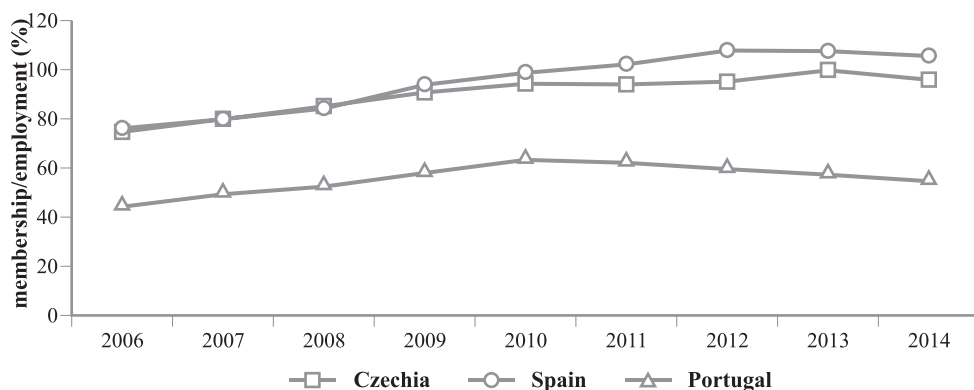


Source: Author's own elaboration based on APS CR, INVERCO, DGSFP, ASF, Eurostat data.

Figure 1 presents the scope of participation in voluntary pension schemes reflected by the number of plan members with regard to the size of the 15-64 population. This ratio does not fully correspond to the percentage of covered working-age individuals, because individuals can participate in more than one pension plan (e.g. an occupational and a personal one), and it is impossible to distinguish between such cases when the available data is aggregated at the national level. However, it can be considered as a proxy for coverage. Among the three countries studied, supplementary pensions are the most widespread in Czechia. In 2014, the reported number of pension plans amounted to 67% of the size of the working-age population. Also in Spain, membership is recorded at a quite high level. It reaches 60% with

relation to the 15-64 population. For Portugal, this number is lower, as the membership rate only slightly exceeds 35%. The presented number of voluntary pension plan participants can be directly compared with the estimates of supplementary pension coverage delivered by OECD [OECD 2015a]. Whereas for Czechia, the results shown in Figure 1 are very similar to the membership (with regard to 15-64 population) reported by OECD, for Spain and Portugal the differences are significant. However, OECD underestimates coverage, as it does not include pension insurance contracts in both countries in its Global Pensions Statistics database<sup>4</sup>. Such plans as *Seguros colectivos* in Spain or *Planos poupança-reforma* in the form of insurance contracts in Portugal have the greatest popularity compared to other programmes, and their exclusion results in reporting of inadequately low coverage rates.

Figure 2. Membership in voluntary pension programmes with regard to the size of employment



Source: Author's own elaboration based on APS CR, INVERCO, DGSFP, ASF, Eurostat (LFS) data.

Membership can be also referred to the size of employment. Figure 2 presents the number of voluntary pension plans participants expressed as a percentage of the number of persons employed<sup>5</sup>. This indicator accounts for the differences between countries in the labour market situation, i.e. employment rates, and these differences, as shown in Table 1, are large. For Czechia and Spain, membership expressed in this manner exceeds 100%. However, this does not imply full coverage. It may result from labour force fluctuations (persons enrolled in voluntary pension programme maintain their member status also when not working), as well as from duplicate participation in personal and occupational plans. A considerably smaller rate is reported for Portugal, as it reaches 55% of the persons employed.

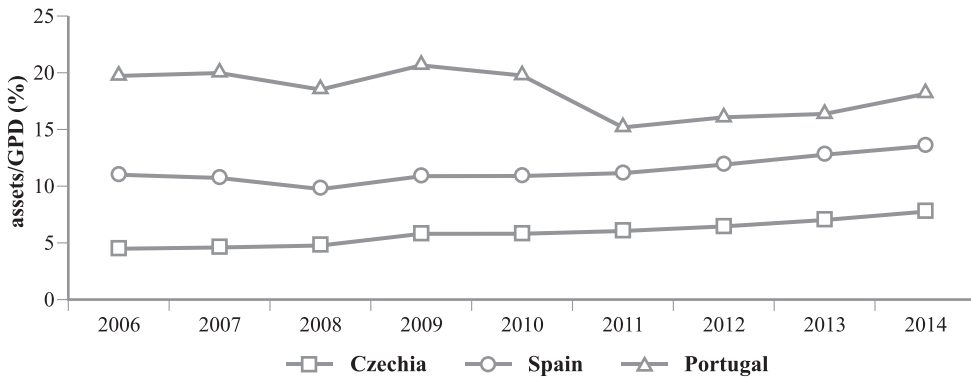
<sup>4</sup> The complete list of supplementary pension programs included in the GPS database is published at <http://www.oecd.org/daf/pensions/gps>.

<sup>5</sup> The data on employment is obtained from the Eurostat Labour Force Survey statistics. It includes self-employment.



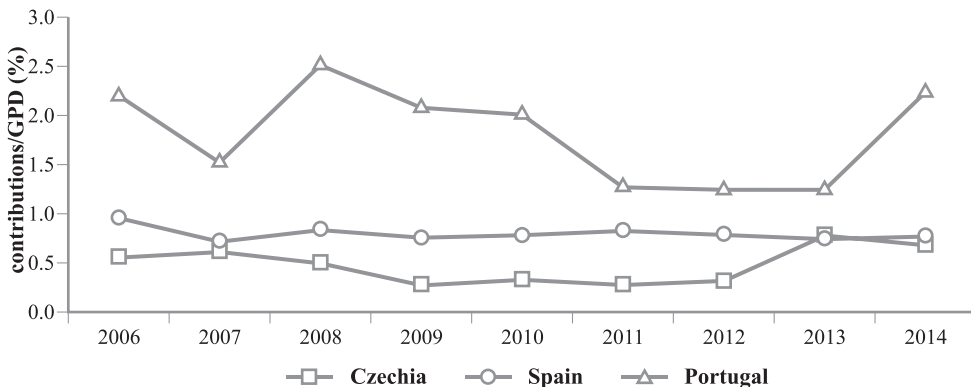
As shown in Figure 3 the largest funds are accumulated in Portuguese voluntary pension schemes. Their value exceeded 18% of gross domestic product in 2014. The assets in Spain and Czechia reported for this period were smaller (comparing to output), as they amounted to 13% and 8%, respectively. However, these numbers imply a rather low level of assets, especially when compared to the average private pension assets (total voluntary and mandatory) in the OECD countries that reach almost 83% of GDP [OECD 2015a]<sup>6</sup>. There are countries such as the United Kingdom or Ireland where private pensions are exclusively voluntary, but the assets are significantly greater comparing to their GDP.

Figure 3. Assets of voluntary pension plans as a share of GDP



Source: Author's own elaboration based on APS CR, INVERCO, DGSFP, ASF, Eurostat data.

Figure 4. Annual contributions paid to voluntary pension plans as a share of GDP

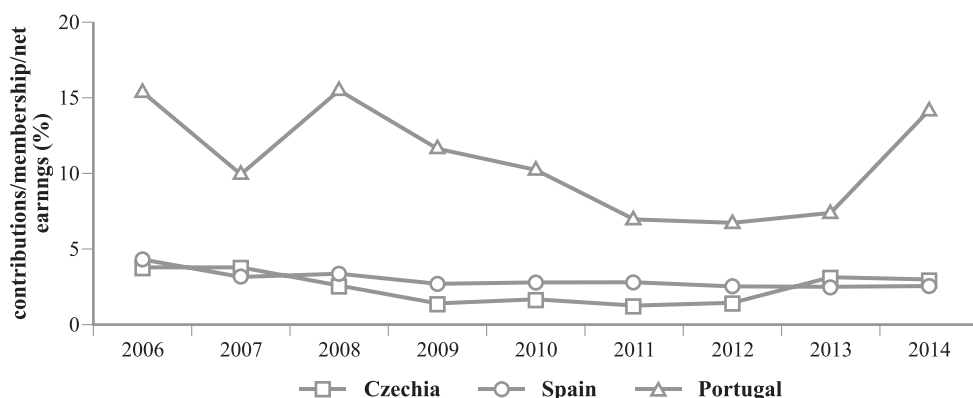


Source: Author's own elaboration based on APS CR, INVERCO, DGSFP, ASF, Eurostat data.

<sup>6</sup> This is a weighted average for 34 OECD countries reported for 2013. However, it should be taken into account that this value may be underestimated due to the incomplete coverage of the private pension programmes by the OECD database.

Figure 4 presents the level of contributions paid from 2006 to 2014 to voluntary pension plans with relation to output. The highest contributions are reported for Portugal (2.6% in 2014). In Spain and Czechia, these levels have been comparable in recent years, as in both cases they amounted to 1% of GDP. From a somewhat different perspective, the level of contributions is shown on the graph presented in Figure 5. It reports aggregated contributions paid in each year divided by the number of plan members and with relation to net annual earnings<sup>7</sup>. As such, it can be considered as a rough proxy for the savings rate connected solely with savings in voluntary pension plans. For Portugal, this rate exceeded 14% in 2014, whereas for Czechia and Spain it amounted to approximately 2.6%.

Figure 5. Annual contributions paid to voluntary pension plans per plan member as a percentage of annual net earnings



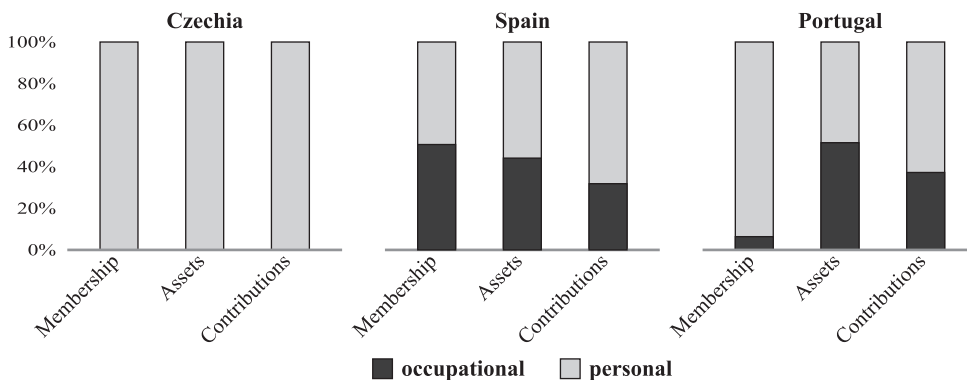
Source: Author's own elaboration based on APS CR, INVERCO, DGSFP, ASF, Eurostat (SES) data.

Another aspect that the development of supplementary pensions can be related to, is the split between occupational and personal plans. Figure 6 presents how membership, assets and contributions are distributed between these two types of pension plans. In Czechia, only personal plans function under voluntary pension schemes, but with a possible employer contribution to a plan. However, according to the information reported by OECD Funded Pensions Statistics, their share accounted for approximately 18% of the total contributions to voluntary pension plans paid in 2014. Spain is the country with a mixed system, where neither personal nor occupational plans prevail. Only in the case of contributions does the share of personal plans slightly exceed 65%. In Portugal, personal plans are characterised by extensive membership, however, the prevalence of this kind of plan is not reflected in contributions and assets accumulated in voluntary pension schemes.

<sup>7</sup> The information on the annual net earnings is provided by the Eurostat (based on the EU Structure of Earnings Survey). It is given for a single person without children, earning 100% of the average wage.

While occupational plans account only for 7% of the total membership, the shares of assets and contributions in the corresponding categories amount to 52% and 37%, respectively.

Figure 6. Shares of occupational and personal plans in supplementary pensions (as of 2014)



Source: Author's own elaboration based on APS CR, INVERCO, DGSFP, ASF data.

## 5. Discussion and conclusions

In the previous sections, qualitative as well as quantitative comparative analyses for three countries, namely Czechia, Spain and Portugal, with regard to the development of supplementary pensions schemes, are presented. Table 3 summarizes the main aspects of the functioning of voluntary pensions in the countries studied.

Table 3. Voluntary pensions in Czechia, Spain and Portugal – a summary

	Czechia	Spain	Portugal
membership level	high	high	moderate
asset level	low	low	moderate
contribution level	low	low	high
auto enrolment	no	partly (only occupational plans)	partly (only occupational plans)
occupational/personal structure	personal only (employer may contribute)	mixed	mixed (with prevalence of personal plans)
financial incentives	greater towards plan members (highest in the group)	comparable between employers and plan members	greater towards employers

Source: Author's own elaboration.

In all three countries, the role of voluntary pensions can be regarded as limited, especially compared to countries such as the United Kingdom, New Zealand or Ireland. However, the performance of this sector (in terms of membership, accumulated assets and contributions paid) in Czechia, Spain and Portugal is still much better than in many European countries, such as France, Italy, or other Central and Eastern European countries. The analyses conducted prove that two main dimensions of voluntary pension development, which are extensive coverage and sufficient saving rates, do not necessarily converge. In order to increase the importance of supplementary pensions and their role in providing adequate pensions in the future, both should be equally regarded by policymakers. Czechia can serve as an example of a country where very generous tax incentives resulted in broad participation, but these means turn out to be inefficient when it comes to the saving outcomes measured by assets and contributions paid<sup>8</sup>. Quite different findings can be formulated for Portugal, where contributions and assets are considerably higher than in Czechia, but coverage is much smaller.

Comparisons of the effects of quasi-mandatory solutions regarding membership in occupational plans delivers some interesting findings. In Czechia, there are only personal plans, and individuals are not subjected to auto enrolment. In Spain and Portugal, employers can establish pension programme on a voluntary basis, but employees are auto enrolled [EIOPA 2014]. However, as shown in the previous section, in Czechia the participation in voluntary pension plans is at a comparable level as in Spain, and significantly greater than in Portugal. Consequently, one can conclude that the quasi-mandatory measures are not a necessary condition for achieving a high take-up rate. In Spain, where personal plans account for a more or less half of the total number of voluntary pension plans, the role of auto enrolment is limited. The auto enrolment solution adopted in Portugal also does not seem to be an effective tool to promote high supplementary pensions coverage. It applies only to plans set up on voluntary basis by employers. Thus, the results imply that in Portugal there may be some barriers (or lack of sufficient incentives) on the side of employers that prevent them from establishing pension programmes on a larger scale.

The design of supplementary pension schemes that include measures promoting occupational or personal plans in a different (smaller or greater) scope does not seem to be crucial as far as the saving effects are concerned. The countries analysed in this study have quite different structures with regard to the relevance of these two kinds of pension arrangements. In Czechia, an occupational scheme does not function, in Spain both schemes are balanced in terms of the dimensions analysed, whereas in Portugal the size of the occupational scheme measured by participation rate is small, but it is very efficient in terms of contributions and accumulated assets.

In the countries studied, different policies are implemented in connection with financial incentives to encourage greater savings. In Czechia, they are the most

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<sup>8</sup> Similar findings are also presented by Rutecka-Góra [2016] who concludes that generous state subsidies and tax relief in Czechia have resulted in high coverage, however their impact on the contribution levels remains highly questionable.

generous and mainly addressed to plan members. In Spain, employers contributing to pension plans are favoured equally to plan members. In Portugal, employers can benefit from tax advantages to a greater extent than plan members. The examples of Portugal and Czechia may indicate that financial incentives towards employers are more efficient than tax incentives and state subsidies aimed at members, i.e. employers are more responsive to favourable tax treatment. The efficiency of Portuguese occupational pensions in terms of average saving rates compared to Czech personal pensions supports this view. However, as this conclusion is formulated on the basis of single-countries case studies, caution is required, as there are more in-depth analyses needed.

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### Abbreviations

ARR – aggregate replacement ratio; CZK – Czech koruna; PAYG – Pay-As-You-Go; PRR – pensions replacement rate.