



ESPN Thematic Report: Contribution to the 2018 Pension Adequacy Report

Croatia

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[Ivana Vukorepa]
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Contact: Giulia Pagliani

E-mail: Giulia.PAGLIANI@ec.europa.eu

*European Commission
B-1049 Brussels*

European Social Policy Network (ESPN)

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Summary/Highlights

The Croatian pension system has undergone many reforms including one systemic reform (1998 - 2002), and several parametric reforms, the last one encompassing all three parts of the pension system (2013-2015). Frequent and often contradictory reforms have failed to achieve a balance between adequacy and long-term sustainability. A number of reforms have sought to improve adequacy in the mandatory pillars: a more generous rotating indexation formula, reduction of the management fee of second pillar funds, the introduction of life-style funds, and changes in the formula for payments under the first pillar for two-tier pensioners. In terms of improving sustainability, only a few reforms have been implemented: very slow retirement age increases, insufficient pension increments for working longer and questionable changes in the eligibility criteria for disability pensions. Unfortunately, some pension and tax reforms as well as labour market policies still jeopardize the idea of favouring later retirement and hence increased pension duration: 1) the decrease in early retirement decrements and insufficient deferred retirement increments, 2) two new types of early retirement without decrement, 3) work upon retirement with full pension paid, 4) employment legislation linking employment termination to 65, and 5) continued unequal tax treatment of pensions and other employment incomes. Furthermore, despite some reforms, work under non-standard contracts is still cheaper than using standard employment. Hence, apart from distorting the labour market, such an approach is adversely affecting future pension adequacy for non-standard workers.

Redistributive elements are strongly present, especially within the first PAYG pillar, in several forms: 1) pension credits during maternity and parental leave are paid even for non-working parents and unemployed persons that lack maximum 5 years of insurance period for the old-age pension, 2) pension credits for disability and survivor's pensions, 3) minimum pension without means testing, 4) early retirement pensions with actuarially insufficient decrements, and 5) seventeen "privileged" categories of pensioners as well as special treatment of workers in arduous and hazardous jobs. These sometimes lead to the system being perceived as unfair.

There are a number of significant challenges to pension adequacy:

- There is continuous unfavourable pension system dependency ratios, as well as long-term demographic problems, such as negative natural increase rates, emigration, and low and decreasing employment rates of older workers.
- Although pensioners experience a significant drop in living standards compared to their pre-retirement income, data show that the situation has been slowly improving in recent years.
- Gender difference are mainly result of a different statutory pension age for men and women that is currently undergoing an equalisation period (completed by 2030).
- The most worrying are theoretical replacement rate projections which estimate a great drop by 2056, for an average earner with 40 years of contributions, to only 40.2%. Some improvements are visible with prolongation of working lives.
- Significant policy changes that favour employability and labour market participation of the elderly as well as promote longer working lives seem crucial, since they will positively affect both pension adequacy and the system's sustainability. In addition, some other, more fairness oriented, changes are needed.
- Additional resources for the poorest pensioners and those who did not earn a pension could be found within better adapted means-tested social assistance measures.

1 General description of the national pension system

Since 2002 the Croatian pension system is a mixed system consisting of three pillars. The legislative framework is complex and has been changed frequently.¹ The first pillar is statutory designed as a PAYG defined benefits scheme financed by contributions, with a high deficit financed from the State Budget (around 48%).² Both the second and third pillars can be classified as statutory funded pension schemes. They are defined contribution schemes based on individual accounts financed by contributions and investment returns. The second pillar is mandatory, while the third pillar is a voluntary supplementary scheme including both "open funds" for all citizens and "closed funds" sponsored by employers, trade unions or other professional associations. Hence, "closed funds" within third pillar represent occupational defined contribution schemes, while Croatia has no specific occupational defined benefit pension schemes.

Regarding personal coverage, the first pillar covers all persons in employment and self-employment (including those on maternity and parental leave and sick leave) and some others including full-time volunteers, apprentices and parents with children under one year of age. All insured persons who were under 40 at the time of the 2002 reform had to participate in both the first and second pillars (double coverage). Those between 40 and 50 could choose between staying in the first statutory PAYG scheme or additionally joining a second pillar (statutory funded scheme), while those over 50 had to remain within the first pillar. The dependency ratio within the first pillar grew rapidly between 1990 and 2000, being itself a major driver of the reforms. Since 2010, it is higher than 80%, reaching a peak in 2014 of 87.57%. Since then, it has fallen slightly. At the end of 2016, the first pillar had 1.440 m. contributors and 1.233 m. pensioners; hence a dependency ratio of 85.64%.³ It is useful to note that during the summer months there are improvements in the dependency ratio due to tourism (the seasonal character of the Croatian economy). The number of individual accounts within the second pillar is always higher than the number of contributors in the first pillar, reaching 1,784,169 at the end of 2016⁴. This difference is due to the fact that during a period of unemployment the second pillar retirement accounts are kept inactive. The number of savers within the supplementary voluntary third pillar is slowly growing, but despite some state incentives it remains low overall (around 286,000 people at the end of 2016)⁵.

The total contribution rate for the mandatory pillars is 20%. Persons covered only by the PAYG scheme pay all contributions to the first pillar, while those under both pillars pay 15% to the first pillar and 5% to the second pillar. Since January 2017, due to tax reform, persons receiving non-regular income from employment and self-employment (so called "other income") pay contributions at a reduced rate (10% instead of 20%). The pension contribution is paid from employee wages or from the "pension insurance base" (for self-employed persons and some other categories). Contributions paid for mandatory pension schemes are tax exempt, while pension payments are taxed. Contributions paid for voluntary schemes come from taxed income, with the exception of employers matching

¹ Currently it consists of several basic laws: The Pension Insurance Act (NN 157/2013, 151/2014, 33/2015, 93/2015, 120/2016), The Act on Compulsory Pension Funds (NN 19/2014, 93/2015), The Act on Voluntary Pension Funds (NN 19/2014) and The Act on Pension Insurance Companies (NN 22/2014). However, there are all together 18 laws relevant for the pension system.

² There is a constant trend of increasing expenditures in the first pillar pensions (in 2014 the deficit was HRK 13.984 billion (approximately €1.84 billion), in 2015 it increased to HRK 15.326 billion (approximately €2.016 billion), and in 2016 to HRK 16.602 billion (approximately €2.184 billion). Source: Author's calculations based on the State Budget data on revenues from pension contributions and expenditures for pension benefits, NN 141/14, 103A/15, 111/2016, 119/2016), also available on web: <http://www.mfin.hr/hr/proracun>.

³ Croatian Pension Insurance Institute, Statistical Indicators (data files), <http://www.mirovinsko.hr/default.aspx?ID=723>.

⁴ Croatian Financial Services Supervisory Agency (HANFA), Monthly reports, <http://www.hanfa.hr/EN/nav/110/monthly-report.html#section0>.

⁵ Ibidem.

contributions that are tax exempt.⁶ Hence, the third pillar pensions in payment are normally tax-exempt; they are only partially taxed proportionally to the tax relief awarded during the accumulation phase.

Pension benefits comprise old-age pension (including several early retirement pension options), survivors' pension and three types of disability pension (total, partial and temporary), including also higher benefits if the risks of death and disability were caused by accidents at work and occupational diseases. In order to acquire a right to old age or early retirement pension persons must fulfil two conditions: 1) pensionable age and 2) qualifying years. The pensionable age still differs for men and women, although it will be equalised to 65 by 2030. The early retirement window is set 5 years lower. From 2031 to 2038 there is transitional period increasing the retirement age to 67, and for early retirement to 62. As a result of several reforms, early retirement decrement is no longer actuarially neutral.⁷ Regarding qualifying years, for old-age retirement 15 years are required while for early retirement the requirement is 35 years. In addition, from 2014, two new early retirement options without pension decrement were introduced: 1) at age 60 for those who had completed at least 41 years of contributions, and 2) for persons that reached early retirement age and have been unemployed for at least two years as a result of the bankruptcy of their employer. Deferred retirement is possible, but with an accrual bonus only for a maximum of 5 years (hence up to age 70).⁸ Since 2014 old-age pensions continue to be paid, in full, only to beneficiaries who continue to be employed part-time, up to a maximum half-time of full working hours, i.e. a maximum of 20 hours per week⁹. This measure does not apply to full-time employment, regular self-employment activities, nor to early retirement pensioners. The Labour Act as well as many laws in the public sector still link automatic termination of employment to becoming 65 (e.g. civil service, public administration, education, health sector). The healthcare legislation provides that the salary compensation should be entirely covered by the employer for workers aged 65 or older.¹⁰

Croatia has numerous groups of so-called 'privileged pensioners', who have earned their pension under more favourable conditions based on their status. Statistically they are now divided into seventeen categories and at the end of 2016 made up 14.49% of all pensioners.¹¹ In addition, persons performing hazardous and arduous work, as well as some other categories of persons (e.g. persons with certain disabilities), enjoy pension advantages in the form of additional years of service and retirement age reduction, partially financed by employers' additional contributions. They represent between 6 to 8% of all new pensioners with the average retirement income around 27% higher compared to the general pension averages.¹²

2 Reform trends

The Croatian pension system has undergone many reforms: one systemic reform (from 1998 to 2002), and several parametric reforms, the last one encompassing all three parts

⁶ Since 2010, up to HRK 500.00 per month (around 66 EUR) or the total of HRK 6,000.00 per year (around 800 EUR).

⁷ In 2007 it was reduced from 0.34% to 0.15% per month. In 2011 and in 2014, it was made dependent on the years of contributions, so the decrement for retiring five years early now varies between 6% and 20.4%.

⁸ The bonus of 0.15 percent per each month of later retirement (maximum 9 percent for 5 years) is granted provided that the beneficiary has completed 35 years of insurance and the pension is taken for the first time (Art. 85, para. 3 of the Pension Insurance Act).

⁹ Art. 99 of the Pension Insurance Act.

¹⁰ For more see: Vukorepa, I. (2015), *op. cit.*, pp. 295-298;

¹¹ Croatian Pension Insurance Institute, *Statistical information Series*, 4/2016, p. 33.

¹² Vukorepa, I. (2017). *Retirement Policy Changes for Workers in Arduous and Hazardous Jobs: Comparative Overview and Lessons for Croatia*, *Zbornik Pravnog fakulteta u Zagrebu*, 67 (2017), 1, pp. 5-28.

of the pension system (2013-2015). Frequent and often contradictory reforms have failed to achieve a balance between adequacy and long-term sustainability.¹³

A number of reforms have sought to improve **adequacy** in the mandatory pillars. Firstly, in 2014 a new rotating indexation formula was introduced, index proofing pensions twice a year. In addition, pensions cannot be indexed downwards.¹⁴ This reform impacts positively on pension adequacy but with a long-term negative impact on the pension system's deficit. Secondly, the management fee of second pillar funds has been reduced from 1.2% in 2006 to 0.45% in 2013. From 2016, it will continue to be reduced, to reach 0.3% in 2020. Thirdly, since August 2014, life-style funds were introduced into the second pillar. Each mandatory pension fund (currently there are 4) has to have 3 sub-funds of different investment risk exposure (A - aggressive, B - balanced, C - conservative). Participation in the sub-funds automatically changes with age.¹⁵ However, B sub-fund is a default fund until 5 years before statutory pension age.¹⁶ Although fund members are expected to be better-off than in the old single-fund model, the negative timing risk due to market shocks has not been eliminated.¹⁷ Fourthly, in 2014, changes in the "basic pension" formula were introduced (formula for payments under the first pillar for two-tier pensioners). The new formula replicates the single tier pension formula making it proportional to the pension contribution rate ratio,¹⁸ with the effect that it increases pension benefits compared to the original formula. The effect of this increase is different for different income groups, but will in any case result in an increase in pension system costs.¹⁹

In terms of improving **sustainability**, only a few reforms have been implemented. Firstly, slow transitional periods of retirement age increases, as explained above. Secondly, in 2014, changes in the eligibility criteria for disability pensions were introduced; disability started to be assessed based on residual work capacity, involving reassessment every three years, with the possibility of random checks. From 2015, total disability pensions are being converted to old age pensions when the recipient reaches retirement age. This measure resulted in the administrative reduction of the number of disability pensioners but without any positive impact on pension expenditures.

Furthermore, **some pension and tax reforms as well as labour market policies jeopardize the general idea of favouring later retirement and hence increase pension duration**. Firstly, due to reforms undertaken in 2007, 2011 and 2014 early retirement decrement is not any more actuarially neutral,²⁰ while the actuarial fairness of the size and limitation of the pension deferral increment can be questioned.²¹ Secondly,

¹³ Vukorepa, I. (2015). Lost between Sustainability and Adequacy: Critical Analysis of the Croatian Pension System's Parametric Reform, *Revija za socijalnu politiku*, 22 (2015), 3; pp. 279-308;

¹⁴ The 1 July indexation maintains the Swiss formula (50% wages:50% prices) which was used between 1999 and 2013. The 1 January indexation is based on whichever of three wages:price ratios (70:30, 50:50, and 30:70) gives the highest increase. Since 2015 "privileged" pensions were supposed to be indexed by Government decision in their privileged part, but in 2017 this approach was abandoned (Amendments to the Pension Insurance Act, NN 120/16).

¹⁵ A is for fund members that have 10 or more years until the statutory old age, B is for those who have 5 or more years, and C is for those who have less than 5 years. The overwhelming majority of second pillar participants are within B funds (around 98%). Based on Croatian Financial Services Supervisory Agency, Monthly Reports, <http://www.hanfa.hr/EN/nav/110/monthly-report.html#section0>.

¹⁶ The overwhelming majority of second pillar participants are within B funds (around 98%). Based on Croatian Financial Services Supervisory Agency, Monthly Reports, <http://www.hanfa.hr/EN/nav/110/monthly-report.html#section0>.

¹⁷ Unfortunately, law proponents omitted considering other lifecycle portfolio management options proposed by scholars, e.g. target-date funds (see: Potočnjak, Ž., Vukorepa, I. (2012); Kovačević, R., Latković, M. (2015)).

¹⁸ Since the first pillar contribution rate is 15%, and for the second pillar 5%, hence total is 20%, then contribution rate ratio, i.e. "basic pension factor" for the two-tier pensioners is 0.75 (15/20).

¹⁹ Conclusion based on author's own calculations.

²⁰ In 2007 it was reduced from 0.34% to 0.15% per month. In 2011 and in 2014, it was made dependent on the years of contributions, so the decrement for retiring five years early now varies between 6% and 20.4%.

²¹ In 2011, an incentive to work longer was introduced amounting to 0.15% per each month of later retirement, for a maximum 5 years, limiting the total increment to 9%.

since 2014, two new early retirement exits without pension decrement were allowed. Thirdly, since 2014, old-age pension is being paid in full to beneficiaries who continue part-time employment.²² The National Reform Programme from 2017 previewed an extension of the personal scope of this measure.²³ Such an approach, without a proportionate reduction of pension, raises concerns, because it is contrary to the idea of postponing full retirement, and it can distort the labour market since pensioners could be willing to work at a reduced labour price, if they have full pension in payment. Fourthly, income tax still favours retirement over working. Although the Income Tax Act of 2017 increased the basic personal tax-free allowance for employed and self-employed persons making it equal to the amount for pensioners, pensioners now enjoy preferential treatment due to the new provision which provides for a reduction of a pensioner's tax obligation by 50%.²⁴ Fifthly, the Labour Act as well as many laws in the public sector still link automatic termination of employment to becoming 65 (e.g. civil service, public administration, education, health sector). Sixthly, healthcare legislation provides that the salary compensation should be entirely covered by the employer for workers aged 65 or older.²⁵

So far, only some measures aimed at promoting longer working lives have been envisaged by the Government: accelerated retirement age increases, higher early retirement decrements, and changes to the preferential early retirement option for the long term insured (i.e. for those aged 60 with 41 years of contributions).²⁶ Further, since 2013, Government has signalled its intention to reform the existing generous system of entitlements for workers in arduous and hazardous jobs. None of the planned reforms were undertaken yet; they seem to have been postponed until 2018.²⁷

With a view to improve pension adequacy there is a **recurring policy debate on three issues**. Firstly, on the introduction of a 27% pension supplement also for two-tier pensioners.²⁸ There are dissenting opinions on the issue, drawing attention to the fact that the proposal should be considered in the context of previous "basic pension" formula increases, as well as arguments of fairness and relating to the long-term financial availability of such a measure.²⁹ Secondly, the Union of Croatian Pensioners,³⁰ advocates the introduction of a "social pension" aimed at older people without the right to a pension. The justification for such a measure is questionable since those persons can be protected within the social assistance system, e.g. by the so-called guaranteed minimum benefit scheme (*zajamčena minimalna naknada*).³¹ Thirdly, the Union of Croatian Pensioners as well as some scholars favour the abolition or reduction of the second funded pillar so as to

²² Art. 99 of the Pension Insurance Act (NN 157/13, 151/14, 33/15, 93/15, 120/16).

²³ Croatian National Reform Programme, April 2017, <https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-croatia-hr.pdf>, pp. 66-67

²⁴ Art. 24, para. 5 of the Income Tax Act (NN 115/16).

²⁵ For more see: Vukorepa, I. (2015), op. cit., pp. 295-298;

²⁶ Croatian Government (2016). National Reform Programme 2016, April 2016, adopted on 28 April 2016, http://ec.europa.eu/europe2020/pdf/csr2016/nrp2016_croatia_en.pdf, p. 40. Croatian National Reform Programme, April 2017, <https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-croatia-hr.pdf>, pp. 66-67.

²⁷ Proposal of legislative plan for 2018, <https://esavjetovanja.gov.hr/ECon/MainScreen?entityId=6085>.

²⁸ It was introduced in 2007 with the purpose to correct differences in the pension amounts due to gradual expansion of the benefit accounting period from 10 most favourable years to the entire working life (instead of introducing a one-time comprehensive expansion that would not have resulted in such differences). Therefore, the amount of pension supplement depends on the year of retirement (from 4% for pensions acquired in 1999 to 27% for pensions acquired from 2010 onwards). Some groups of pensioners are not entitled to the supplement such as: two-tier pensioners as well as pensioners receiving minimum pension, maximum pension and "privileged" pensions. (Art. 2-4 of the Pension Supplement Act, NN 79/07, 114/11).

²⁹ E.g. Nestić, D. favoring the idea *versus* Vukorepa, I. favoring a more cautious approach due to previous "basic pension" formula increases and the lack of other reforms, *Večernji list*, 21.10.2017.; TV Show "Otvoreno", 10.5.2017;

³⁰ Sindikat umirovljenika Hrvatske, <http://www.suh.hr>.

³¹ Stubbs, P., Zrinščak S. (2015). ESPN Thematic Report on Minimum Income Schemes Croatia. Brussels: European Union, 2015, p. 15.; Bejaković, P. Poverty Alleviation (2017): The Case of Croatia, in: Staicu, Gabriel Ilie (ed.). *Poverty, Inequality and Policy*, Rijeka : InTechOpen, 2017, p. 74

leave more resources for current pensioners.³² Such an approach would go against the systemic reforms implemented so far and raises several short-term and long-term concerns.³³

3 Assessment of adequacy

3.1 Current adequacy

3.1.1 General assessment of current adequacy

Although pensioners experience a significant drop in living standards compared to their pre-retirement income, data show that the situation has been slowly improving.

The Aggregate Replacement Ratio (the ratio of income from pensions of persons aged between 65 and 74 years and income from work of persons aged between 50 and 59 years) in 2016 was among the lowest in the EU-28, according to Eurostat data, at 0.39.³⁴ However, this is itself a slight increase on previous years, particular on the low of 0.32 in 2010.³⁵ The low ARR can be explained by the very unfavourable pension system dependency ratio, lack of income from the statutory funded part of the pension system for current pensioners, and limited number of years of contribution (short working lives).³⁶ The Gender gap in pension income dropped by 2.05 pp since 2010, standing at 23.78% in 2016. National data show constant increases in the length of old-age and early retirement: at the end of 2010 it was 18 years and 1 month, at the end of 2016 it was 20 years and 7 months and at the end of September 2017 it was 21 years and 1 month.³⁷ Similarly, EU data for 2016 record average retirement duration of 18.4 years for men and 23.6 years for women, while predicting it to increase to 21.5 years for men and 25.1 years for women in 2056.³⁸

The Relative median income ratio of older people (65+) is slowly improving. It has increased by 0.5 pp from 2010, being 0.83 in 2016, although it remains below the EU-28 average. Furthermore, for women, the situation is less positive than for men (in 2016 it was at 0.79 compared to 0.88 for men).³⁹ This can be explained by lower retirement age and shorter periods of contribution (especially for single pillar pensioners belonging to older cohorts who had shorter working lives), thus directly affecting the level of income from pension benefits. Income inequality between the top and the bottom quintile of those aged 65+, as measured by the income quintile share ratio S80/S20, was 4.6 in 2016, showing

³² E.g. Bežovan, G; Jakovčević, D.; Lovrinović, I. *versus* e.g. Anušić, Z., Bejaković, P., Nestić, D., Potočnjak, Ž., Vukorepa, I. etc. (Round Table: Croatian Pension System and Sustainability of the Second Pillar), Zagreb, Faculty of Law University of Zagreb 21.10.2016).

³³ Short-term benefit would be a temporary reduction of explicit public debt, but the long-term damage could be much greater. Firstly, the implicit debt would increase. Secondly, it would cause citizens to lose trust in governments again, which might open an additional path to the grey economy. Thirdly, in legal terms, the abolition of the second pillar would represent nationalization of private property, and in a socio-economic sense it would represent an additional burden for future generations.

³⁴ Eurostat, Aggregate replacement ratio, <http://epp.eurostat.ec.europa.eu/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tsdde310&language=en> (last time accessed on 9 November 2017)

³⁵ Ibidem.

³⁶ The share of pensioners receiving pensions based on the basis of 40 or more qualifying years, although slowly increasing is still very low (at the end of 2016 only 14.84%). Moreover, around 41% of pensioners have less than 30 years of service, more women than man. Information from the Croatian Pension Insurance Institute, Statistical Information, 4/2016, p. 27.

³⁷ Croatian Pension Insurance Institute, Statistical information Series, 4/2010. 4/2016 and 3/2017.

³⁸ European Commission, Background statistics (see table in the annex).

³⁹ Ibidem.

a drop of 0.7 compared to 2010.⁴⁰ Overall risk of poverty and social exclusion for older persons remains higher than for the total population (at 27.9% in 2016).⁴¹ Nevertheless, the at-risk-of-poverty rate or social exclusion (AROPE) for those aged over 65 has decreased since 2010 by 3.8 pp (being 33.7% in 2016), and for those aged over 75 even more, by 6.4 pp (dropping to 37.8% in 2016).⁴² Data on material and social deprivation (MSD) for those aged over 65 show even a bigger decrease, since 2010 by 6.4 pp (being 18.3 in 2016). The housing situation of older people in Croatia (65+) is good, since 96.5% are homeowners; although still 8.4% are overburdened with housing costs.⁴³ Thus, there is a potential in using homes for building up income in retirement. The health situation indicators are below EU 28 average. The expected healthy life years at the age of 65 was 4.7 years for men and 4.5 years for women compared to EU average of 9.4 years.⁴⁴ Data also point to a decrease in healthy life years: from 2010 to 2016 it decreased by 1.9 years for men and 2 years for women), which should be an incentive for the improvement of the preventative and curative health care policy. Regarding meeting the need for medical care, in 2016 there were 4.3% of those over 65 that have self-reported unmet need, hence slightly above the EU average of 3.5%.⁴⁵ It should also be mentioned that the adequacy of pensions is sometimes complemented by the availability of some social services for older persons at a reduced price: e.g. public transport tickets, as well as concert, theatre and cinema tickets, and so on.

3.1.2 Redistributive elements of public pension schemes

A redistributive (solidarity) element is strongly present in the Croatian pension system, especially the first PAYG pillar, in several forms. Firstly, apart from covering all persons in employment and self-employment (including those on maternity and parental leave and sick leave), the mandatory system covers also non-working parents⁴⁶ and unemployed persons that lack maximum 5 years of insurance period for the old-age pension.⁴⁷ Secondly, pension credits are also provided for disability and survivor's pensions in the form of an "additional insurance period", that is a fictive period (not covered by contributions) accredited for the purpose of increasing benefits. Moreover, if the risks of death and disability were caused by accidents at work or occupational diseases then the pension is calculated for a minimum 40 years insurance period, hence in most cases regardless of the actual years of insurance.⁴⁸ Thirdly, minimum pension receivers can be considered as implicit pension subsidy receivers, while those having the right to a maximum pension can be considered as implicit pension tax payers. Namely, the minimum pension is not means tested. It depends on the number of qualifying years multiplied by the minimum actual pension value, which is set at 97% of the actual pension value, resulting in a significant degree of redistribution. However, this degree of redistribution is partially reduced by the "pension supplement" of 27%, resulting in the fact that those

⁴⁰ Ibidem.

⁴¹ Eurostat, People at risk of poverty or social exclusion by age and sex. http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_peps01&lang=en (last time accessed on 9 November 2017).

⁴² European Commission, Background statistics (see table in the annex).

⁴³ Ibidem.

⁴⁴ Ibidem.

⁴⁵ Ibidem.

⁴⁶ A non-working parent may be granted pension insurance during the first year of a child's life, based on a personal claim, and the unemployed carer parent as long as specific care is needed (Art. 14 of the Pension Insurance Act).

⁴⁷ The unemployment legislation provides for the pension insurance for person that reached old-age pensionable age but lack maximum 5 years of insurance period, provided that they are entitled to unemployment cash benefit (see Art. 51-54 of the Act on Job Placement and Unemployment Benefits (*Zakon o posredovanju pri zapošljavanju i pravima za vrijeme nezaposlenosti*, NN 16/2017). The same right existed also in the previous legislation.

⁴⁸ Art. 33 and 34 of the Pension Insurance Act.

whose average wages or contribution bases were below 76.325% compared to the average national wage will be entitled to the minimum pension. The regular maximum pension is capped at 380% of persons earnings compared to economy wide average earnings, while contributions can be paid up to 600% of average earnings.⁴⁹ Thirdly, “privileged” categories of pensioners, as well as early retirement takers (due to a non-actuarially neutral decrement), are implicit pension subsidy receivers, especially taking into account the length of retirement.

Furthermore, although indexation of pensions was suspended completely as an austerity measure in 2010 and 2011, the indexing mechanism was not weakened after indexation was reintroduced. On the contrary, in 2014, more adequacy favourable indexation was introduced, equally applying to first and second pillar pensions.

3.2 Retirement conditions for the self-employed and for people in non-standard employment

The Croatian social security system includes employees, self-employed persons and some non-standard workers. However, the actual level of their benefits in respect of specific social risks differs depending on three elements: 1) the type of contributions paid; 2) the contribution rate; and 3) the contribution base.⁵⁰

Under mandatory pension insurance, self-employed persons and members of their families are granted the same rights, under the same conditions, as employed persons and their family members. Self-employed persons pay their own contributions, at the same rate as employed persons; however, the contribution base differs according to the type of self-employment activity. There is no possibility for the self-employed to opt-out of the mandatory system. Unlike the situation for employees, periods of insurance by self-employed persons are recognised only where contributions have actually been paid. In cases where contributions have not been paid, the pension is granted only for the period covered by contributions: but additional contributions can be paid retrospectively, in which case the pension is recalculated.⁵¹

Despite recent tax reform and some other improvements, there is still a variety of contribution bases and contribution rates that makes work under non-standard contracts (e.g. contract for service, author’s contract, student contract or occupational training etc.) cheaper than using standard employment contracts or contracting with self-employed workers. Hence, apart from distorting the labour market, such an approach is adversely affecting future pension adequacy for non-standard workers.⁵²

3.3 Future adequacy and challenges

The net TRR for Croatian average male earners working for 40 years amounted to 56.6% in 2016. The gender differences under current scenarios is a result of a different Standard Pension Age (SPA) for men and women that is undergoing an equalisation period (until

⁴⁹ For more information see: Vukorepa, I. (2015), op. cit., pp. 288-290. On redistribution in the pension system was written also by Bejaković, P, Mrnjavac, Ž. (2016). The Role of the Tax System and Social Security Transfers in Reducing Income Inequality: The Case of the Republic of Croatia. *Ekonomski pregled Zagreb*. 67 (2016), 5; pp. 408-410.

⁵⁰ For more see: Vukorepa, I., Tomić, I., Stubbs, P. (2017). ESPN Thematic Reports on access to social protection for people working on non-standard contracts and as self-employed. Brussels: European Union, 2017, <http://ec.europa.eu/social/BlobServlet?docId=17687&langId=en>.

⁵¹ Ibidem, p. 11.

⁵² Ibidem, p. 11-12, 15, 21, 22.

2030).⁵³ By 2056, the TRR is expected to drop significantly. Croatia's net TRR of an average earner that worked for 40 years up to the SPA, that is under current legislation prescribed to be 67 from 2038 onwards, will have fallen by 16.4 PP, to 40.2%. A person starting working at 25 and having worked until the SPA, hence 42 years, can expect a higher TRR, estimated at 41.8%. Those delaying retirement above the SPA by 2 years will have an increased TRR of 43.7%.⁵⁴ Hence, an increase in retirement age and career length results in higher pension entitlements, however it is questionable whether the incentive to work longer is rewarding enough taking into account life-expectancy increases and hence the length of retirement. Comparing TRRs by earning profiles, it is evident that low-earners (with 2/3 of average earnings) have a higher TRR than average earners and much higher than high earners. This can be explained by the strongly redistributive character of the first pillar PAYG scheme, where low earners have a right to the minimum pension without a means test, and the maximum pension is capped. Regarding gross and net TRR under all length of career scenarios and earning profiles, it should be pointed out that the much higher net TRR values compared to gross values can be linked to tax policy, as indicated above.

Hence, there are a number of significant challenges to pension adequacy, especially taking into account long-term demographic problems: negative natural increase rates, emigration, and low and decreasing employment rates of older workers. Therefore, significant policy changes that favour employability and labour market participation of older people seem crucial, since they will positively affect both pension adequacy and the system's sustainability.

4 Main opportunities for addressing pension-related challenges

In the context of continued problems with the pension system's sustainability, insufficient economic growth and unfavourable demographic trends and projections, the scope for new measures to increase pension adequacy are rather limited. Indeed, in general terms, most of those which may have an impact on adequacy have already been introduced in recent years.

Therefore, the only significant policy changes that favour employability and labour market participation of the elderly seem crucial, since they will positively affect both pension adequacy and the system's sustainability. In addition some other, more fairness oriented, changes are needed. Hence, reform recommendations could include the following:

- 1) changes in the labour law and health insurance legislation that hampers employment after 65
- 2) speeding up the increases in the retirement age with a possible linkage to life expectancy or healthy life years indicators
- 3) stronger (actuarially fair) discouragement of early retirement and higher pension deferral bonus
- 4) reduction of special early retirement schemes

⁵³ TRR differs for women depending on the exit variant. If women work up to 65 years of age then their TRR is higher than of man, amounting to 60.2%. This can be explained by the fact that standard pensionable age (SPA) for women in 2016 is still lower than for men. Hence, women working above their standard pensionable age have a right to benefit increment. Contrary to that women starting working at the age of 25 and having worked until SPA in 2016 had a lower TRR reaching only 51.7%, which can be explained by shorter years of career compared to men.

⁵⁴ European Commission, Background statistics (see table in the annex).

- 5) changes in the special system of arduous and hazardous workers and promotion of transfers to other jobs in order to postpone retirement
- 6) partial retirement with proportionate/partial pension benefits in payment
- 7) division of a minimum pension into an "earned" part and a "social pension part" which would be means tested
- 8) division of privileged pensions into an "earned part" and a "privileged" part, which would improve transparency and enable adaptation of the privileged parts depending on the available budgetary resources,
- 9) social security contributions should be collected on all types of income from work equally, so as to improve the level of future benefits for atypical workers, and
- 10) since funded pensions will have an increasingly important role in the future replacement rates, some improvements could be considered for the second pillar, e.g. regarding investment rules, lifecycle portfolio management and enhanced minimum guaranteed rates of return.

More resources for the poorest pensioners and those who did not earn pension should be found within better adapted means tested social assistance measures, reducing stigma and barriers to access.

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Annex

Background statistics – Croatia

1. Relative incomes of older people

Indicator	2016			Change 2010-2016		
	Total	Men	Women	Total	Men	Women
Relative median income ratio, 65+	0.83	0.88	0.79	0.05	0.04	0.06
Income quintile share ratio (S80/S20), 65+	4.6	4.5	4.5	-0.7	-0.6	-0.6
Aggregate replacement ratio (ARR) (%)	0.37	0.39	0.40	0.05	0.01	0.09

2. Poverty and material deprivation

Indicator	2016			Change 2010-2016		
	Total	Men	Women	Total	Men	Women
At-risk-of-poverty or social exclusion (AROPE), 65+ (%)	33.7	28.8	37.0	-3.8	-2.5	-4.6
At-risk-of-poverty rate (AROP), 65+ (%)	27.0	22.4	30.1	-3.5	-2.7	-3.9
Severe material deprivation (SMD), 65+ (%)	15.2	14.0	16.0	-0.5	1.4	-1.6
At-risk-of-poverty or social exclusion (AROPE), 75+ (%)	37.8	31.1	41.5	-6.4	-4.5	-7.3
At-risk-of-poverty rate (AROP), 75+ (%)	31.2	25.0	34.6	-6.4	-5.1	-7.0
Severe material deprivation (SMD), 75+ (%)	15.3	12.2	17.0	-2.6	-0.6	-3.7
Relative poverty gap, 65+ (%)	24.6	27.7	22.1	-0.4	1.8	-2.9
At-risk-of-poverty rate (AROP), 65+: 50 % threshold (%)	16.2	15.2	16.8	-3.0	-0.9	-4.4
At-risk-of-poverty rate (AROP), 65+: 70 % threshold (%)	35.0	29.7	38.5	-4.2	-3.6	-4.6
				Change 2014-2016		
Material and social deprivation, age 65+ (%)	18.3	16.2	19.7	-6.4	-5.8	-6.7

3. Gender differences

Indicator	2016		Change 2010-2016	
	Total		Total	
Gender gap in pension income (65-79) (%)	23.78		-2.05	
Gender gap in non-coverage rate (W-M in p.p.) (65-79)	-1.5		-1.5	

4. Housing and health situation of older people

Indicator	2016			Change 2010-2016		
	Total	Men	Women	Total	Men	Women
Population 65+ living in overcrowded households (%)	22.1	18.1	24.7	-1.4	-2.3	-0.8
Tenure status among people 65+: share of owners (%)	96.5	96.5	96.4	-0.2	-0.4	-0.1
Housing cost overburden rate, 65+ (%)	8.4	6.0	10.0	-15.1	-13.8	-15.8
Self-reported unmet need for medical care 65+ (%)	4.3	4.1	4.4	-5.5	-2.9	-7.2
Healthy life years at age 65 (years) *		4.7	4.5		-1.9	-2.0

5. Pension duration

Indicator	2016			Projections for 2056		
	Total	Men	Women	Total	Men	Women
Pension payment duration (2012) (years)		18.3	27			
Retirement duration (AWG) (years)		18.4	23.6		21.5	25.1

Data source: (1) (2) (3) (4) Eurostat, Sept-Oct 2017 (5) European Commission

Notes: * - 2015 data; Data for 2010 used for comparisons as data for 2008 – n.a.

6. Theoretical Replacement Rates (TRRs)

TRR case	Net (%)				Gross (%)				
	2016		2056		2016		2056		
	Men	Women	Men	Women	Men	Women	Men	Women	
Average Earnings	Variant: Old base case: 40 years up to 65	56.6	60.2	38.6		40.4	42.9	27.5	
	New Base case: 40 years up to the SPA	56.6		40.2		40.4		28.6	
	Increased SPA: from age 25 to SPA	56.6	51.7	41.8		40.4	36.8	29.8	
	AWG career length case	62.3	52.8	42.0	37.4	44.4	37.7	29.9	26.7
	Longer career: 42 years to SPA			41.8				29.8	
	Shorter career: 38 years to SPA			38.5				27.4	
	Deferred exit : 42 years to SPA +2			43.8				31.2	
	Earlier exit: 38 years to SPA -2			36.0				25.7	
	Career break – unemployment: 3 years			38.7				27.6	
	Career break due to child care: 3 years			40.2				28.6	
	Career break care to family dependent: 3 years			38.9				27.7	
	Short career (20 year career)			20.2				14.4	
	Work 35 y, disabled 5 years prior to SPA			43.6				31.1	
	Early entry in the LM: from age 20 to SPA			44.9				32.0	
	Index: 10 years after retirement @ SPA			38.0				27.1	
	Extended part-time period for childcare			34.2				24.4	
	Pension rights of surviving spouses				33.0				23.5
Low (66%)	Variant: Old Base case: 40 years up to 65	61.3	65.2	48.2		46.7	49.6	36.7	
	New Base case: 40 years up to the SPA	61.3		50.0		46.7		38	
	AWG career length case	67.4	57.2	52.7	46.6	51.4	43.6	40.1	35.5
	Career break – unemployment: 3 years			48.2				36.7	
	Career break due to child care: 3 years			50.5				38.5	
	Short career (20 year career)			24.1				18.4	
High	New Base case: 40 years up to the SPA	45.8		32.4		30.3		21.4	
Average replacement rate across retirees									

7. Sustainability and context

Indicator	2016			Projections for 2056		
	Total	Men	Women	Total	Men	Women
Life expectancy at 65 (years)	17.1	15.2	18.7	22.2	20.5	23.8
Old-age dependency ratio (20-64) (%)	31.7	25.3	38.1	56.9	49.8	64.3
Economic old-age dependency ratio (15-64) (%)	50.1	36.5	66.1	75.6	63.0	89.7
Employment rate, age group 55-64 (%)	38.1	45.1	31.6	52.0	x	x
Pension expenditure as % of GDP (ESSPROS)	9.1					
AWG projections		2016		2055		
<i>(potential) indicator on in-kind LTC benefits</i>		?		?		
Gross public pensions as % of GDP (AWG projections)		YES		YES		
Benefit ratio (%)		YES		YES		
Coverage ratio (% of pop aged 65+)		YES		YES		

Data source: (6) Member State and OECD; (7) European Commission, DG ECFIN

Notes: * - 2015

