Access and sustainability of social protection in a changing world of work

1. Introduction $(^{365})$

In the European Union, economic and social progress are intertwined and complementary. Well-designed social policies enable workers to make the most of new opportunities in the labour market and contribute to economic prosperity. Social protection and inclusion policies provide workers with security and income predictability when moving to a new job or facing life cycle risks. Enabling services allow workers to acquire new skills, remain in good health or stay at work when relatives need care. (366) By contrast, if social policies do not enable Europeans to fulfil their potential at school and in the labour there will eventually be consequences for the sustainability and the adequacy of social protection.

By international standards, European societies have very high levels of social protection and social inclusion. Despite substantial national differences in the organisation and effectiveness of their welfare systems, European countries rank among the most equal and inclusive in the world. (367) The recent proclamation of the European Pillar of Social Rights underlines the shared ambition to uphold and further enhance these high standards in a changing world of work and to improve equality of opportunity.

Many Europeans are concerned about the future, and particularly about the prospects of the younger generations. (368) Many common challenges are linked to societal and demographic change, including population ageing. (369) While increased life expectancy is a great achievement in itself, ageing populations will have a major impact on pension and health care expenditure. This extra cost will be borne by a shrinking workforce. (370) Population ageing will also bring increasing demands for long-term care, while changing family and household structures affect the provision of informal care. Policies to improve work-life balance through care services, leave and flexible work arrangements can foster labour participation.

Technological change and globalisation create new opportunities, but also call for modernising welfare systems and the provision of public goods and services. Technological innovations and global information flows have created employment opportunities that would have been difficult to imagine even two generations ago. At the same time, these developments create new needs, such as access to digital communications. Moreover, welfare systems that are tailored to traditional labour markets (in terms both of coverage and financing) may be suboptimal in a new context of more diverse employment relations and frequent career changes.

⁽³⁶⁵⁾ This chapter was written by Endre György, Jörg Peschner, Simone Rosini and Tim Van Rie. Contributions by Petrica Badea, Annelisa Cotone, Lucie Davoine, Bettina Kromen, Alberto Tumino and Eurofound are gratefully acknowledged.

⁽³⁶⁶⁾ Annual Growth Survey 2018 "Social protection systems should provide adequate and well-targeted income support, foster labour market participation and ensure equal access to quality services."

⁽³⁶⁷⁾ ILO (2017); European Commission (2017a).

^{(&}lt;sup>368</sup>) European Commission (2017b).

^{(&}lt;sup>369</sup>) European Commission and Economic Policy Committee (2018); Social Protection Committee (SPC) and European Commission (2018).

⁽³⁷⁰⁾ Tightening labour supply may be partly offset by automation, see Acemoglu and Restrepo (2018), as well as by migration and – in the longer term - higher fertility rates (European Commission 2017b).

This chapter provides an overview of how social protection systems interact with the changing world of work. First, it discusses access to social protection benefits, in particular for non-standard employees and the self-employed. Secondly, it surveys the role of means-testing, the debate on universal basic income, activation requirements and access to services. The third section assesses recent trends in the financing of social protection, including the roles of social security contributions and of general government contributions, as well as the outlook for social protection financing in a changing world of work. The final section sets out conclusions.

1.1. Social protection expenditure

Social protection helps individuals and families to cope with social risks or needs through income support, cost compensation or social services. It provides support to households and individuals who face unemployment, sickness or injury, disability, old age or the death of a spouse or a relative. Social protection systems also help to meet the cost of housing and address the specific needs of families, particularly those with children. In addition, they seek to prevent the social exclusion of marginalised groups. (371)

Social benefits can be provided by public authorities or private actors such as civil society or charity organisations, trade unions or employers. Social protection includes both schemes where coverage is mandatory and those where it is voluntary, as long as they are based on the principle of social solidarity. Individual arrangements which operate solely in the interest of the insurance taker (such as private life insurance) are not considered as social protection. Direct exchanges, such as care facilities run by employers and only accessible to children of their employees, are not included in social protection either. Nor is the share of health care costs that recipients pay out of their own pockets considered as social protection (as opposed to the part covered by social insurance). (372)

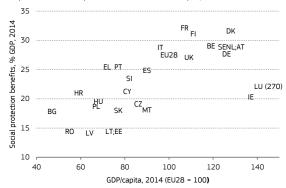
The social protection systems of EU Member States are very diverse, in line with their different traditions. They differ with regard to "the size of the budget and the way it is allocated, the sources of financing, the degree of coverage of risks in the population." (373) Whereas certain social protection systems focus on protecting the general population, others provide insurance to workers or target the neediest. Many features of national systems can be traced to specific historical circumstances and political

(371) Education and training are not included in this concept, unless they are directly linked to any of the aforementioned risks (e.g. training for the unemployed). preferences, including the organisation of public finances. $(^{374})$

The total size of the social protection budget differs across countries. In general, countries with higher levels of GDP per capita tend to spend a larger share of GDP on social protection (*Chart 5.1*). However, a substantial variation remains even within low- and high-spending groups. (³⁷⁵)

Chart 5.1
The overall budget for social protection benefits varies across Member States

Expenditure on social protection benefits and GDP/capita, 2014



Note: GDP per capita in Purchasing Power Standards; Expenditure on social protection benefits as % of GDP

Source: Eurostat: National accounts for GDP per capita [tec00114]; ESSPROS for social expenditure [spr_exp_gdp] Click here to download chart.

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There is also a large variation in the relative size of specific social protection functions across countries. Old-age and survivors' pensions tend to be the largest spending item, followed by sickness, health care and disability (except for Ireland, Croatia and Germany where sickness, health care and disability are larger). There is a substantial variation in the relative proportions of expenditure devoted to unemployment, children/family benefits, housing and social exclusion (Chart 5.2). To some extent, these differences are the result of policy choices, but they also reflect different population and risk profiles across countries, including cyclical conditions for risks such as unemployment.

The relative weight of cash transfers — as opposed to benefits in kind — varies across countries as well as between different functions. Benefits in kind are provided either in the form of goods and services, or reimbursement of expenses (where the beneficiary needs to provide proof of

⁽³⁷²⁾ For additional information, see Eurostat (2016).

⁽³⁷³⁾ From European Commission (2017a).

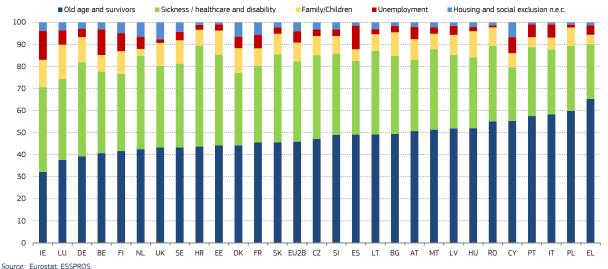
^{(&}lt;sup>374</sup>) Preamble 19 of the European Pillar of Social Rights states "In particular, the establishment of the European Pillar of Social Rights does not affect the right of Member States to define the fundamental principles of their social security systems and manage their public finances, and must not significantly affect the financial equilibrium thereof."

⁽³⁷⁵⁾ Ireland and Luxembourg are notable outliers. This is at least partly due to the specificity of GDP measurement in these countries. In Luxembourg, many cross-border workers contribute to the economic output of the country. For Ireland, the effects of globalisation and relocation of multinational companies may distort measurement of aggregate domestic economic activity (see Box 1.1. in Country Report 2018, SWD(2018) 206 final).

Chart 5.2

Depending on the country, old age and survivors' pensions represent one to two thirds of social protection expenditure

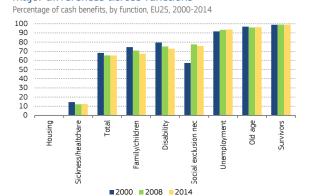
Expenditure on social protection benefits by function, 2014



Click here to download chart.

payment to qualify for the benefit). Cash benefits are provided mainly as a periodic payment, (³⁷⁶) in many cases as income replacement to compensate for a loss of labour market earnings.

Chart 5.3
Two thirds of social expenditure is on cash benefits, with major differences across functions



Note: The complement of the cash benefits are in-kind benefits. Source: Eurostat, ESSPROS.

Click here to download chart.

Over the past 15 years, several Member States have seen a relative increase in expenditure on in-kind benefits as compared with cash transfers. These include several 'Continental' Western European countries (Germany, the Netherlands, Belgium, Austria), as well as Sweden. On the other hand, the proportion of spending on cash benefits increased in Ireland, Greece and Portugal mainly due to spending on old age pensions. At EU level, there has been a slight trend towards more expenditure on in-kind (care) benefits within functions related to family, children and disability (*Chart 5.3*).

For people with disabilities, expenditure on cash benefits is much greater than expenditure on rehabilitation, which is however key to integration into the labour market and retaining employment positions. In 2014 expenditure on cash benefits (EU average) was EUR 380 per inhabitant and EUR 206.4 billion in total. By comparison, expenditure on rehabilitation (EU average) was only EUR 34 per inhabitant and EUR 18.6 billion in total. Differences among Member States are very large in this respect.

1.2. Social protection in a changing world of work

1.2.1. Changing social risks and opportunities

Social protection benefits are conditional on the occurrence of specific risks or events, the incidence of which may change in the new world of work.

Labour market changes have the largest impact on social protection functions that compensate for loss of earnings. This applies notably to income replacement benefits for the inability to work as a result of sickness or disability, old age or unemployment. Jointly, social contributions (paid in good times) and social benefits (received in bad times) help to smooth and redistribute workers' income over the life course. Many social protection systems were designed on the assumption of stable contractual employment. Changes in the labour market which make workers' careers less predictable (with more frequent breaks and changes of job and occupation) and incomes more volatile pose significant challenges to social protection systems.

If workers are displaced as a result of technological innovation and structural change, this creates additional demands for social protection (see Chapter 2). Such developments may lead to a higher risk of temporary or long-term

⁽³⁷⁶⁾ While cash benefits may also include lump sum payments paid on a single occasion, these typically represent less than 10% of cash benefits and tend to be concentrated in specific programmes such as maternity benefits, redundancy payments or small pensions.

unemployment, with an additional demand for income replacement benefits and active labour market policies, including re-training and job search assistance.

Certain forms of non-standard employment blur the boundaries between being in and out of work. An employee who is working part-time but who would prefer to have a full-time job could be considered as partially unemployed. In certain Member States, such workers are already subject to specific regimes within unemployment insurance. Newer forms of work, for example very short term assignments that are mediated by on-line platforms, could raise further questions about the provider's employment status. Such developments may also require adjustments to social protection rules in certain Member States.

Changes in the world of work bring new opportunities as well. Voluntary part-time work may enable families to achieve a better balance between their professional and private lives, in some cases complemented by child care services. The age at which workers are deemed 'too old' to work may be redefined by changing working conditions as a result of technological improvements and shorter working hours. In many countries, an increase in retirement ages is not only desirable but even imperative because of delayed entry to the labour market and increased longevity. At the same time, increases in overall longevity are not always fully matched by gains in healthy life years, (377) while occupational health and safety hazards and chronic diseases still affect a substantial proportion of the population. A key challenge is to design disability benefits which promote active participation, social inclusion and social protection. The design of disability benefits can lead to benefit traps reducing the motivation to seek work, for example when benefits are withdrawn immediately and entirely after (re-) entering employment.

Where work is less physically demanding longer careers may be more feasible. In several Member States where income from old age pensions and from work were traditionally mutually exclusive, there are possibilities for complementing old age pensions with a limited amount of labour market earnings. Recent reforms across Europe have increased the pension age and at the same time introduced partial early pension schemes. These are established at the sectoral level, i.e. in the form of collective agreements covering specific sectors, as well as at the national level. (378) Germany and Finland have recently enacted reforms in respect of such 'flexible' pensions. (379)

For a number of social protection benefits, changes in the labour market have no impact or only an indirect one. In several Member States,

families with a new-born baby may receive a birth grant. However, neither costs linked to childbirth nor the relevant benefits are directly affected by changes in employment status. Broadly the same applies to social protection schemes that provide support for housing, (380) in case of bereavement, (381) for sickness and severe disability at birth or when young.

Poverty and social exclusion which are not directly or exclusively linked to any of the aforementioned labour market risks may be addressed by last resort safety nets. These programmes, including minimum income schemes, (382) may signal needs or challenges that are not (or insufficiently) covered by other schemes. This includes situations where social protection systems are not well enough adapted to the changing world of work. In many instances, such last resort safety nets are conditional upon a means test.

1.2.2. Diverse employment relations

Increasingly diverse employment relations pose challenges to welfare systems that were designed to protect workers in 'standard' employment. Where new forms of employment emerge, this can create an (at least temporary) uncertainty as to where a form of work should be classified in existing social protection systems. The emergence of online platforms, for example, has raised questions about the social protection rights of the platform workers, as well as about the respective obligations of these workers, their clients and the platform.

Non-standard work is highly diverse and social protection for employment according to status. characteristics of the standard employment relationship include a bilateral relationship between worker and employer (rather than third parties), personal subordination of the employee (working under the authority of the employer), and economic dependency (pay from employment being the main or single source of income), involving an open-ended cooperation, working full-time, (383) with corresponding social security contributions being paid by the employer and employee. Where forms of work deviate from this standard, they generally receive less protection from social security. Across Member States, specific groups of workers are systematically at a disadvantage as regards social protection, whereas

⁽³⁷⁷⁾ European Commission (2017a).

⁽³⁷⁸⁾ Eurofound (2016)

⁽³⁷⁹⁾ Social Protection Committee (SPC) and European Commission (2018)

^{(&}lt;sup>380</sup>) Unless new forms of work reduce demands for physical presence, thus reducing the need to live in expensive urban centres.

^{(&}lt;sup>381</sup>) Spasova et al. (2017).

⁽³⁸²⁾ Principle 14 of the European Pillar of Social Rights on Minimum income states: "Everyone lacking sufficient resources has the right to adequate minimum income benefits ensuring a life in dignity at all stages of life, and effective access to enabling goods and services. For those who can work, minimum income benefits should be combined with incentives to (re)integrate into the labour market."

⁽³⁸³⁾ Schoukens and Barrio (2017).

Box 5.1: Social protection and new forms of employment

Several important developments in the field of social protection refer to new forms of employment. Member States have not always been able to ensure a comparable level of social protection for different categories of workers. Eurofound (2015a) identified nine new forms of employment in European labour markets, classifying them according to their implications for labour market performance, working conditions and social protection. (1)

Certain innovative forms of employment combine a high level of flexibility with social protection coverage. *Employee sharing* is a practice where several employers jointly hire an employee full-time on an openended contract. The worker has social protection coverage which is similar to that of standard workers. Alternatively, several *job-sharing* workers may combine their working hours to perform a (full-time) job for a single employer. These workers are entitled to a level of social protection similar to that of part-time employees. *Voucher-based workers* provide their services to users in return for a document purchased from a third party, usually a public authority. The worker exchanges the voucher for a payment and remuneration may include social security contributions.

Several new forms of employment have a neutral or diffuse impact on workers' social protection. *ICT-based mobile workers* use information technology to work from different locations. Their employment conditions and social protection coverage rely largely on the specific agreement concluded with their employer. *Interim managers* tend to have high wages and good working conditions to compensate for the insecurity of their jobs.

Where work flows are unstable, or no employer is identified, gaps in social protection are more likely to occur. Casual workers can be called in on demand by their employer, who is not obliged to provide a regular workflow. Their social protection coverage is often piecemeal and for a limited amount of time (though national exceptions apply, for example in Belgium or Slovakia). Portfolio workers provide their services to a large number of clients. In many cases, there is no employer contributing to their social protection. The same applies to crowd workers who are active on on-line platforms. Typically, neither the client nor the intermediary platform contributes to workers' social protection. Collaborative employment is a form of collaboration among freelancers, the self-employed and/or micro enterprises who jointly organise to overcome limitations of scale. While these workers are usually considered self-employed, in some countries, such as France, umbrella organisations may take on an active role in their social protection.

other novel forms of employment have fewer implications for the social protection of workers (*Box 5.1*).

As individual workers change and also combine jobs more frequently, transferability of social protection rights becomes more **important.** (384) (385) This may arise, for example, in relation to the pension entitlements of someone who has worked as an employee but who then becomes self-employed. It may also affect the rights of workers changing to different sectors. Portability of social protection entitlements is essential if modern welfare systems are to support dynamic labour markets and job transitions, in the spirit of the European Pillar of Social Rights. Specific social security coordination rules apply to mobility across borders within Europe (Box 5.2).

⁽¹⁾ Although not explicit in the publication, according to the Eurofound website the definition of social protection is: "Social protection provisions are key instruments for reducing social risks, combating poverty and promoting greater social cohesion. They are also contributing factors to a person's quality of life."

⁽³⁸⁴⁾ Annual Growth Survey 2018: "Social protection systems should adapt to new ways of working and ensure that entitlements are portable from one job to the next, make it easier to cumulate contributions from multiple jobs, and secure transitions between jobs."

⁽³⁸⁵⁾ The European Pillar of Social Rights, Principle 4 "Active support to employment', states that "Everyone has the right to transfer social protection and training entitlements during professional transitions."

Box 5.2: EU social security coordination

Free movement in the EU could not take place without the guarantee that people will not lose their social security protection when moving to another Member State. When a person travels or moves to another Member State (whether for a holiday, study, temporary work or to settle permanently), there is a need to create bridges between national systems so as to guarantee uninterrupted cover.

The EU provides common rules to protect social security rights when moving within Europe (EU 28, Iceland, Liechtenstein, Norway and Switzerland). These rules do not replace national systems with a single European one. They are about coordination, not harmonisation. All countries are free to decide who is to be insured under their legislation, which benefits are granted and under what conditions.

The EU Treaty requires the EU to adopt measures in the field of social security as are necessary to provide free movement of workers (article 48 of the Treaty on the Functioning of the European Union). Consequently, EU social security coordination was put in place at the start of the European Economic Community as early as 1958 and has been modernised in subsequent years. The current version of the rules has been in force since 2010 (with Regulations (EC) 883/2004 and 987/2009).

The essence of social security coordination at EU level is 'linking' a person to a social security system of a Member State. This link determines where he or she needs to pay social security contributions and claim social security benefits if needed. It also ensures that previous periods of insurance, work or residence in other countries are taken into account when a person claims benefits.

The main principles are:

- One country only: a person is covered by the social security system of one Member State at a time so that he/she
 only pays contributions in one country. The person is entitled to benefits, if any, in the country where he/she pays
 contributions;
- Equal treatment or non-discrimination: a person moving to another EU Member State has the same rights and obligations as the nationals of the country where he/she is insured;
- Aggregation: when claiming a benefit, previous periods of insurance, work or residence in other countries are taken into account if necessary (for example to demonstrate that the person satisfies a minimum period of insurance required under national law in order to be entitled to benefits);
- Exportability: if a person is entitled to receive a benefit in cash from one Member State, he/she may generally receive it even if he/she is living in a different Member State.

The rules cover the whole range of social security benefits: sickness benefits; maternity and equivalent paternity benefits; old-age pensions; pre-retirement and invalidity benefits; survivors' benefits and death grants; unemployment benefits; family benefits; and benefits related to work accidents and occupational diseases.

In December 2016, the Commission proposed targeted adjustments to these rules to ensure that they remain fair and clear and are easier to enforce. This proposal is a key element of this Commission's agenda for fair labour mobility.

2. Access to social protection

2.1. What gaps in coverage are there for non-standard workers and the self-employed?

Access to social protection depends on the formal coverage, effective coverage and transferability of social protection schemes. In order to be covered by a given scheme, someone must be formally entitled to participate in that scheme, if not mandatorily, then at least voluntarily. In order to accrue and access benefits, that person must meet the scheme's conditions relating to contributions or entitlements. And if that person is not to lose accrued benefit entitlements when changing jobs, scheme rules must allow existing entitlements to be preserved and transferred.

Non-standard and self-employed workers may have certain disadvantages in gaining access to social security cash benefits. These include unemployment benefits, sickness benefits, maternity and paternity benefits, invalidity benefits, old-age benefits and benefits in respect of accidents at work and occupational diseases. (386) In line with the principle on social protection in the European Pillar of Social Rights, (387) the Commission proposal for a Council Recommendation on access to social protection for workers and the self-employed (388) aims to secure such access across groups, social security branches and Member States. This section builds on the analytical work underpinning that proposal.

^{(&}lt;sup>386</sup>) Note that this section mainly considers access to cash benefits, which are mostly income replacement benefits. For access to benefits in kind, such as health care, see section 2.6.

^{(&}lt;sup>387</sup>) "Regardless of the type and duration of their employment relationship, workers, and under comparable conditions, the self-employed, have the right to adequate social protection."

⁽³⁸⁸⁾ COM(2018) 132 final.

2.1.1. Gaps in formal coverage

Individuals without formal coverage are neither covered on a mandatory basis, nor can they join corresponding schemes on a voluntary basis. A group can be identified as formally covered by a specific social security provision (e.g. old age pension, unemployment protection, maternity protection) if the existing legislation or collective agreement specifies that this group is entitled to participate in the scheme.

In certain Member States, specific categories of non-standard workers are not formally covered for certain risks. Formal social security coverage is usually the same for employees in non-standard employment and those in standard employment. There are exceptions, however: most notably, casual and seasonal workers, apprentices or trainees, on-demand workers and those on temporary agency contracts, as well as people working on certain contracts defined at the national level. Such coverage gaps are widespread geographically (*Table 5.1*).

The situation regarding formal coverage tends to be critical for the self-employed. There are fundamental gaps in the formal coverage of three core elements of social protection (unemployment, sickness, accident and occupational injuries), where the self-employed as a group are excluded from membership in some Member States, in the sense that they cannot join the scheme. In particular, self-employed workers in general - or certain categories of them - do not have any formal access to unemployment benefits in eleven Member States (*Table 5.2*).

In some countries there are voluntary social security schemes. These may be supplementary to the existing mandatory schemes or may apply only to categories of workers who are not mandatorily covered by the main schemes. Such voluntary schemes are generally more common for self-employed workers than for non-standard employees. (389) For Member States with voluntary schemes for all self-employed workers or for some sub-groups, there is generally a low rate of enrolment, varying from less than 1% to below 20%.

2.1.2. Gaps in effective coverage and lack of transferability

Even when non-standard workers and the selfemployed have formal coverage, they may experience gaps in effective coverage. In such cases, they are prevented from accruing and taking up adequate entitlements. This may be because specific, less favourable rules apply to them, or because uniform eligibility criteria are more difficult to meet for people outside standard employment. For instance, given that temporary employees move more

(389) For a detailed overview, see the impact assessment accompanying the Proposal for a Council Recommendation on access to social protection for workers and the self-employed, SWD(2018) 70 final. frequently into unemployment than standard employees, (390) it can be more difficult for them to accumulate a given qualifying period. Similarly, the methods for calculating the income base or the reference income may be unfavourable to the self-employed where they assume long previous periods of earnings, or where they do not take account of the volatility of self-employment incomes.

The criteria most frequently associated with gaps in effective coverage for non-standard workers and the self-employed are:

- Long waiting periods i.e. a particularly long period of time between the occurrence of the risk and the receipt of the benefit;
- Minimum qualifying periods i.e. the minimum period for which people have to contribute to a scheme before they can start to receive benefits;
- Duration of benefits i.e. the length of time during which the individual receives the benefit, which may differ from that of standard workers;
- Minimum working periods i.e. if someone is required to have worked a minimum of hours/months/years in order to be eligible to receive the benefit in case of need. This criterion is stricter than a minimum qualifying period, since a person can, for instance, be unemployed, but still have the possibility of contributing to the system, whereas a requirement for a minimum working period means that someone who is not in (self-) employment is ineligible for the benefit.

Transferability of rights refers to the possibility of either transferring accumulated entitlements to another scheme following a change of employment, occupation or sector, (³⁹¹) or allowing previous work history to count towards the minimum period required in the new employment status. Contribution histories are particularly important for the adequacy of benefits because, for instance, the time profile of benefit levels in unemployment insurance may depend on the contribution history.

⁽³⁹⁰⁾ European Commission (2017b).

^{(&}lt;sup>391</sup>) This implies that entitlements can only be transferred when the individual has formal coverage (and chooses to be enrolled in the case of voluntary coverage) before and after the transition.

Table 5.1 Specific groups of non-standard workers cannot access the social security schemes of certain Member States Lack of formal social security coverage for non-standard workers

	Casual workers	Seasonal workers	National specificities	Freelance	Apprentices	Trainees	Vocational trainees
Unemployment benefits	RO, HU, MT, LT	BG, RO, LV, HU, MT, LT	AT ^a , CZ ^b , DE ^c , PL ^d , SK ^e		BE, EL, HR, MT, NL, PL	EL, FR, IT, LT, MT, NL, PL, RO	
Sickness benefit	HU, LT, LV, RO	HU, LT, LV, RO	CZ ^b , SI ^d		BE, HU, NL, PL	DK, FR, HU, LT, NL, PL	DK, EL, FR, HU, PL
Maternity benefit	LT, RO	BG, LT, LV, RO	CZ ^b , PL ^d , Uk ^h	BG, FR	BE, MT	FR, HU, IT, LT	EL, FR, HU, IT
Accident and occupational injuries	RO, HR, LT	BG, LT, LV, RO	CZ ^b , ES ^f				
Old age/survivors' pensions	MT, LT	BG, HU, RO, LT	CZ ^b , HU ^g , LU ^g , MT ^h , PL ^d		BE, HR, MT	EL, FR, HU, IT, LT, MT	
Invalidity	HU, LT	HU, LT	AT ^a , PL ^d				

The table reports in which branches and in which Member States non-standard workers are excluded from formal coverage in the sense that they have no mandatory coverage and cannot opt -into voluntary schemes.

National specificities: a) Marginal part-timers; b) Agreement to perform a job; c) Mini-jobbers; d) civil law contracts; e) employees on "work agreement" with irregular income; f)

domestic workers; g) on- call jobs; h) temporary agency work

Source: Impact assessment accompanying the Proposal for a Council Recommendation on access to social protection for workers and the self-employed SWD(2018)70 final Click here to download table

Table 5.2 In several Member States, self-employed workers cannot gain access to social security schemes Lack of formal social security coverage for the self-employed

Unemployment benefits	BE ^a , BG, CY, DE, FR, IE, IT, LV, MT ^b , NL, UK ^b	
Sickness benefits	EL ^a , IE ^b , IT ^a	
Accident and occupational injuries	BE, BG, CY, CZ, IE, LT, LV, NL, SK, UK	

Note: The table reports in which branches and in which Member States at least one sub-group of the self-employed is excluded from formal coverage in the sense that they have no mandatory coverage and cannot opt -into voluntary schemes.
a) Only one or more sub-groups of the self-employed are not formally covered. b) In these Member States only means-tested benefits are available to the selfemployed while they are excluded from contributory schemes.

Source: Impact assessment accompanying the Proposal for a Council Recommendation on access to social protection for workers and the self-employed, SWD(2018)70 final

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A lack of transferability can hinder the build-up of adequate entitlements over the course of a career. This may mean lower old age pensions for workers who have made frequent job changes, for example as a result of administration costs. Gaps in transferability may discourage individuals from moving, for example between employment and selfemployment when these two statuses are covered by different schemes. Obstacles to transferability can arise from a lack of regulation in this area, from extremely high administrative costs, or from different rules governing different schemes which prevent people from transferring accumulated rights.

2.1.3. Transparency of entitlements

have also been identified in information provided for the general public on social protection scheme rules, obligations and entitlements. Transparency of information is increasingly important because of the growing number of changes between different types of employment status, contract forms and social security schemes. Guidance available on scheme websites, or through simulation tools providing personalised information, may be incomplete or lack transparency.

A lack of simple and transparent information reduces people's awareness of their rights and obligations to social security and prevents them from taking informed decisions. A significant proportion of self-employed and non-standard workers is unaware of their social security coverage (up to 20% for some categories) - much higher than in standard employment. Although generic information about social security schemes is provided in most Member States, for instance via dedicated websites, this information may not always be available broken down by employment status or contract. Personalised information for at least one scheme is available only in about half of Member States. This is true of both an overview of individual rights and obligations and of obtaining information through online simulation tools.

2.2. Behavioural effects

The discussion above explained the disadvantages experienced by non-standard workers and the selfemployed with respect to social security coverage. For a more complete picture, it is important to review the challenges of establishing social protection systems that allow for the specificities of various forms of work.

First, fair systems rely on the verification of both the correct level of contribution payments and the occurrence of the risks they are designed to protect against. Assessing the income base for social contributions is more difficult for selfemployed people than for standard employees. As the personal income of the self-employed cannot be easily disentangled from earnings intended for retention to finance their business activity, they may legitimately use their discretion in setting their contribution base. This opens the door to unwarranted under-reporting of income. Moreover, verifying the unemployment status of the self-employed is particularly difficult, given the volatility of work volumes and the absence of an employer (see below).

Second, social security systems can only function if the risks of the insured are pooled and balanced. Arrangements that create particularly strong incentives for riskier clients to enter a social security system could challenge its financial sustainability. Careful design choices, including subsidies, are therefore needed to ensure the viability of schemes with voluntary participation. The individualisation of schemes would disbursements and the contributions paid by individuals. arguably increasing incentives to contribute/save. However, such schemes would not pool risks, would be incompatible with insurance against risks such as disability, and would fail to achieve the redistributive objectives of social security.

Third, the limited contributory capacity of workers and the self-employed is a constraint. Many non-standard and self-employed workers (especially those without employees) are low-paid. Equal social security treatment would require payments equivalent to the sum of the employees' and employers' contributions for standard workers. Many of the self-employed simply could not afford the resulting contribution burden. Government subsidies could be a remedy, but at the risk of adverse selection (mainly lower earners attracted to participate) or of income being reported only at the minimum level required for qualifying. (392) Employers might also have a stronger incentive to encourage bogus self-employment.

Finally, where workers have a large degree of choice over social protection, they may underestimate future risks or needs. The career paths of non-standard workers are less predictable than those of standard workers, with more frequent unemployment spells and re-training needs. It is therefore arguably fair to give non-standard workers with accrued entitlements greater control over the timing and purpose of benefit withdrawals. They could then spend the funds on other job-related benefits, for example professional training or early retirement. However, this could lead to entitlements being used up too early, resulting in inadequate benefits in later years, or even endanger the financial health of the funds. The challenge would be how to introduce mechanisms to mitigate such weaknesses, without making the system too complex.

2.3. How many workers are covered by social insurance?

Estimating the social protection coverage of workers requires detailed information on their employment status and history and this needs to be combined with policy rules. (393) For some policy rules (notably where

(³⁹²) See the example of German Social Insurance for Artists in OECD (2018).

a system is voluntary and requires opting into), large scale surveys may not provide the required information. This warrants some caution in interpreting and comparing research results, particularly when they are based on different assumptions (see Annex 1). However, several robust findings emerge.

A sizeable proportion of workers in the EU is at risk of not being entitled to unemployment benefits. According to Matsaganis et al. (2015), in the EU more than one worker in seven (12.9%) was at risk in 2014 (Table 5.3). The lack of coverage is concentrated among family workers and self-employed people, who either lack formal coverage or are assumed not to opt into voluntary systems. Employees on short-term contracts or working part-time are also relatively exposed. For most countries, the number of workers at risk of not being covered increases further if account is taken of the short work history of certain workers with open-ended contracts and if stricter assumptions are made about self-employed people not opting into voluntary systems.

A substantial proportion of workers is at risk of not being entitled to sickness benefits and maternity benefits. EU-wide in 2014, this affected more than 7% of the relevant workers: in some Member States it affected 15% or more (*Table 5.3*). The risk of not being entitled to different social protection benefits varies across countries, as well as across social protection schemes. Member States that have a high level of coverage for one risk do not necessarily achieve this for other risks. However, it is common to find that the self-employed and non-standard employees are less likely to be covered. Even where workers are covered, the impact and strength of such coverage (in terms of benefit levels) vary among Member States.

The risk of not being covered by unemployment or sickness benefits tends to be higher for working men than for working women. The risk of poor social protection coverage is particularly concentrated among the self-employed – of whom many are men. Persons working in a family-owned business or farm without pay – a group with low coverage – are mostly women. The self-employed constitute a relatively small proportion of female employment.

Part-time workers tend to be covered to the same extent as full-time workers, although in some Member States, part-time workers receive lower amounts of social benefits. However, unemployment and sickness benefits may not be available for women re-entering the labour market after a career interruption as they may fail to fulfil the eligibility conditions for benefits, despite having an open-ended contract.

⁽³⁹³⁾ Note the distinction between workers' coverage rates and the coverage rates of the unemployed. Workers' coverage rates simulate how many workers would receive a benefit if they became unemployed. Coverage rates of the unemployed

measure how many of those who are unemployed receive a benefit (for example among short-term unemployed, see Joint Employment Report 2018).

Table 5.3
Substantial proportions of workers are at risk of not being entitled to social protection benefits, with large differences between countries.

Risk of not being entitled to social protection benefits among workers, by type of benefit and Member State, 2014

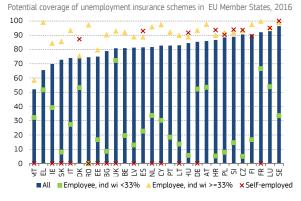
	Maternity	Sickness	Unemployment
LU	6.9	1.5	2.5
EE	0.2	0.5	3.2
IE	6.9	5.5	4.1
CZ	11.9	14.2	4.9
UK	8.3	0.2	5.0
LT	15.5	9.8	5.0
HR	11.4	6.4	6.4
HU	11.2	0.3	7.1
SK	3.9	0.1	7.4
SE	7.4	0.1	8.1
DE	2.6	3.5	9.5
AT	0.9	3.7	9.8
FI	1.3	0.3	9.9
SI	12.6	4.5	10.1
PT	3.0	13.2	11.0
ES	7.4	6.4	12.4
PL	13.2	17.1	12.7
EU	7.6	7.7	12.9
LV	0.5	0.7	13.2
FR	4.1	3.3	13.8
BG	9.3	9.4	15.1
MT	3.8	2.6	15.4
DK	11.5	6.9	15.4
CY	2.9	3.0	17.2
NL	0.7	12.7	17.9
BE	9.3	2.8	18.4
IT	15.0	23.7	24.6
RO	15.1	11.2	28.7
EL	9.2	19.7	35.8

Note: Maternity: female workers aged 15-49; Sickness and unemployment: workers aged 15-64. Countries ranked according to risk of unemployment.

Source: Matsaganis et al (2015).

Click here to download table

Chart 5.4
Employees with low work intensity and the selfemployed have lower coverage by unemployment insurance



Note: Potential coverage measures the proportion of workers who would be covered by unemployment insurance schemes if unemployed, based on their previous work history (months of work over the last year). There is no coverage rate for the selfemployed in AT, BE, PT and EL due to specific rules that cannot be simulated. 'Ind wi' refers to individual work intensity.

Source: Jara Tamayo and Tumino (2018), based on EUROMOD H1.0+, input data EU-SILC 2016, except Germany (EU-SILC 2014) and UK (FRS 2014/15). Policy rules 30 June 2017.

Click here to download chart

Across Europe women tend to have lower pension entitlements in terms both of access to benefits and pension levels. (394) The gap in access

to pensions is particularly pronounced for occupational pensions (based on professional activity) where men are more likely to be covered by second pillar pension systems than women. Even if the gender gaps for public pensions are typically lower than for occupational pensions, these gaps can be sizeable in certain Member States. At the age of 65 to 79, women in the EU28 have pensions that are on average 40% lower than those of men. This gap ranges from 0% in Estonia to 52% in Spain. (395)

In general, gender pension gaps reflect gender differences in the labour market. Lifetime earnings and duration of working life tend to be lower for women. These differences interact with entitlement conditions, particularly where public pensions are insurance-based and entitlements are conditional upon a contribution record.

2.4. The role of means-testing

Means-tested social benefits are social benefits that are conditional on the beneficiary's income and/or wealth falling below a specified level. (396)

The main rationale for means-testing is that it enables resources to be targeted on the most needy groups. In a context of public finance constraints (and with ageing populations), directing scarce resources to the most vulnerable groups can be considered an efficient social policy intervention. (397) Moreover, the beneficiaries of means-tested benefits may include 'outsiders' who do not qualify for benefits based on other criteria. This may include non-standard workers who do not qualify for contributory benefits or whose entitlements based on contributions are very limited.

However, means-tested benefits also have drawbacks. (398) Thev require substantial administrative efforts to establish the level of income or wealth. Moreover, a substantial proportion of those who fulfil the conditions do not claim means-tested benefits. (399) Even though this 'non-take-up' is not restricted to such benefits, (400) it is more common in their case than in others. Means-testing adds complexity to claiming procedures (particularly for vulnerable populations). The receipt of such benefits can be considered stigmatising. (401) Also, means tests

⁽³⁹⁴⁾ The European Pillar of Social Rights, Principle 15 'Old age income and pensions' states that "Women and men shall have equal opportunities to acquire pension rights."

^{(&}lt;sup>395</sup>) Social Protection Committee (SPC) and European Commission (2018).

⁽³⁹⁶⁾ Eurostat (2016).

⁽³⁹⁷⁾ Korpi and Palme (1998) stated "the more we target benefits at the poor, the less likely we are to reduce poverty and inequality", due to limited public support and lower overall welfare spending. Recent studies, however, (Marx et al., 2013) no longer find empirical grounds for this statement, as outcomes of universal versus targeted benefits are contingent on many other policy parameters, including activation requirements.

^{(&}lt;sup>398</sup>) Van Oorschot (2002).

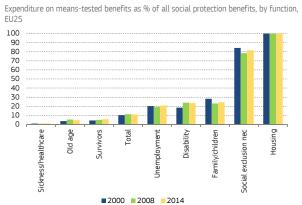
^{(&}lt;sup>399</sup>) Matsaganis et al (2008).

⁽⁴⁰⁰⁾ Eurofound (2015b).

⁽⁴⁰¹⁾ Atkinson (2015).

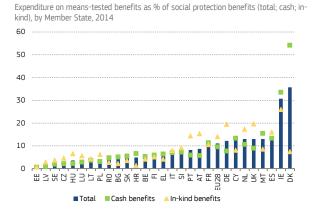
can create benefit traps in cases where an increase in income from other sources (for example work) makes the beneficiary's household ineligible for the meanstested benefit. (402)

Chart 5.5
Most housing and social exclusion benefits are meanstested, whereas very few sickness benefits, old age and survivor benefits are



Source: Eurostat, ESSPROS Click here to download chart.

Chart 5.6
Means-tested social benefits represent 11% of overall
EU expenditure, with large variation across Member
States



Source: Eurostat, ESSPROS [spr_exp_fto] Click here to download chart.

The proportion of means-tested benefits in social expenditure varies across functions and across Member States. Means-tested expenditure typically constitutes a small proportion of expenditure on sickness and health care, as well as on old age and survivor benefits. By contrast, means tests are very common for social exclusion benefits, and housing benefits are generally conditional on low income or wealth. Means-testing has gained ground in disability, while it has become relatively less common in child/family benefits (*Chart 5.5*). EU-wide, meanstested benefits accounted for approximately 11% of social expenditure in 2014. At Member State level, the proportion varies from less than 3% in Estonia, Latvia,

Sweden and the Czech Republic to more than 30% in Ireland and Denmark (*Chart 5.6*).

2.5. Activation requirements

Certain income replacement benefits are conditional upon the recipients' availability for work and job search. Such requirements in many cases complement other criteria regarding prior work history or contribution record (for insurance benefits) or criteria regarding financial resources (for meanstested benefits). Unemployment benefits may be made conditional on job-search requirements, including frequency of job search reporting, as well as documentation of job search. (403) Availability requirements for the unemployed include conditions regarding their availability for work or participation in active labour market policies. 'Suitability requirements' specify the occupational or geographical mobility that can be expected from job searchers, along with the definition of valid reasons for refusing job offers. Sanctions may apply for 'voluntary' unemployment, related to the refusal of job offers, or participation in active labour market policies or cooperation with public employment services.

Several Member States have defined stricter criteria in recent years. For unemployment benefits, no country relaxed its requirements in the period 2011-2014 (the years of the two available OECD surveys on the topic covering all Member States but Cyprus) while 6 countries made them more strict (Belgium, Croatia, Greece, Latvia, Malta and the UK). Longer-term data from a smaller set of countries likewise point towards a trend of increased strictness in eligibility criteria. (404) While it is more difficult to assess the effects of entitlement and eligibility criteria on non-standard workers, flexible labour and mini-jobs are likely to lead to partial exclusion. (405)

2.6. How accessible and affordable are public services?

Enabling social services such as child care, health care or long-term care can play an important role in the changing world of work. Wide provision of quality childcare services (406) is associated with higher rates of female participation in the labour market. Older workers are also more likely to extend their careers if they do not need to take care of young or elderly relatives and if they are in good health. (407)

⁽⁴⁰²⁾ Note that such a trap is in many ways similar to other incentive 'traps' linked to tax benefit systems, such as inactivity traps, low wage traps and unemployment traps.

⁽⁴⁰³⁾ Langenbucher (2015).

⁽⁴⁰⁴⁾ Venn (2012).

⁽⁴⁰⁵⁾ Schoukens (2018).

⁽⁴⁰⁶⁾ The European Pillar of Social Rights, Principle 11 'Childcare and support to children' states that "Children have the right to affordable early childhood education and care of good quality."

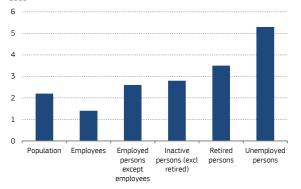
⁽⁴⁰⁷⁾ European Commission (2015a), chapter III.2 The efficiency and effectiveness of social protection systems over the life course.

Access to such enabling services may be limited for specific groups of workers, depending on national systems. Whereas several Member States grant access to health care based on residence status (i.e. not linked to labour market status), others link access to being in gainful employment. In several Member States, specific groups of workers (such as seasonal and casual workers or workers on civil law contracts) are not mandatorily covered by health care. (408) In addition, the cost of premiums or contributions may lead to effective coverage gaps, particularly for low income groups. Access to health care is not only a matter of eligibility, but is also determined by the scope of coverage (the extent of services included in the benefit package) and its depth (the share of the health care cost covered). Along with limited availability of health care (waiting lists or travel), this may lead to unmet needs for health care. Among workers, those who do not have the status of employee (mainly self-employed) tend to report higher rates of unmet need for health care compared to employees (Chart 5.7).

There are large differences across Member States as regards the perceived quality of public services, with some recent improvements. Quality ratings of public services differ depending on their nature. Across EU countries, citizens' quality ratings of services tend to be highest for health care, then education, public transport, child care and long-term care, and lowest for social housing. All in all, the highest average quality ratings across services can be found in Luxembourg, Austria, Malta, Finland and Denmark. The lowest overall quality ratings of public services are recorded in Cyprus, Latvia, Italy, Slovakia, Bulgaria and Greece. Overall the quality rating of public services in the EU improved over the period 2007-2016, particularly in some Member States that previously had lower levels of satisfaction. This is not the case, however, for several Member States, including Cyprus and Greece. (409)

Chart 5.7 Across the EU, employees are the least likely to have unmet needs for health care, whereas the unemployed have the highest risk

Unmet need for health care among population aged 16 to 64, by labour status, EU28, 2016



Note: Self-reported unmet needs for health care, because it is too expensive, too far to travel or because of waiting lists.

Source: Eurostat, based on EU-SILC [hlth_silc_13]

Click here to download chart.

Differences in the accessibility of public services may also result from physical and non-physical barriers limiting access for certain people, such as those with disabilities or elderly people. In this respect the European Commission has proposed a European Accessibility Act, (410) a directive aimed at improving the accessibility of certain products and services (such as transport or telecommunications) which could foster participation in the labour market for people with disabilities.

(410) COM(2015)0615.

⁽⁴⁰⁸⁾ For a detailed overview, see Spasova et al. (2017).

⁽⁴⁰⁹⁾ Eurofound (2017).

Box 5.3: The debate on universal basic income

Universal basic income refers to periodic payments from the state to all citizens so that everyone has an income, regardless of their contribution record, personal or family needs, wealth or income from other sources, job search requirements or any other conditions. It has gained renewed attention in the context of the changing world of work. A number of entrepreneurs, international institutions (¹) and social scientists (²) have discussed the potential merits and drawbacks.

Proponents of a universal basic income highlight its all-encompassing coverage. The beneficiaries would include non-standard workers who are not eligible for social insurance benefits. The neediest citizens who do not take up means-tested benefits, despite being eligible, would be automatically covered. (3)

Universal basic income is seen by some as facilitating adjustments in the labour market. It would provide income security to workers who are displaced (whether permanently or not) by technology (4) and would sustain aggregate demand. Some have argued that a universal basic income would have a positive effect on individual creativity and entrepreneurship. (5)

The lack of targeting is one of the main criticisms of universal basic income. All citizens would receive the benefit, including high-income groups. Particularly where the benefit replaced existing social protection benefits, the negative impact on the most vulnerable groups could be large.

In terms of financing, universal basic income at a meaningful level of income would require a major increase in state spending. It is at least questionable whether Europe's shrinking workforce and its ageing society will generate the productivity gains necessary to fund such unconditional benefits.

Unconditional transfers may reduce the incentive to work, particularly for low-skilled workers and low wage earners. (6) The absence of reciprocity or of any link between reward and effort may limit public support for such schemes. (7)

The possible effects of universal basic income on gender equality remain disputed. Some scholars argue that a universal basic income would make women more financially independent, enhancing their ability to choose which job to take and also acknowledging explicitly the role of unpaid care work. (8) (9) Others argue that a universal basic income scheme would reinforce existing gender inequalities and norms, widening gender gaps in labour market participation, working hours or unpaid work. (10)

Currently, several experiments with basic income schemes are underway, both in and outside Europe. Notably, at the beginning of 2017 Finland launched an experiment on basic income. The experiment is due to last until the end of 2018 and analysis based on the evidence collected should be available at the beginning of 2019. After a debate on the constitutional and legislative requirements for conducting such an experiment, its target group was composed of 2000 people between 25 and 58 years old who were receiving the basic unemployment benefit. The amount paid during the experimental period of two years is EUR 560 per month, which is equal to basic unemployment insurance. This is paid without any meanstesting and recipients are allowed to work without losing the benefit.

The effects of a universal income scheme such as this, its distributional implications, financing, and work disincentives are likely to be limited because of the narrow population group included in the experiment. Indeed, the extent to which the effects of relatively small-scale programmes can inform large-scale policy reforms remains open to debate. (11)

- (1) IMF (2017); OECD (2017).
- (2) See for example the Basic Income Earth Network.
- (3) Van Parijs (2016).
- (4) Painter and Thoung (2015); eBay founder Pierre Omidyar; Elon Musk of Tesla; Richard Branson of Virgin.
- (5) Mark Zuckerberg of Facebook referring to a "cushion to try new things" in a changing economy that relies on entrepreneurship and new ideas.
- (6) Studies on guaranteed income schemes found a decrease in work incentives related to these schemes (Forget, 2011).
- (7) Van Oorschot (2006).
- (8) Christensen (2002).
- (9) McLean (2016).
- (10) Robeyns (2001).
- (11) Ravallion (2012).

Box 5.4: Benchmarking Member States in terms of minimum income, unemployment benefits and active labour market policies

Since 2015 the European Commission in cooperation with Member States has undertaken benchmarking exercises in the field of employment and social policies. The objective of these benchmarking exercises is to support mutual learning, promote structural reforms and foster upward convergence among Member States.

The benchmarking exercises follow an approach agreed by the Social Protection Committee (SPC) and the Employment Committee (EMCO). The approach is based on three identification processes. The first refers to key challenges and outcome indicators, the second to performance indicators, and the third to policy levers that can lead to better outcomes. The policy levers refer to general principles for policy guidance, and - where available - specific indicators which allow comparisons of Member States. (1)

Two ongoing benchmarking exercises for the social protection sphere, focus, first, on minimum income, and, secondly, on unemployment benefits and active labour market policies (ALMPs).

The following dimensions were chosen for the benchmarking in the area of minimum income:

- 1) Outcome indicators: the relative median poverty risk gap, the material and social deprivation rate, and the atrisk-of-poverty rate of the population living in (quasi-) jobless households.
- Performance indicators: the impact of social transfers (excluding pensions) on poverty, the persistent at-riskof-poverty rate, and the coverage rate of social benefits for people at risk of poverty in (quasi-) jobless households.
- 3) Policy levers: the adequacy of benefits, (2) the eligibility conditions, and the activation requirements.

The dimensions analysed in the benchmarking on unemployment benefits and ALMPs (3) are the following:

- 1) Outcome indicators: the unemployment rate, the long-term unemployment rate and the at-risk-of-poverty rate of the unemployed.
- 2) Performance indicators: the proportion of people willing to work taking part in activation measures, and the coverage of the unemployment benefits targeting people unemployed for less than 12 months.
- 3) Policy levers for unemployment benefits: duration, replacement rates, eligibility conditions. For policy levers on activation, discussion is currently ongoing.

Within the context of the European Pillar of Social Rights, the Commission intends to continue working with the Member States to promote benchmarking and exchanges of best practice.

- (1) See Joint Employment Report 2018, Box 1.
- (2) Two indicators for this policy lever have been identified for the measurement of adequacy: minimum income as a proportion of the poverty threshold (an average of the last three years would be used to smooth the abrupt change in the threshold), or as a proportion of the income of a low wage earner (defined as someone earning 50% of the average wage).
- (3) This label covers different categories of activation measures: training, employment incentives, job rotation, job sharing, supported employment and rehabilitation, direct job creation and start-up incentives.

THE FINANCING OF SOCIAL PROTECTION

Social protection receipts as a proportion of GDP remained stable between 2000 and 2006 in the EU as a whole, (411) then grew by over 10% from 2006 to 2009, stabilising at a higher rate until 2015 (the latest year available for most Member States). All but two Member States (Hungary and Greece) saw an increase in social protection receipts in real terms between 2006 and 2015. As a result, the GDP proportion of social protection receipts across the EU grew from approximately 27% at the beginning of the millennium to about 30% in 2015. As mentioned earlier, this increase is mainly associated with growing demand for social protection triggered by demographic changes and the Great Recession.

3.1. What are the main forms of social protection financing?

Social expenditure can be funded through different types of receipts. A key distinction can be made between social contributions and general government contributions. (412)

Social contributions are key features of Bismarckian (⁴¹³**) social insurance systems.** They provide specific, dedicated means to finance the system, establishing who is eligible to receive benefits. Reducing the social contribution burden has been an important policy endeavour in Bismarckian welfare states. Facing increased demand for social protection

⁽⁴¹¹⁾ No data for BG and HR.

⁽⁴¹²⁾ Two additional categories of financing, transfers from other schemes and other receipts, play a smaller role.

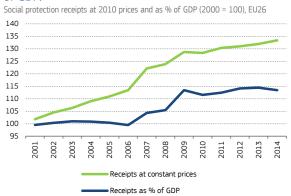
⁽⁴¹³⁾ Named after the 19th century German chancellor Otto von Bismarck who oversaw the introduction of the world's first contribution-based social insurance schemes. This arrangement forms the basis of existing social security systems in many continental European countries. DICE Database (2016).

benefits following the Oil Shock of the early 1970s, Continental European countries reacted by promoting early exit from the labour market. By the 1980s, the resulting burden on labour costs was recognised as a brake on employment creation.

Financing from general government contributions is typically associated with the more universal provision of benefits. (414) As well as country-to-country differences, financing structures tend to vary across expenditure functions: the proportion of social contributions in total financing tends to be lowest for housing, social exclusion and sickness/health care, whereas it is typically highest for unemployment insurance and old age pensions. (415)

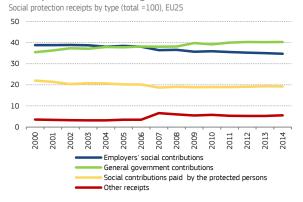
Chart 5.8

A large increase in social protection receipts in 2008-2009 was followed by a stabilisation at a higher share of GDP.



Note: Not including BG and HR
Source: Eurostat ESSPROS and national accounts
Click here to download chart.

Chart 5.9
The proportion of general government contributions in social protection financing increases



Source: Eurostat, ESSPROS Click here to download chart.

Increased reliance on general government revenues accompanied the overall growth of social protection receipts in 2006-2015. In most Member States, the largest source of this growth in social protection financing was general government

contributions, which grew from around 10% of GDP in 2000-2006 to over 12% by 2012. Social contribution receipts grew overall, but at a slower pace.

Accordingly, the relative weight of social contributions has gradually declined, with general government revenues providing a growing proportion. Employers' contributions, which typically represent the largest proportion of contributions, have declined most strongly. However, the contributions by protected persons (employees, to a lesser extent the self-employed, pensioners) have also tended to decline relative to funds contributed by general government.

3.2. Why is the proportion of general government contributions increasing?

The growing proportion of general government contributions in social protection financing is explained by several factors. The demand for social protection expenditure increased as a consequence of the Great Recession and of demographic trends, while at the same time governments were not in a position to increase social contributions. Attempting to do so through contribution rate hikes would have had an adverse effect on work incentives, put recessionstricken employers at the risk of going out of business and, in general, harmed competitiveness. In this context, the European Commission has recommended a shift away from labour taxation as a measure to competitiveness and support workers' employability, beginning with the 2010 Annual Growth Survey and continuing in country-specific recommendations issued as part of the European Semester. (416) Governments have resorted complementing the budgets of social protection schemes through general government receipts. The most important elements of the policy context are reviewed below.

First, general government financing may cover deficits in social insurance schemes. The Bismarckian model of exclusively contribution-financed social benefits rarely exists in a pure form. Instead, state budgets tend to contribute to the funds, with the role of the state ranging across the EU from no financial participation at all, through providing fixed contributions or subsidies, to the state covering deficits. As regards benefits linked to old age, eight Member States take on the broadest responsibility for covering deficits. For unemployment benefit, this figure is twelve Most remaining Member States contribute to the funds to a smaller extent. (417) The institutional conditions for general government participation are therefore in place. Moreover, general government contributions have a stabilisation function, as revenue shortfalls and heightened demand for expenditure by social security funds occur during simultaneously economic downturns, particularly in the case of unemployment benefits.

⁽⁴¹⁴⁾ This solution was first adopted in post-war Britain and it has influenced the social protection system of Scandinavian countries too. DICE Database (2016).

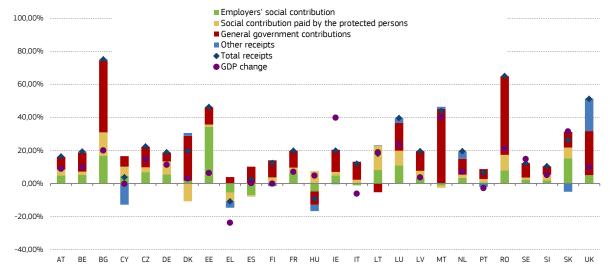
⁽⁴¹⁵⁾ Social Protection Committee and European Commission (2015).

⁽⁴¹⁶⁾ See European Commission (2015b).

⁽⁴¹⁷⁾ Authors' calculation based on Social Security Administration (2016)

Chart 5.10
Social protection receipts grew significantly in most Member States, and the largest source of this growth was general government contributions

Percentage change in social protection receipts, by type, 2006-2015



Note: EUR, 2010 prices

Source: Eurostat: ESSPROS and national accounts

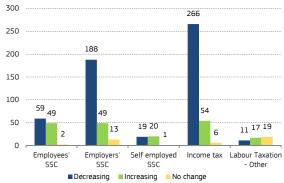
Click here to download chart.

Second, expenditure on functions that are typically funded from general government revenues has increased markedly. As mentioned above, some social protection functions, namely housing, social exclusion, family/children benefits and sickness/health care, are mostly financed by general government contributions. These four categories were responsible for almost half (47.5%) of the growth in total social protection expenditure between 2006 and 2015 in the EU. (418)

Third, social contribution rates and revenues stagnated in the EU during 2006-2015, the time when social protection expenditure was rising. In line with country-specific recommendations of the Council, several Member States have adopted measures to reduce labour costs through social contribution or personal income tax cuts, often targeted on vulnerable groups of workers. Taking the EU as a whole, the social contribution burden remained relatively stable, as measured by the most important indicators: the tax wedge, the implicit tax rate on labour and the share of labour taxation in GDP or total taxation. (419) Yet another type of indicator shows that between 2000 and 2014, the majority of reforms linked to employers' contributions resulted in reductions (Chart 5.11). The overall volume of reforms to social contributions paid by employees and the selfemployed has been smaller and the direction of the reforms more evenly split between increases and decreases.

Chart 5.11
Most reforms of employers' social contributions and income taxes resulted in a decrease, whereas the picture is more mixed for other labour taxes

Reforms of labour taxation by field and by direction, EU, 2000-2016



Source: European Commission, LABREF Click here to download chart.

3.3. Financing social protection in a changing world of work

The prevalence of non-standard forms of work is likely to put additional pressure on the financing of social protection in the future. Certain new forms of work blur the distinction between employees and the self-employed with the result that non-standard workers' contribution levels are on par with those of the self-employed. The self-employed typically pay lower contributions than employees. While no direct evidence is currently available, simulations in *Box 5.5* show that shorter working hours, and an increase in self-employment with little connection to the EU Member States' social insurance schemes, may put these systems under strain, aggravating the challenges associated with ageing.

⁽⁴¹⁸⁾ Data not available for HR and PL.

⁽⁴¹⁹⁾ Even if there may be substantial differences for specific countries. OECD Revenue Statistics; European Commission (2018), p.30.

Further sources of financing may become necessary if the contributory base is shrinking.

Theoretically, one solution is to raise contribution rates. However, many Member States appear to have levels of labour tax burden that are already harming competitiveness and warrant contribution or tax cuts. As detailed in the following subsection, under a future scenario where standard employment is to a significant extent replaced by alternative employment forms with lower social protection coverage, a downward pressure on contribution rates will be even more pronounced. First, non-standard forms of employment may attract workers for various nonfiscal advantages they provide, such as flexibility. Second, where different rules apply, this may incentivise (genuine) changes towards forms of employment with the lowest rates. (420) Third, in the absence of suitable enforcement mechanisms, undeclared or falsely declared work may increase, particularly in jurisdictions where administrations currently face difficulties. (421) These challenges point to a shrinking taxable income base. As a result, new sources of funding, including non-labour tax bases, may need to be found.

Considerations related to the future of work are important elements in the discussion of optimal taxation, particularly for the funding of social protection. Traditionally, discussion of optimal taxation has focused on both efficiency and equity. The problem is to find a tax mix that maximises efficiency (understood as minimising economic distortions while generating a given level of revenue) and at the same time contributes to equity goals (such as mitigating inequality). Implicit in this discourse is that the optimal tax mix needs to be administratively feasible. (422) With non-standard forms of work gaining prominence, the feasibility of labour taxation comes to the forefront of policy considerations. The following sub-section reviews a major strand of the optimal taxation discussion: the rebalancing of the tax mix by shifting the tax burden away from labour. It then extends the discussion by investigating the impact of non-standard employment.

Shifting the tax burden from labour to other tax bases is a practicable element of policy packages designed to regain competitiveness, but it is no panacea. The rationale for revenueneutral tax shifts away from labour (including social contributions) towards more 'growth-friendly' tax bases is that, through the reduction of the tax wedge, both labour supply and labour demand can be boosted. (423) However, this approach is beset by a number of difficulties. First, certain more growthfriendly types of tax, such as recurrent taxes on property and environmental taxes account for a relatively low share of overall tax revenue, potentially limiting their scope to be used as part of a tax shift. Second, while consumption taxes appear to be the most plausible candidate for a tax shift, benefits of such a shift depend on specific circumstances. (424) In addition, distributional considerations may affect the feasibility and desirability of a tax shift to consumption taxation. (425) Where tax revenue is used to finance social protection benefits, this can be overcome if the tax-contribution-benefit system overall is designed to mitigate inequalities. Third, some recent economic literature points to heterogeneity of responses, non-linear effects and differences in amplitude between the short-term and long-term effects in the impact on growth of different tax types. (426)The detailed design of a tax is at least as important as the type of tax.

In the traditional framework, with employees working for a single employer under a standard contract, labour taxation has an advantage in terms of administrative feasibility. Through a third-party declaration (prepared by the employer), labour income is easily verifiable. As this is the main source of income for the large majority of taxpayers, it serves as the prime indicator of ability to pay, and is therefore well-suited to redistributive taxation. Moreover, with particular relevance for financing social protection, it is compatible with the accumulation of individual rights on which social protection benefits are based.

⁽⁴²⁰⁾ A tax and contributions system can be said to be neutral between various forms of employment if workers' and employers' choices between each form is driven by market forces (which encompass efficiency and equity considerations as well as the technology), as opposed to fiscal considerations.

⁽⁴²¹⁾ The association between the labour taxation advantage of the self-employed compared with employees, and the level of selfemployment without employees is noteworthy in this respect. An outflow of standard workers in response to social contribution hikes is a plausible risk, particularly in jurisdictions where (perceived) tax enforcement is weaker. (European Commission 2017c, p.96).

⁽⁴²²⁾ For a presentation of the efficiency-equity trade-off, as well as the administrative constraints, see: Diamond and Saez (2011).

⁽⁴²³⁾ For an international comparison in the choice between various tax types to finance social protection, see Olivier (2015).

⁽⁴²⁴⁾ Cost competitiveness gains for a given country are smaller if several countries implement such a shift simultaneously European Commission (2013).

⁽⁴²⁵⁾ European Commission (2012); Thomas (2018).

⁽⁴²⁶⁾ Baiardi et al. (2017).

Box 5.5: New forms of work and financing social security

More part-time and more self-employed workers may pose new challenges

ESDE 2017 showed that demographic ageing will bring a double burden for today's young people and future generations. Compared with current pensioners, they will pay higher contribution rates during their working careers and receive lower pensions during their retirement. This is because the EU's working-age population will decline. At the same time, the number of elderly people will increase strongly. In a very simple model, ESDE 2017 showed that, in the absence of any government measures to cut pensions, the contribution rates to the EU's pension system may be double today's average. In addition to the double burden caused by demographic change, the effect of more fragmented working careers may further reduce future pensions. A refined version of this model shows how new forms of work may exert additional reform pressure on tomorrow's social security schemes.

In the following paragraphs it is assumed that a single EU contribution rate for social security (1) balances out the volume of benefits and revenues of the EU's income-replacing benefit schemes: pensions and unemployment benefit/social assistance. Both are funded by employee's contributions and paid to people not in employment in a pay-as-you-go social security scheme. (2) It is assumed that non-working people of working age do not pay any social contributions. Yet they will acquire pension rights worth half of those who do work

Apart from this re-distributive element in the pension system, pension rights follow contributions paid by employees. Thus, person's biography in a certain year has an impact on the pension right acquired in that year: The person can be employed or not. If in employment they can be self-employed or employee. Self-employed workers are assumed not to be insured in the social security scheme. Finally, workers decide on the number of hours worked. Everything else being equal, social security contributions (and pension rights) will change in parallel to the number of hours worked, since the latter define the assessment basis on which contributions are paid (the insured income).

The following will show how new forms of work may impact on the EU's social security contribution rates. A number of assumptions need to be made.

A standard scenario

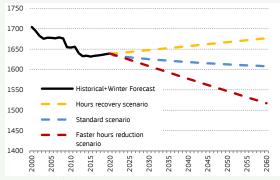
First, the **employment rate of people aged from 20 to 64 (72% in 2017) will increase** in line with the High-Activity scenario as defined in ESDE 2017 which assumes that by 2030 the EU manages to use its human resources fully and has achieved an

- (1) Consider an "EU contribution rate" equal to the average across 28 EU countries.
- (2) See European Commission (2017b), Chapter 4, Box 4.2 on pp. 122-123..

employment rate of almost 87%. (3) It is assumed that this employment rate will not change after 2030.

Chart 1
High uncertainty about the number of hours worked in the future.

Average hours worked per worker per year



Source: AMECO database, DG EMPL projections

Secondly, **hours worked will decline**. In the absence of solid estimates of how the number of hours worked per person will be affected by new forms of work over the next decades, a number of assumptions are made. The negative trend as observed and forecast (4) for the period 2000 – 2019 is extrapolated. It is assumed that it will continue, but the pace of the decline will diminish (log-linear trend-regression): see the blue line in Chart 1

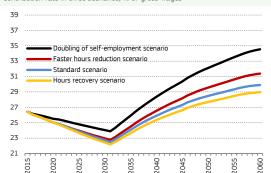
Thirdly, the **nominal pension level is 47% of average wages**. In line with ESDE 2017, all people aged 65 and older receive a pension equal to 47% of average gross wages (today's average pension benefit rate). This is the nominal overall pension level that is kept constant over time, while *individual* pension rights may vary with respect to a worker's biography. In the long run, the volume of pensions will increase due to demographic ageing.

Fourthly, people aged 20-64 not in employment receive some kind of a benefit, either unemployment or some other social assistance, if they are not working. Both have to be financed out of contributions paid by current employees. The level of this benefit is calibrated as 18% of average gross wages (today's average unemployment benefit). (5)

- (3) The scenario assumes full activation of women and older workers by 2030 and further educational progress. For detail see European Commission (2017b), Chapter 2, pp. 58-59, especially Box 2.1.
- (4) For the period 2017 to 2019 the Commission's Winter Forecast assumption is being used.
- (5) Per unemployed and per year this is €6.667 per year, or 18% of the EU's average wage level.

(Continued on the next page)

Box (continued) Chart 2 Future forms of work may make social protection more costly. Contribution rate in three scenarios, % of gross wages



Source: DG EMPL calculations based on Eurostat 2015 Population Projection, Eurostat EU LFS, Eurostat National Accounts

Chart 2 shows the contribution rate for incomereplacing social security schemes, as a percentage of wages earned by those in employment. In the standard scenario it will decline up to 2030 due to the assumed strong increase in the employment rate. In the very long term, demographic ageing will pull contribution rates up, as discussed in ESDE 2017. (6)

New forms of work may impact on both the number of hours worked and the future incidence of self-employment (Chapter 2). Three additional scenarios are therefore plotted.

A faster hours-reduction scenario

A higher incidence of part-time work and new forms of work-sharing may depress hours per workers faster than assumed in the standard scenario. A linear trend-prolongation of the decline seen since the year 2000 would reduce hours worked as marked by the red curve in Chart 1. In 2060 people would work 90 hours fewer compared with the standard scenario (-6%). The contributory base would shrink accordingly, forcing the social insurance contribution rate to climb by 1.5 pps, compared with the standard scenario, to balance out revenue and expenditure.

An hours-recovery scenario

However, in order better to harmonise the assumption on working hours with the optimistic High Activity scenario on employment as outlined in ESDE 2017, the (log-linear) trend-projection can be assumed to start only from the period since 2013 (instead of 2000) when the EU saw its labour markets recover (see Chapter 1). Such an increase could be linked to labour shortages, in combination with policy measures to facilitate work-life balance. The assumption is that people work 70 hours more on average per year (+4%), compared with the standard scenario. The contribution rate could thus be lower by almost 1 ppt.

A doubling of self-employment scenario

Chapter 2 indicates that self-employment as a proportion of total employment is one of the labour market trends which is hardest to project. There is evidence that new forms of work, including selfemployment, may shape the future world of work to a much greater extent than they have done so far. In a third scenario it is thus assumed that the proportion of self-employed (aged 20-64 years), which is 15% today, will double by 2060 as more and more people work on the internet or other collaborative platforms. As selfemployed are not part of the social security insurance system, the increasing share of self-employed implies that the volume of contributions paid to social security declines. Under these circumstances, the social security contribution rate would climb by 4.6 pps by 2060, compared with the standard scenario.

In the very long run, contribution rates in the alternative scenarios would converge towards the standard scenario because individual pension entitlements follow the contributions paid as employee. (7) For example, as today's self-employed workers are not entitled to a pension, this lowers the amount of pensions to be paid in the future, so that contribution rates can be lowered again. However, the simulation shows that a higher share of self-employed would lower the contributory base, thus drive up contribution rates for a long time. This is relevant for the labour market as social security contributions are usually paid by employers and employees. Higher contribution rates would increase labour costs and reduce workers' take-home pay.

However, the changing world of work poses feasibility challenges in the area of labour taxation, which may reinforce the need for a tax shift away from labour. With the emergence of new non-standard forms of work, certain administrative advantages of taxing labour income are fading. Under existing tax administration methods, labour income becomes less traceable for workers who have several employers, often earning smaller amounts per individual contract. (427) The employment status becomes more difficult to verify. Third-party reporting

is harder to enforce, as both the users of labour as a service and the intermediaries are difficult to pin down, unlike employers with reporting obligations. Moreover, as explained in Chapter 2, certain new forms of work are associated with a weakening of the bargaining power of workers, due in part to crossborder competition between workers. Therefore, even those workers for whom participation in social protection schemes through the payment of contributions would be individually desirable may be unable to secure it, when bargaining with (non-standard) employers.

⁽⁶⁾ European Commission (2017b), Chapter 4.

⁽⁷⁾ However, as there are re-distributive elements in the pension system there will not be full convergence.

⁽⁴²⁷⁾ European Commission (2017c).

Neutrality between various forms of work might be achievable only at a lower contribution rate which would however leave a funding gap that would need to be filled by alternative means. Contribution rates might need to adjust to the optimum level of those subgroups of labour income earners who have more options to adjust their declared income in the face of higher rates, notably non-standard workers and the self-employed. The ensuing revenue shortfall would then have to be covered through other taxes. In this regard, there has been renewed attention to capital taxation, including taxes on (labour-displacing) robots and technology (428) to finance social protection. Still, some would argue that such a tax may stifle innovation and investment, while the international mobility of capital and technology may limit its feasibility at national or local level. (429) Therefore, shifting the tax burden to less mobile bases, such as consumption appears to be a viable alternative, although its regressive nature has to be borne in mind. Additionally, the modernisation in particular the digitalisation - of tax administration may gain an important role. This would allow more effective accounting for income earned in the new economy. Furthermore, institutional changes that offset the weakening of the market power of workers may help to maintain a higher level of contributory benefits.

4. CONCLUSIONS

Social protection is a key component of Europe's model of a highly competitive social market economy. Modern social protection systems enable workers and their families to make the most of the new opportunities emerging from a changing world of work and to contribute fully to economic and social progress. As this report has shown, future shifts in the labour market are very likely, but their precise direction, scale and timing remain uncertain. In such a dynamic context, social protection can provide (income) stability for those who are forced to change jobs in an increasingly diverse and dynamic labour market, or who actively choose to pursue new career paths. As welfare and work are closely linked, changes in the world of work can have major impacts on the existing welfare systems.

First, along with new opportunities, structural changes in the labour market may generate additional demands for social protection. Flexible new forms of work can offer the unemployed or the inactive new entry points into the labour market. At the same time, workers that are displaced by new technologies may require support via income replacement benefits or retraining. The same applies to workers who make more frequent transitions throughout their careers. A large proportion of social protection benefits consists of replacement incomes

for jobless individuals. Non-standard employment may partly come to redefine the notion of being 'out of a job'.

Second, in many Member States, specific groups of (non-standard) workers have reduced access to social protection. Rights and obligations associated with social protection have been developed primarily for workers employed on standard contracts. Workers in non-standard employment or the selfemployed may be formally excluded from specific social security benefits. Alternatively, such workers despite being formally covered - may find it more difficult to fulfil the criteria regarding work history or prior contributions. As workers' careers become less linear, the transferability and transparency of entitlements become more important if comprehensive coverage is to be ensured. While there have been policy initiatives to address coverage gaps in several Member States, the recent proposal for a Council Recommendation on access to social protection (430) aims for comprehensive and systematic improvement. Meanwhile, the new developments have sparked renewed debates about last resort safety nets and conditionality, including henefit means-testing, universal benefits or job search requirements.

Third, changes in the world of work will have major implications for the financing and sustainability of social protection. In many Member States, employers' and workers' social contributions remain an important source of funding for social protection systems (even if general government contributions constitute a growing share). In addition to a shrinking contribution base due to population ageing, challenges to the financing of social protection are reinforced where new forms of work do not generate (sufficient) receipts for social protection. To ensure the sustainability of social protection, several routes can be explored. Ensuring that all forms of work contribute to social protection could help to sustain finances. Revenue from sources other than labour could gain a more important role. Investing in people by ensuring access to effective and efficient social protection for all is at the heart of the European Pillar of Social Rights and of European initiatives on access to social protection.

⁽⁴³⁰⁾ COM(2018) 132 final.

⁽⁴²⁸⁾ Oberson (2017).

⁽⁴²⁹⁾ ILO (2018).

Annex 1: Methodologies used to estimate coverage rates

Table A1.1 Comparison of methodology used in Matsaganis et al (2015) and Jara Tamayo and Tumino (2018)

	Matsaganis et al. (2015)	Jara Tamayo and Tumino (2018)		
Microdata	EU-Labour Force Survey 2014	EU-Statistics on Income and Living Conditions 2015,		
		except Germany SILC 2014 and UK 2014/5 FRS		
Policy rules	MISSOC (policy rules July 2015)	EUROMOD (policy rules 2017)		
Risks covered	- Unemployment	- Unemployment		
	- Sickness			
	- Maternity			
Standard workers	Employees, working full-time, open-ended contract	Employees with individual work intensity >= 33%		
		Work intensity defined as months worked over the year (over 12),		
		multiplied by number of hours worked in the week (by the individual)		
		over median hours worked during the week (at country level)		
Non-standard workers	- Self-employed	- Self-employed (income from self-employment, not as employee)		
	- Family workers	- Employees with low work intensity (<33%)		
	- Employees, working full-time, fixed-term contract			
	- Employees, working part-time, open-ended contract			
	- Employees, working part-time, fixed-term contract			
Coverage concept	Risk of not being entitled to benefit	Potential coverage: share of workers who would be covered		
		by unemployment insurance schemes in case of unemployment based		
		on their previous work history (months of work over the last year)		
Criteria self-employed	Number of months worked	Work history (months worked)		
	Voluntary: opt in if self-employed with employees	Voluntary: (Not simulated)		
	Voluntary: opt out if solo self-employed			
Criteria employees	- Employees on open-ended contracts are assumed to be eligible,	Work history (months worked), regardless of contract type		
	regardless of number of months worked.			
	- Workers on fixed-term contracts are assumed to be at risk of			
	not being eligible to benefit if their contract expires			
	before the number of months required for entitlement.			

Source: /

Click here to download table.

References

Acemoglu, D. and P. Restrepo (2018), "Demographics and Automation", *National Bureau of Economic Research (NBER) Working Paper*, No. w24421.

Atkinson, A. B. (2015), *Inequality, what can be done?*, Harvard University Press.

Baiardi, D., P. Profeta, R. Puglisi and S. Scabrosetti (2017), "Tax Policy and Economic Growth: Does It Really Matter?", *CESinfo Working Paper*, No. 6343.

Christensen, E. (2002), "Feminist Arguments in Favour of Welfare and Basic Income in Denmark", *Paper presented at the 9th International Congress on Basic Income*, Geneva September 12 –14 2002.

Diamond, P., and E. Saez (2011), "The case for a progressive tax: from basic research to policy recommendations", *Journal of Economic Perspectives*, 25(4), pp. 165-90.

DICE Database (2008), "Bismarck versus Beveridge: A Comparison of Social Insurance Systems in Europe", *DICE Report*, 4. http://www.cesifo-group.de/DICE/fb/oRRqmC6c

Eurofound (2015a), New forms of employment. https://www.eurofound.europa.eu/sites/default/files/ef_ publication/field_ef_document/ef1461en.pdf

Eurofound (2015b), Access to social benefits: Reducing non-take-up.

https://www.eurofound.europa.eu/publications/report/2 015/social-policies/access-to-social-benefits-reducing-non-take-up

Eurofound (2016), Extending working lives through flexible retirement schemes: Partial retirement. https://www.eurofound.europa.eu/sites/default/files/ef_publication/field ef document/ef1629en.pdf

Eurofound (2017), European Quality of Life Survey 2016: Quality of life, quality of public services, and quality of society.

https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1733en.pdf

European Commission (2012), *Employment and Social Developments in Europe 2012*.

http://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=7315

European Commission (2013), "Recent Reforms of Tax Systems in the EU: Good and Bad News", *Taxation Papers*, 39.

http://ec.europa.eu/taxation_customs/sites/taxation/file s/resources/documents/taxation/gen_info/economic_an alysis/tax_papers/taxation_paper_39.pdf

European Commission (2015a), *Employment and Social Developments in Europe – Annual Review 2015.*

http://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=7859&furtherPubs=yes

European Commission (2015b), "Tax shifts", *Taxation Papers*, 59.

https://ec.europa.eu/taxation_customs/sites/taxation/files/resources/documents/taxation/gen_info/economic_analysis/tax_papers/taxation_paper_59.pdf

European Commission (2017a), *Reflection paper on the social dimension of Europe*.

https://ec.europa.eu/commission/sites/beta-political/files/reflection-paper-social-dimension-europe_en.pdf

European Commission (2017b), Employment and Social Developments in Europe – Annual Review 2017. http://ec.europa.eu/social/main.jsp?&catId=89&furtherNews=yes&langId=en&newsId=2841

European Commission (2017c), Labour Market and Wage Developments in Europe – Annual Review 2017. http://ec.europa.eu/social/BlobServlet?docId=18371&langId=en

European Commission (2017d), "Literature review on taxation, entrepreneurship and collaborative economy", *Taxation Paper* 70.

https://ec.europa.eu/taxation_customs/sites/taxation/files/taxation_paper_70.pdf

European Commission (2018), *Taxation Trends in the European Union – 2018 edition*.

https://ec.europa.eu/taxation_customs/sites/taxation/files/taxation_trends_report_2018.pdf

European Commission and Economic Policy Committee (Ageing Working Group) (2018), "The 2018 Ageing Report, Economic & Budgetary Projections for the 28 EU Member States (2016-2070)", *Institutional Paper*, 79. https://ec.europa.eu/info/sites/info/files/economy-finance/ip079_en.pdf

Eurostat (2016), European system of integrated social protection statistics — ESSPROS, Manual and user guidelines, 2016 edition.

http://ec.europa.eu/eurostat/documents/3859598/7766 647/KS-GQ-16-010-EN-N.pdf/3fe2216e-13b0-4ba1b84f-a7d5b091235f

Forget, E. (2011), "The Town With No Poverty", *Canadian Public Policy*, 37:3, pp. 283–305.

ILO (2017), World Social Protection Report 2017–19. Universal social protection to achieve the Sustainable Development Goals.

http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---

publ/documents/publication/wcms_604882.pdf

ILO (2018), "Innovative approaches for ensuring universal social protection for the future of work", Future of Work Centenary Initiative Issue Note, No. 4,. http://www.ilo.org/global/topics/future-of-work/publications/issue-briefs/WCMS_618176/lang-en/index.htm

IMF (2017), Fiscal Monitor: Tackling Inequality. http://www.imf.org/en/Publications/FM/Issues/2017/10/ 05/fiscal-monitor-october-2017

Jacques, O. (2015), "Les trois mondes des régimes fiscaux: L'économie politique du financement des États-providence", *Mémoire présenté à la Faculté des Arts et Sciences en vue de l'obtention du grade de M.Sc en Science politique*, Université de Montréal.

Jara Tamayo, H. X. and A. Tumino (2018), "Income protection of atypical workers in case of unemployment in Europe", *JRC Working Papers on Taxation and Structural Reforms*, forthcoming.

Korpi, W. and J. Palme (1998), "The paradox of redistribution and strategies of equality: Welfare state institutions, inequality, and poverty in the Western countries", *American Sociological Review*, Vol. 63, Issue 5, pp. 661-687.

Langenbucher, K. (2015), "How demanding are eligibility criteria for unemployment benefits, quantitative indicators for OECD and EU countries", OECD Social, Employment and Migration Working Papers, No. 166.

http://dx.doi.org/10.1787/5jrxtk1zw8f2-en

Marx, I., L. Salanauskaite and G. Verbist (2013), "The Paradox of Redistribution Revisited: And That It May Rest in Peace?" *IZA Discussion Paper*, No 7414.

Matsaganis, M., E. Özdemir, T. Ward and A. Zavakou (2015), "Non-standard employment and access to social security benefits", *Social Situation Monitor Research Note*, 8/2015.

http://ec.europa.eu/social/BlobServlet?docId=15687&langId=en

Matsaganis, M., A. Paulus and H. Sutherland (2008), "The take-up of social benefits", *European Observatory on the Social Situation and Demography Research Note*, 2/2008.

http://ec.europa.eu/social/BlobServlet?docId=9833&lan gld=en

McLean, C. (2016), "...and justice for all? Basic income and the principles of gender equity", Juncture, 22(4), pp. 284-288.

Oberson, X. (2017), "Taxing robots? From the Emergence of an Electronic Ability to Pay to a Tax on Robots or the Use of Robots." *World Tax Journal*, 9.2, pp. 247-261.

OECD (2017), "Basic income as a policy option: Can it add up?", *Policy Brief on the Future of Work*.

http://www.oecd.org/els/emp/Basic-Income-Policy-Option-2017.pdf

OECD (2018), "The Future of Social Protection: What works for non-standard workers?", *Policy Brief on the Future of Work*. http://www.oecd.org/social/Future-of-social-protection.pdf

Painter, A. and C. Thoung (2015), "Creative Citizen, Creative State: The Principled and Pragmatic Case for a Universal Basic Income", *RSA*.

https://www.rexsresources.com/uploads/6/5/2/1/65214 05/rsa_basic_income_20151216.pdf

Ravallion, M. (2012), "Fighting poverty one experiment at a time: Poor economics: a radical rethinking of the way to fight global poverty: review essay", *Journal of Economic Literature*, 50(1), pp. 103-14.

Robeyns, I. (2001), "Will a basic income do justice to women?" *Analyse & Kritik*, 23(1), pp. 88-105.

Schoukens, P. (2018), "New forms of (platform) work and social security", *Presentation at the Social Situation Monitor Research Seminar on social protection in the changing world of work*, Brussels, 12 January 2018. Presentation available at: http://ec.europa.eu/social/BlobServlet?docId=18891&langId=en

Schoukens P. and A. Barrio (2017), "The changing concept of work: when does typical work become atypical?", *European Labour Law Journal*, vol. 4, pp. 1-28.

Social Protection Committee (SPC) and European Commission (2015), *Social protection systems in the EU: financing arrangements and the effectiveness and efficiency of resource allocation.*

http://ec.europa.eu/social/main.jsp?catId=738&langId=e n&pubId=7743&visible=0

Social Protection Committee (SPC) and European Commission (2018), *The 2018 Pension Adequacy Report, Vol. I, Current and future income adequacy in old age in the EU.*

http://ec.europa.eu/social/BlobServlet?docId=19417&langId=en

Social Security Administration (2016), *Social Security Programs Throughout the World: Europe, 2016.* https://www.ssa.gov/policy/docs/progdesc/ssptw/2016-2017/europe/ssptw16europe.pdf

Spasova S., D. Bouget, D. Ghailani and B. Vanhercke (2017), "Access to social protection for people working on non-standard contracts and as self-employed in Europe. A study of national policies", *European Social Policy Network (ESPN)*.

http://ec.europa.eu/social/main.jsp?catId=738&langId=e n&pubId=7993

Thomas, A. (2018, forthcoming), "Distributional effects of the VAT: Update and Extension", *OECD Taxation Working Paper*, forthcoming. http://www.oecd.org/tax/tax-policy-working-papers.htm

Van Oorschot, W. (2002), "Targeting welfare: On the functions and dysfunctions of means-testing in social policy." In P. Townsend and S. Gordon (eds.) *World poverty: new policies to defeat an old enemy*, Policy Press, pp. 171-193.

Van Oorschot, W. (2006), "Making the Difference in Social Europe: Deservingness Perceptions Among Citizens of European Welfare States", *Journal of European Social Policy*, 16:1, pp. 23-42.

Van Parijs, P. (2016), "Basic Income and Social Democracy", *Social Europe*, April 2016 https://www.socialeurope.eu/2016/04/44878

Venn, D. (2012), "Eligibility Criteria for Unemployment Benefits: Quantitative Indicators for OECD and EU Countries", *OECD Social, Employment and Migration Working Papers*, No. 131.