

# International Social Security Review

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- Implementation challenges for seafarers' social security protection: The case of the European Union
- The risk of under-insurance in the Finnish statutory pension scheme for self-employed workers: A trajectory analysis
- Mortality analysis of persons with disabilities in Argentina by age, sex and duration of benefit, 2015–16
- Payment of Universal Credit for couples in the UK: Challenges for reform from a gender perspective
- Extending pension coverage in Cambodia: The governance and investment challenges of the Social Security Investment Fund



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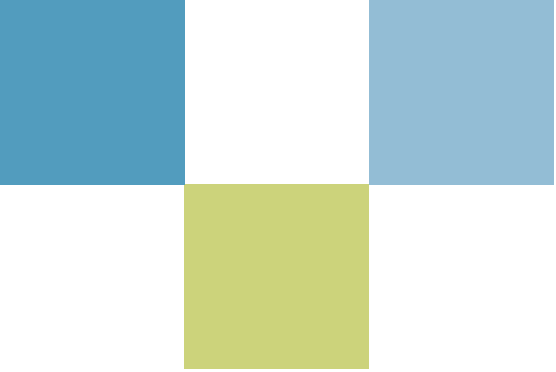
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# Implementation challenges for seafarers' social security protection: The case of the European Union

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**Abstract** In a world of competing flag States and short-term employment, enjoying the benefits provided by a social security system is a difficult, if not impossible, task for many seafarers. The Maritime Labour Convention, 2006, has abandoned the flag State principle in favour of the residence principle for that reason. This article addresses the implementation challenges of this approach by examining the European Union case, and highlights the advantages of the residence principle in terms of administrative efficiency and effectiveness, enhanced coordination between social security contributions and personal income tax in cross-border situations, and better use of State aid measures.

**Keywords** social security, legal aspect, seafarer, taxation, ILO Convention, international

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## Introduction

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Since 1889, the year in which Chancellor Otto von Bismarck initiated a social security programme for Germany, countries have been struggling with the extent of assistance to be provided to individuals in need of health care or income security. Although acknowledged as a basic human right, among others, in the International Labour Organization's (ILO) Declaration of Philadelphia in 1944,<sup>1</sup> the United Nations Universal Declaration of Human Rights in 1948,<sup>2</sup> and the International Covenant on Economic, Social and Cultural Rights in 1966,<sup>3</sup> only about a quarter of the world's population have access to comprehensive social protection (ILO, 2017, p. 7). Access is particularly challenging for those workers who cross national borders, as they may not get access to any national scheme or get access only in a limited way compared to other national or resident workers in the country (Taha, Siegmann and Messkoub, 2015). Seafarers and other maritime professionals are a case in point.

The ILO Social Security (Minimum Standards) Convention, 1952 (No. 102),<sup>4</sup> up to date, provides the branches to be considered by States, to progressively achieve comprehensive protection, namely: medical care, sickness benefit, unemployment benefit, old-age benefit, employment injury benefit, family benefit, maternity benefit, invalidity benefit and survivors' benefit. However, each country tailors their social security scheme in view of their economy and medical facilities, including the determination of contributors to, and beneficiaries of, the scheme. The outcome is a variety of models that rely for their sustainability on workers, regardless of their nationality, that discharge their duties towards employers domiciled or seated in the national territory. If they provide their services in more than one country, at the same time or subsequently, conflicts are generally resolved by resorting to key principles. Namely, while contributions are to be paid to one system only at any given time, States are obliged to coordinate and ensure the principles of aggregation and the maintenance of acquired rights for those workers in the course of acquisition as well as the payment of benefits to beneficiaries residing abroad; the so-called portability principle.

The challenge of seafarers and other maritime professionals is that their services are provided on board a ship that navigates through different jurisdictions and the

1. See the full text of the ILO Declaration of Philadelphia.
2. See the full text of the UN General Assembly, Universal Declaration of Human Rights, 10 December 1948, 217 A (III), Article 22.
3. See the full text of the ICESCR (993 U.N.T.S. 3). See General Comment No. 19: The right to social security (Art. 9 of the Covenant).
4. See the full text of ILO Convention No. 102.



high seas,<sup>5</sup> thereby they do not carry out their activities in a territory (Carballo Piñero, 2015, pp. 13–17). The lack of a jurisdiction has in principle been resolved by resorting to public international law and the allocation of all matters on board a ship to the law of the flag State. Article 94 of the United Nations Convention on the Law of the Sea (UNCLOS)<sup>6</sup> specifically requests States to “assume jurisdiction under its internal law over each ship flying its flag and its master, officers and crew in respect of administrative, technical and social matters concerning the ship”. However, a number of factors complicate this apparently simple approach.

As a State matter,<sup>7</sup> social security does not fit either in the contractual or in the non-contractual realm, but a unilateral approach based on the territoriality principle is preferred over a conflict-of-laws approach when it comes to determining the law governing it. Against this backdrop, each flag State lays down who benefits from its social security scheme. For example, both Spain<sup>8</sup> and Italy<sup>9</sup> provide coverage to seafarers domiciled in the country and working on board ships flying their flag. Notwithstanding this, they have allowed ships registered in their second registry to exclude seafarers residing in a third country from their national schemes.

Flag States might also discriminate among branches, conditioning access to benefits to criteria other than working on board a nationally-registered ship. A useful example is provided by the European Court of Justice in the *F. Wieland & H. Rothwangl* case,<sup>10</sup> involving two former seafarers that applied for old-age benefit before the Dutch administration. The benefit was denied on the ground of their foreign nationality and lack of residence in the country during the period they worked on board Dutch-flagged ships. In fact, the (non-)entitlement arose before their country of nationality had joined the European Union (EU) and, accordingly, they were treated as third country nationals. This meant they did not benefit from the prohibition of discrimination on grounds of nationality enshrined in Articles 18 and 45 of the Treaty on the Functioning of the European Union (TFEU);<sup>11</sup> and in Regulations (ECC) No. 1408/71 of 14 June 1971 on the application of social security schemes to employed persons,

5. For the legal definition of high seas, see the preamble to the United Nations Convention on the Law of the Sea.

6. See the full text of the United Nations Convention on the Law of the Sea (1833 UNTS 3).

7. See ILO Convention No. 102, especially Article 6.

8. See Additional Disposition 16(7) of the Spanish Consolidated Text of the Law on State Ports and the Merchant Navy.

9. See Article 3 of Italian Law No. 30, 27 February 1998.

10. See C 465/14, *Raad van bestuur van der Sociale verzekeringsbank v F. Wieland and H. Rothwangl*, ECLI:EU:C:2016:820.

11. OJ [2012] C 326/47.

to self-employed persons and to members of their families moving within the Community,<sup>12</sup> and (EC) No. 883/2004 of the European Parliament and the Council of 29 April 2004.<sup>13</sup> Similar cases are pending before the European Court of Human Rights (ECtHR) (*Carril Vázquez*, 2018), which address the principles of equal treatment and the prohibition of discrimination on grounds of nationality. It is also to note that the ECtHR deems social security contributions as “property” and thus acquired rights should be respected and their export guaranteed.<sup>14</sup>

A further problem arises out of the short period during which contributions are paid to a particular flag State, either because the ship changes flag or because the seafarer is employed for a voyage or on a short-term basis. In general, and due to the nature of shipping and distant fishing, workers might contribute to a number of flag States and nevertheless not receive any benefits. While State coordination would solve this problem of lack of aggregation, it would require international arrangements that are far from being straightforward. Against this backdrop, in the case of the EU, and as highlighted by the Communication from the Commission of the European Communities to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on Reassessing the regulatory social framework for more and better seafaring jobs in the EU,<sup>15</sup> social security arrangements are usually left to party autonomy and thus to private insurance.

In light of the abovementioned shortcomings, the ILO Maritime Labour Convention (MLC, 2006),<sup>16</sup> no longer relies on the place of ship registration as the main responsible for social security matters, but on the seafarer's country of residence as the one factor that is (usually) stable in his or her life. However, and although the MLC, 2006, entered into force in 2013, many countries have yet failed to implement these provisions. This article addresses the case of the European Union where Directive 2009/13/EC implementing the Agreement concluded by the European Community Shipowners' Associations (ECSA) and the European Transport Workers' Federation (ETF) on the ILO Maritime Labour

12. OJ [1971] L 149/2.

13. OJ [2004] L 314/1. Regulation No. 883/2004 has been amended by Regulation (EC) No. 988/2009 (OJ [2009] L 284); Regulation (EU) No. 1244/2010 (OJ [2010] L 338); Regulation (EU) No. 465/2012 (OJ [2012] L 149); and Regulation (EU) No. 1224/2012 (OJ [2012] L 349). This regulation replaced Regulation (ECC) No. 1408/71 with effect as from 1 May 2010, but only for EU nationals, i.e. not covering European Economic Area (EEA) nationals.

14. See ECtHR, Case 57028/00, judgment of 3 March 2011, *Klein v. Austria*; ECtHR, Case 10441/06, judgment of 7 November 2013, *Pichkur v Ukraine*.

15. The Communication is a first phase consultation of the social partners at Community level provided for in Article 138(2) of the Treaty. See COM(2007)0591 final.

16. See full text of MLC, 2006.

Convention, 2006 (MLC, 2006),<sup>17</sup> ensures EU compliance with this Convention although it has not been ratified by all EU Member States.

Regrettably, the EU Regulations on Social Security Coordination have not been amended in line with the new approach taken by the MLC, 2006, as this approach is not mandatory. Standard A4.5, paragraph 4, of the MLC, 2006, establishes that ratifying countries can deviate from the seafarer's country of residence rule and "determine, through bilateral and multilateral agreements and through provisions adopted in the framework of regional economic integration organizations, other rules concerning the social security legislation to which seafarers are subject". Accordingly, the EU provisions still allocate social security matters on the basis of the flag State principle. Although an interesting development can be found in the Court of Justice's case law where a number of cases – that will be discussed in this article – are resolved by reference to the seafarer's country of residence. Along with the inherent limitations to the coordination efforts undertaken within the EU, this development speaks in favour of replacing the flag State principle by the approach taken by the MLC, 2006.

This article also addresses a further argument in favour of aligning the EU Social Security Coordination Regulations with the MLC, 2006, i.e. the lack of coordination between the law applicable to social security contributions and personal income tax in cross-border employment. While the latter is a problem that is difficult to solve, the 2017 amendments to the Organisation for Economic Co-operation and Development (OECD) Model Tax Convention on Income and Capital have also established principles in favour of the seafarer's residence principle.

As is discussed below, the generalization of the residence principle in addressing seafarers' matters might also help to increase the efficiency and effectiveness of State aid measures focused on supporting national policies on the recruitment and retention of seafarers. The article closes with some final remarks summarizing the pros and cons of the residence principle in terms of enhancing seafarers' access to social security benefits.

### **Social security in the ILO Maritime Labour Convention**

The Seafarers' Bill of Rights – as the ILO Maritime Labour Convention (MLC, 2006), is also known – discusses social security protection within the framework of Title 4. In line with ILO Convention No. 102 (1952), Regulation 4.5 requires ratifying countries to take steps to achieve progressively comprehensive social security protection for all seafarers, i.e. States are granted some flexibility to do so on account of their national circumstances. To start with, they have to provide at the very least three of the nine above-mentioned branches – preferably, medical

17. See OJ [2009] L 124/30.

care, sickness benefit and employment injury benefit<sup>18</sup> – at the time of ratification.<sup>19</sup> In doing so, they are obliged to ensure that seafarers benefit from social security protection no less favourable than that enjoyed by shore-workers.<sup>20</sup>

Regulation 4.5 of the MLC, 2006, does not allocate the responsibility to provide social security protection to any particular State, but to all member States. It is the Code of the MLC, 2006, that deals with this issue in an innovative manner. Deviating from the general rule based on Article 94 of UNCLOS, the primary obligation in these matters is now placed upon labour-supplying countries while flag States retain a subsidiary obligation to ensure that all seafarers have protection. In this vein, paragraph 3 of Standard A4.5 reads as follows: “Each Member shall take steps according to its national circumstances to provide the complementary social security protection referred to in paragraph 1 of this Standard to *all seafarers ordinarily resident in its territory*” (emphasis added; see McDonnell, Devlin, and Doumbia-Henry, 2011; Doumbia-Henry, Forthcoming). Reinforcing the new role of labour supplying countries, Title 5 on Compliance and Enforcement lays down Labour-Supplying Responsibilities in Regulation 5.3, including the implementation of the Convention’s requirements as to the social security protection of seafarers who are its nationals or who are resident or otherwise domiciled in their territory.

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All ratifying countries to the MLC, 2006, are under the obligation of submitting a Declaration at the time of ratifying the Convention, specifying the branches for which they provide social security protection to resident seafarers.<sup>21</sup> Thereafter, the information is posted on the ILO public website, making it possible to learn about the branches to which EU Member States have committed. Regrettably, some States do not provide comprehensive social security protection (covering all branches) to seafarers. In particular, Finland, Hungary, Ireland, Malta, Portugal (including its registry in Madeira), Romania and Slovenia provide social security coverage under three branches only to seafarers residing in their jurisdiction. Cyprus, Denmark (including its registry in the Faroe Islands), Germany and Spain provide coverage to seafarers under four branches.<sup>22</sup>

The number of branches of social security specified by the abovementioned EU Member States is in clear contrast with the number of branches that they ostensibly provide to shore-workers. For example, an examination of the *Social*

18. See Regulation 4.5, Guideline B4.5 – Social security, para. 1, of the MLC, 2006.

19. See Regulation 4.5, Standard A4.5 – Social security, para. 2, of the MLC, 2006. The list of branches to be provided to seafarers by each ILO member State is published on the ILO website and it is part of the documentation that they have to send to the ILO once they have ratified the Convention.

20. Regulation 4.5, para. 3, of the MLC, 2006.

21. See Standard A4.5, paras. 2 and 10 of the MLC, 2006. See also Chaumette (2016) and Doumbia-Henry (forthcoming).

22. See ILO Ratification and Implementation Information for the Maritime Labour Convention, 2006, as of March 2020.

*Security Programs Throughout the World* database reveals that the same countries have programmes dealing with the eight branches covered by the database.<sup>23</sup> In a similar vein, a reading of the comments made by the Committee of Experts on the Application of Conventions and Recommendations (CEACR) regarding the application of the MLC, 2006, by EU Member States indicate that some countries acknowledge that they do not respect the equal treatment principle between seafarers and shore-based workers. Specifically, Belgium, Bulgaria, Cyprus, Denmark, Greece, Hungary, Ireland, Italy, Lithuania, Malta, Poland and Spain have not updated their legislation to include non-national seafarers residing in the country who work on board foreign-flagged ships. The CEACR's comments reveal that the disparity in treatment also applies to non-national seafarers residing in their territory who work on that country's registered ships, as occurs apparently in Bulgaria, Cyprus, Greece, Ireland and Lithuania.

The latter not only infringes Regulation 4.5, paragraph 3, of the MLC, 2006, but also other international and European instruments that lay down the right to equal treatment for social security benefits and non-discrimination. While the ILO Equality of Treatment (Social Security) Convention, 1962 (No. 118)<sup>24</sup> has been ratified by Denmark, Finland, France, Germany, Ireland, Italy and Sweden, all EU Member States are party to the European Convention on Human Rights (ECHR).<sup>25</sup> According to the ECtHR, this Convention prohibits all forms of discrimination on grounds of nationality with respect to the right to social security, unless they are justified by "very weighty reasons".<sup>26</sup>

In fact, the MLC, 2006, is fully conscious that it will take time until labour-supplying countries are in a position to provide full social security coverage to all seafarers residing in their territory, including those working on board foreign-flagged ships. Hence, flag States are not exempted from ensuring social security protection to seafarers working on board their ships, at least in the terms of Standard A4.5, paragraph 5 of MLC, 2006. This provision requires that all these seafarers have access to the benefits "provided for by Regulations 4.1 and 4.2 and the related provisions of the Code, as well as those that are inherent in its general obligations under international law".

The reference to Regulation 4.1 on medical care and Regulation 4.2 on shipowners' liability in the event of death and long-term disability – that are considered supplementary to social security protection in the first paragraph of Standard A4.5 –, serves to highlight that the responsibility of flag States in

23. See *Social Security Programs Throughout the World, Europe 2018*. See also ISSA Country profiles.

24. See the full text of ILO Convention No. 118.

25. See 213 UNTS I-2889.

26. See ECtHR, Case 40892/98, judgment of 19 September 2003, *Koua Poirrez v France*, para. 46; ECtHR, Case 55707/00, judgment of 18 February 2009, *Andrejeva v. Latvia*, para. 87. See also Verschueren (2018, p. 112).

Regulation 4.5 is a secondary one. In this regard, the primary responsibility lies with labour supplying countries. In spite of this hierarchy, Standard A4.5, paragraph 6, makes it clear that flag States are also obliged to ensure adequate coverage under the social security branches.

As indicated by the CEACR as regards one case, the Committee notes the Government's indication that it has not adopted any measures for providing benefits to non-resident seafarers working on ships flying its flag who do not have adequate security coverage. The Committee recalls that although the primary obligation rests with the Member in which the seafarer is ordinarily resident, under Standard A4.5, paragraph 6, Members also have an obligation to give consideration to the various ways in which comparable benefits will, in accordance with national law and practice, be provided to seafarers in the absence of adequate coverage in the nine branches of social security: *"The Committee requests the Government to provide information on any measures adopted under Standard A4.5, paragraph 6."*<sup>27</sup>

In the realm of the European Union, this reminder has been given to Belgium, Greece, Latvia, Lithuania, Malta and Sweden.

### The EU social security coordination framework

The EU social security coordination framework rests on the definitions of ILO Convention (1952) No. 102 (Jenard, 1979), but it does not seek to harmonize these matters within the European Economic Area (EEA). In practice, each country determines its own social security scheme, which usually is portrayed by two factors: the involvement of public management and, in particular, employers' and/or employees' obligation to pay into one social security scheme. One feature is of particular significance for seafarers: the regulations only apply to compulsory schemes, setting aside non-statutory complementary insurance schemes or special schemes for self-employed persons and collective bargaining agreements unless they have been made compulsory by national legislation.<sup>28</sup> This feature has a negative impact on seafarers' rights, to the extent that they

27. See ILO website, MLC Database, Greece. Comments by the CEACR.

28. See Carril Vázquez (2017). To fill the gap, other EU instruments have been released that have been critically analysed by Del Sol and Rocca (2017): Council Directive 98/49/EC of 29 June 1998 on safeguarding the supplementary pension rights of employed and self-employed persons moving within the Community, [1998] OJ L 208/46; Directive 2003/41/EC of the European Parliament and of the Council of 3 June 2003 on the activities and supervision of institutions for occupational retirement provision, [2003] OJ L 235/10; and Directive 2014/50/EU of the European Parliament and of the Council of 16 April 2014 on minimum requirements for enhancing worker mobility between Member States by improving the acquisition and preservation of supplementary pension rights, [2014] OJ L 128/1.

cannot avail themselves of these regulations to gain access to the benefits provided by private insurance schemes.<sup>29</sup>

Coordination provisions apply to workers who are or have been subject to the legislation of one or more Member States and who are nationals of one of the Member States or who are stateless persons or refugees residing within the territory of one of the Member States, as well as to the members of their families and their survivors.<sup>30</sup> These provisions include nationals of third countries residing within the EEA by virtue of Council Regulation (EC) No. 859/2003 extending the provisions of Regulation (EEC) No. 1408/71 and Regulation (EEC) No. 574/72 to nationals of third countries who are not already covered by those provisions solely on the ground of their nationality.<sup>31</sup> These provisions, nevertheless, give priority to international agreements between participant States already concluded before its application if they are more favourable to workers. Similarly, they do not preclude new agreements if concluded under certain conditions.<sup>32</sup>

The most relevant provisions when it comes to coordinating compulsory social security systems within the EU are presently articles 11 et seq. of Regulation (EC) 883/2004. As indicated, these provisions do not harmonize substantive aspects of social security protection, but only determine the Member State to which contributions have to be paid in cross-border cases. Once the responsible Member State has been identified, its legislation establishes who is covered by its system and to what extent. In this manner, the regulation avoids positive and negative conflicts, and provides for the portability principle that ensures that acquired rights to benefits are retained and that these are translated into benefits where appropriate.

In shipping, the main rule is laid down in Regulation (EC) 883/2004, article 11(4), according to which, “[f]or purposes of this title, an activity as an employed or self-employed person normally pursued on board a vessel at sea flying the flag of a Member State shall be deemed to be an activity pursued in the said Member State”. The flag State jurisdiction applies regardless of the ship’s operation on the territorial sea of a third State. In *M. J. Bakker and Minister van Financiën*,<sup>33</sup> the Court of Justice addressed the case of a Dutch seafarer residing

29. Instead, they must rely on other pieces of legislation that are not tailor-made to their needs such as Directive 2014/50/UE, or on the Court of Justice as has already been the case for other international transport workers. See Case C 379/09, judgment of 10 March 2011, *Maurits Casteels v British Airways plc*.

30. See Article 2 of Regulation (EEC) 1408/71 and Regulation (EC) No. 883/2004. Both provisions also indicate that they apply to the abovementioned workers’ survivors.

31. See OJ [2003] L 124/1.

32. See Article 8 of the Regulation No. 883/2004.

33. Case C 106/11, judgment of 7 June 2012, *M. J. Bakker v Minister van Financiën*.

in Spain who was providing services for a Dutch-seated company on board Dutch-flagged dredgers operating in the territorial sea of China and the United Arab Emirates. According to the Court of Justice, “neither respect for the sovereignty of the coastal State nor the United Nations Convention on the Law of the Sea requires that a worker in Mr Bakker’s situation be deprived of the benefit of the social insurance provided for, in accordance with Regulation No. 1408/71, by the Member State whose flag the vessel flies, when that vessel is located in the territorial waters of a State other than that Member State”.<sup>34</sup>

By the same token, the flag State jurisdiction prevails over the seafarer’s country of residence as indicated by the Court of Justice in the *Salemink* judgment.<sup>35</sup> The case concerned a Dutch employee working on a gas extraction platform on the Dutch continental shelf who had been excluded from the Dutch social security system because he was residing in Spain. The Court of Justice reminded that the relevant factor is the habitual workplace and not the worker’s residence. The latter is an additional factor that cannot be considered when establishing who is covered by the social security system of a Member State.<sup>36</sup>

Nevertheless, the seafarer’s residence might play a role under given circumstances.<sup>37</sup> Pursuant to article 11(4) of Regulation 883/2004, “a person employed on board a vessel flying the flag of a Member State and remunerated for such activity by an undertaking or a person whose registered office or place of business is another Member State shall be subject to the legislation of the latter Member State if he resides in that State. The undertaking or person paying the remuneration shall be considered as the employer for purposes of the said legislation”. Hence, if both a shipowner and a seafarer reside in one and the same country, the law governing social security matters would be that of the seafarer’s country of residence.

The same applies if the vessel is not flying the flag of a Member State as concluded by the Court of Justice in the *SF* case.<sup>38</sup> A Latvian citizen residing in Latvia was requested to pay social security contributions to the Netherlands because he had been working for a Dutch-based company on board a vessel flying the flag of Bahamas that, during the working period on board, sailed over the German part of the continental shelf of the North Sea. The claim was appealed by the seafarer arguing that the relevant system was that of his residence in accordance with article 11(3) of Regulation 883/2004, as the latter is applicable in default of any other criteria. The Court of Justice confirms, first, that the case

34. Case C 106/11, *Bakker*, para. 29. See also para. 28.

35. Case C 347/10, judgment 17 January 2012, *A. Salemink v. Raad van bestuur van het Uitvoeringsinstituut werknemersverzekeringen*, para. 32–35.

36. Case C 347/10, *Salemink*, para. 40–44.

37. Case C 347/10, *Salemink*, para. 32–35.

38. Case C 631/17, judgment of 8 May 2019, *SF v Inspecteur van de Belastingdiens*.



is covered *ratione personae*<sup>39</sup> by the regulation – to the extent that both employer and employee are residing within the EU –, and second, the applicability of the said provision for cases in which services are provided on board ships flagged in third States.

If the seafarer is a mobile worker, who is constantly changing employers, vessels and territories,<sup>40</sup> the country of habitual residence is again preferred provided that a substantial part of their activity is undertaken in that country. If not, the applicable system would be that of the Member State where the registered office or place of business of the employer is located, as indicated by the Court of Justice in the *Kik* judgment.<sup>41</sup> This case involved a Dutch seafarer residing in the Netherlands who was first compulsorily insured in the latter country as he was employed by a Dutch company until 31 May 2004. From 1 June 2004, he became an employee of a company seated in Switzerland, but to provide the same services as for the Dutch company on board a Panamanian-flagged pipe-laying vessel operating outside the territory of the EEA (approximately three weeks above the continental shelf of the United States and approximately two weeks in international waters) and then above the continental shelf of the Netherlands (periods of one month and approximately one week) and of the United Kingdom (a period of slightly more than one week). While his wages were subject to income tax in the Netherlands, the Court of Justice found that no substantial part of the services were provided in this country and prioritized the residence of the Swiss employer as the factor that established the applicable social security scheme.<sup>42</sup> Finally, the Court of Justice took a pro-worker approach reminding that, if the legislation of the Member States in which the employer is seated does not provide for the employee to be insured under any social security scheme, the legislation of the Member State of the employee's residence will apply.<sup>43</sup> The same applies in cases involving several employers with registered offices or places of business in different Member States.

As can be seen, and although the EU social security coordination framework has not been amended to be in line with Standard A4.5, paragraph 3, of the MLC, 2006, the Court of Justice allocates a remarkable number of cases in accordance with the residence principle. The issue would be then whether it is necessary to derogate the flag State principle in a highly coordinated framework. Setting aside open interpretation issues – in particular as regards to the meaning of the social

39. *Ratione personae* refers to a legal instrument's personal scope of application, i.e. who is covered by the regulation, while *ratione materiae* indicates a legal instrument's substantive scope of application, i.e. the matters included on it.

40. Regulation No. 883/2004, article 13.

41. Case C 266/13, judgment 19 March 2015, *L. Kik v Staatssecretaris van Financiën*.

42. Case C 266/13, judgment 19 March 2015, *L. Kik v Staatssecretaris van Financiën*, para. 58.

43. Case C 266/13, judgment 19 March 2015, *L. Kik v Staatssecretaris van Financiën*, para. 63.

security and social assistance concepts –, the main challenge arising out of this legal framework is how to achieve effective administrative cooperation. Although the EU regulations clearly lay down the obligation to cooperate, it takes much time and effort to actually get Member State administrations to cooperate,<sup>44</sup> as the development of the Electronic Exchange of Social Security Information (EESSI)<sup>45</sup> and in particular the establishment of the European Labour Authority,<sup>46</sup> illustrate. Yet, migrants can find it hard to join a social security scheme, due to not only information issues and the administrative burden, but because the required criteria make access to benefits difficult (Carril Vázquez and Fotinopoulou Basurko, 2018). In the case of seafarers and other maritime professionals, the allocation of these matters to their country of residence would not solve all coordination issues as will be seen in the last section of this article, but would certainly simplify matters.

### Personal income tax and social security coordination

Although responding to different objectives, personal income tax and social security contributions are key elements in modern welfare systems and their linkages are taken into account by national systems when establishing their tenets. Some countries finance their social security system mainly from taxation and request low social security contributions while others provide coverage on a contributory basis, thereby imposing higher social security contributions. In cross-border scenarios, this interaction might give rise to different problems that are difficult to solve as long as the preferred approach seems to be to permit States to adjust the different coordination rules on the basis of the territoriality principle.<sup>47</sup>

One feasible solution to the lack of adjustment between personal income tax and social security provisions would be the harmonization of connecting factors in the provisions dealing with both matters (Tepperová, 2019, p. 37). However, an examination of existing rules reveals that countries select the governing legal system based on the underlying values to either personal income tax or social security. While the former aim at distributing the tax paid in a particular situation focusing on governmental interests, the latter seeks to ensure an individual's rights and benefits in social security matters (Tepperová, 2019, p. 27).

44. See Regulation 883/2004, article 76; and Schiek et al. (2015, p. 74).

45. More information on EESSI is available on the European Commission website.

46. Regulation (EU) 2019/1149 of the European Parliament and of the Council of 20 June 2019 establishing a European Labour Authority, amending Regulations (EC) No. 883/2004, (EU) No. 492/2011, and (EU) 2016/589 and repealing Decision (EU) 2016/344 (Text with relevance for the EEA and for Switzerland), [2019] OJ L 186/21.

47. Extensively, within the EU framework, see Spiegel et al. (2015).

Accordingly, divergence between both regimes in cross-border employment cases seems to be the rule and not the exception. Shipping does not deviate from this pattern either, although recent developments have the potential to change this situation and to help better align both contributions.

Unlike social security matters, the levy of personal income tax is not subject to direct coordination at EU level, but to the oversight of the Court of Justice, in particular to remove discriminatory provisions. Hence, the rule is to resort to bilateral or multilateral tax treaties where the rationale is to tax where income is earned. In a national setting, this country is usually the country of the worker's residence, an assumption that fails in cross-border cases. In shipping, the situation is even more complicated because the place from which the shipping enterprise is effectively managed might be of relevance, in addition to workplace and residence. In this vein, article 15(3) of the former OECD Model Tax Convention on Income and Capital allocated the tax power in line with article 8 thereof, according to which countries deduct wages and other remuneration paid to employees from the taxable profits of a shipping company, and thus the same countries have an interest in levying tax on those employees; i.e. the country from where the shipping enterprise is effectively managed.

Hence, States may choose among three different connecting factors in their tax treaties, and only two of them might coincide with those that allocate social security matters; i.e. the seafarer's country of residence or the flag State assuming that the latter is the country where services are provided. For example, this is the case of Greece whose income tax treaties are based on the above-cited article 15(3), but it is bound by the EU Regulations on Social Security Coordination. Specifically, the country primarily applies the flag State principle and the habitual residence rule on a subsidiary basis to determine the relevant social security system for seafarers as outlined in the previous section of this article, while resorting to the place from where the shipping company is effectively managed to determine which country has tax power upon seafarers' personal income.

Another problem arising out of this non-coordinated approach is double taxation or no taxation at all. In shipping, this type of case is aggravated by the probability of triangular situations, i.e. cases in which a seafarer not only works and resides in different countries, but also the shipping company is effectively managed from another country. The Dutch Court of Appeals has already dealt with one of these cases,<sup>48</sup> involving a seafarer that worked on board a ship operating in the Netherlands for 22 days and in Nigeria for 212 days. According to article 15(3) of the 2001 Belgium-Netherlands Tax Treaty, the seafarer had to be paid his entire personal income in the Netherlands because the shipping company

48. Hertogenbosch, judgment of 30 December 2009, V-N 2010/32.8.

was effectively managed from this country. However, the seafarer faced the problem that Belgium, his country of residence and where he paid taxes, had signed a treaty with Nigeria in 1989 whose article 15 lays down that the right to tax corresponds to the country where work is performed, in this case Nigeria. As the 1991 Netherlands-Nigeria Tax Treaty is of no avail in this situation because the taxpayer does not reside in Dutch territory, double taxation seems unavoidable. Moreover, it is to note that the seafarer's country of residence is not taken into account, thereby the taxpayer does not gain any tangible benefit out of this double taxation.

In light of these triangular cases, the OECD proceeded to amend the Model Tax Convention on Income and Capital in November 2017. The new article 15(3) reads as follows:

Notwithstanding the preceding provisions of this Article, remuneration derived by a resident of a Contracting State in respect of an employment, as a member of the regular complement of a ship or aircraft, that is exercised aboard a ship or aircraft operated in international traffic, other than aboard a ship or aircraft operated solely within the other Contracting State, shall be taxable in the first-mentioned State.

In line with the provisions of the MLC, 2006, on social security matters, the new rule points to the seafarer's country of residence as the one responsible for taxing personal income. The amendment made in Article 15(3) is explained by noting that countries from where shipowners effectively manage their business are overcompensated, given that they are allowed to tax, both, shipowner's profits and their employees' income. The new connecting factor has also a number of advantages. First, it avoids double (non-)taxation in the said triangular cases. Second, it tackles the complaint of countries that do not allow the taxation of non-residents (OECD, 2014). Third, it puts an end to interpretation issues such as of the meaning of "effective management" or determining the relevant enterprise in cases of hiring-outs and wet leases (Pötgens and Vergouwen, 2017). Fourth, and as the OECD Commentary to the provisions highlights, "[t]he purpose of that amendment was to provide a clearer and administratively simpler rule concerning the taxation of the remuneration of these crews" (OECD, 2017).

Another innovation in the new Article 15(3) is that the former modal verb usage "may" be taxed has been replaced by "shall", reinforcing the fact that this paragraph is an exception in respect to the two previous ones. In practice, this means that its application cannot be avoided by interpreting it as voluntary in character, while also providing grounds to countries other than that of the habitual residence to levy the personal income tax (OECD, 2014; Pötgens and Vergouwen, 2017). To that end, the OECD provides countries with two alternatives to this general rule, which actually allows taxation by both the country of the enterprise's effective management and that of the employee's

residence. However, neither of these alternatives can be inserted in a treaty without being accompanied by clear mechanisms to avoid double (non-)taxation, as indicated in article 23 of the OECD Model Taxation Convention (OECD, 2017, para. 9.9).

The amendments to the 2017 OECD Model Tax Convention enhance tax efficiency for, both, States and taxpayers, while bringing tax treaties in line with the move undertaken by the MLC, 2006, by allocating social security matters from the flag State to the seafarer's country of residence. For the time being, this is a forward-thinking move to the extent that the 2017 OECD Model Tax Convention is only a model, and a significant number of ongoing bilateral tax treaties do not adhere to it. As already discussed, the MLC, 2006, faces significant challenges when it comes to the implementation of its social security provisions. Nevertheless, it is important to bear in mind the benefits of such an alignment in personal income tax and social security for, both, countries and taxpayers. As mentioned, cross-border cooperation among social security authorities is challenging, despite the clear mandate laid down in Article 76 of Regulation 883/2004. This cooperation is, however, more challenging and even non-existent between tax and social security authorities (Bakirtzi, Schoukens and Pieters, 2010), which for different reasons may deprive individuals of their full taxation and social rights (Spiegel et al., 2015, p. 55).

### **State aid in maritime transport and cross-border employment**

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The inherent internationalization of shipping and other ocean-related industries has obliged practically all States with a maritime interest to adopt aid measures as a means to avoid “flagging-out”<sup>49</sup> and to attract re-registration. In fact, preferential tax regimes are so commonplace across the world that “the race to the bottom has reached the bottom” (Stevens, 2017), leaving no room for discussion regarding how essential these are for the retention of national fleets. Along with specific preferential tax regimes for shipping companies, States may include exemptions and/or reductions in social security contributions and personal income tax. As indicated by the Community Guidelines on State Aid to Maritime Transport (hereafter, Guidelines),<sup>50</sup> one of the main objectives is “to maintain the level of maritime know-how and the protection and promotion

49. The term “flagging out” refers to the practice of switching the vessel's registration to another country, to operate under another “flag State”; more commonly, this is referred to as operating under a “flag of convenience”.

50. They were first adopted in 1989, amended in 1997, OJ [1997] C 205/1; and in 2004, Commission Communication C(2004) 43. OJ [2004] C 13/3. They are based on Article 107 of Treaty on the Functioning of the European Union (TFEU).

of employment of seamen in the European Union”;<sup>51</sup> i.e. in national settings. Hence, these measures might play a significant role in the recruitment and retention strategy of maritime nations.

The establishment of a preferential tax regime is also behind this type of strategy to the extent that if the shipping interest is kept in the country, the same will apply to maritime-related jobs. However, this assumption is only true to a certain extent, owing to the fact that shipping companies can employ seafarers from all over the world. Seafaring is a global profession and that creates the conditions for a race to the bottom in labour and employment standards (Carballo Piñero, 2015). Against this backdrop, exemptions and/or reductions in social security contributions and personal income tax, along with educational and training grants, might be used to level the playing field, to encourage shipowners to recruit seafarers residing in the country that adopts these types of measures.<sup>52</sup>

The Guidelines also entitle EU Member States to subsidize maritime training and to support labour-related costs, such as social security contributions and personal income tax. This type of State aid seeks to increase employment in the sector for EU/EAA seafarers, defined in the Guidelines as “Community/EEA citizens, in the case of seafarers working on board vessels (including ro-ro ferries<sup>53</sup>) providing scheduled passenger services between ports of the Community”, and “all seafarers liable to taxation and/or social security contributions in a Member State, in all other cases”.<sup>54</sup>

However, while 19 EU Member States have implemented a tonnage tax regime (Weber and van de Sande, 2017), only ten provide such seafarer schemes.<sup>55</sup> Seafarer schemes may consist of an exemption or reduction in social security contributions (Belgium, France, Germany, Ireland), in income tax (Denmark) or both (Finland, Italy, the Netherlands, Portugal, and Sweden), including cost relief in the event of, for example, repatriation in Finland. In Bulgaria, Croatia and Italy, they also attach a training requirement to the tonnage tax, i.e. shipowners are required to provide cadet berths<sup>56</sup> in exchange for participating in a preferential tax regime.

Remarkably, these State aid measures are granted in the form of exemptions, refunds or grants to the shipping company, and not to seafarers. An immediate problem arising out of this approach is that it may give rise to double taxation in

51. See Guidelines, para. 3.1.

52. For a successful example in the United Kingdom, see Oxford Economics and Frazer-Nash Consultancy (2017), and UK Chamber of Shipping (2018). Yet, this example has been strongly criticized; see Oyaró Gekara (2010).

53. “Roll-on/roll-off” ferries for motor vehicles.

54. See Guidelines, para 3.2.

55. Information extracted from the European Commission, DG COMP website on State Aid Cases.

56. Sea-going training placements to help “cadets” complete their training and qualify as seafarers.

those cases in which the seafarer is residing in a different country from the one where the company is seated. According to Petition 2018/0502 sent to the European Parliament by an officer working for a Danish company under the Danish International Ship Register and apparently residing in Germany:

the passing of a new law in Denmark, which brings the company he works for under the DIS (Danish International Ship Register) tax regime, is severely disadvantageous and discriminatory towards foreign workers. The petitioner claims that in the future, affected workers will be paid a net salary, but will then be subject to taxation and social security contributions in their own country of residence, resulting in a situation of double taxation.

Despite this being a clear case of double taxation, the Court of Justice does not consider this an infringement of Member States' obligations to not hinder the EU free movement of workers and to not discriminate on grounds of nationality. The reason for this is because none of the States involved is treating these cross-border situations differently from national ones, and the Court is not competent to allocate taxing rights.<sup>57</sup> Against this backdrop, the only feasible way to solve the case seems to be for the seafarer to change country of residence, unless the countries involved conclude a tax treaty in terms of the abovementioned Article 15(3) of the 2017 OECD Model Convention on Income and Capital. Still, the latter might not be very effective in light of the fact that State aid is granted directly to the company, and thus this approach might endanger employment if the labour-supplying country does not adopt similar measures.

The scenario is different for social security contributions where the EU Regulations on Social Security Coordination ensure that there is only one country responsible on these matters. However, the adoption of State aid measures focused on national fleets does endanger sound recruitment and retention strategies across the EU where neither Cyprus nor Malta, the largest flag EU Member States, have implemented a seafarer scheme, and Croatia, a major labour-supplying country, only provides for a training requirement in its package. While countries across the world face a shortage in recruitment and

57. See, for example, C 513/04, judgment of 14 November 2006, *Kerckhaert und Morres*, ECLI:EU:C:2006:713; C 194/06, judgment of 20 May 2008, *Orange European Smallcap Fund*, ECLI:EU:C:2008:289; C 27/07, judgment of 3 April 2008, *Banque Fédérative du Crédit Mutuel v Ministre de l'Economie, des Finances et de l'Industrie*, ECLI:EU:C:2008:195; C 67/08, judgment of 12 February 2009, *Margarete Block v Finanzamt Kaufbeuren*, ECLI:EU:C:2009:92; C 128/08, judgment of 16 July 2009, *Jacques Damseaux v Belgian State*, ECLI:EU:C:2009:471; C 96/08, judgment of 15 April 2010, *CIBA Speciality Chemicals Central and Eastern Europe Szolgáltató, Tanácsadó és Kereskedelmi kft v Adó- és Pénzügyi Ellenőrzési Hivatal (APEH) Hatósági Főosztály*, ECLI:EU:C:2010:185; C 540/11, order of 19 September 2012, *Daniel Levy and Carine Sebbag v Etat belge - SPF Finances*, ECLI:EU:C:2012:581.

increasing “officer wastage” rates (ILO, 2019, p. 7), labour-supplying nations are better placed to resort to this type of aid measure as part of their recruitment and retention policies.

### Concluding remarks

The internationalization of maritime employment along with the increase in short-term employment call into question the flag State as the main party responsible for the social protection of workers at sea. In contrast, the country of residence provides a factor that is (usually) stable in the seafarer's life, avoids to a great extent aggregation and portability issues, and ensures the maintenance of acquired rights in cross-border employment. In line with this approach, the European Court of Justice has acknowledged the role of the residence factor in worker protection, in detriment to the flag State principle. While the latter still plays a role in the EU social security coordination framework, a number of reasons can be presented that suggest this role should be reduced. First, although the EU enjoys a highly coordinated system, achieving effective administrative coordination is nevertheless a difficult task. This would be simplified if the number of States involved in the need for coordination were reduced, as would be the case if preference were given to the seafarer's country of residence. Second, in view of the amendments made to Article 15(3) of the OECD Model Convention on Income and Capital, the choice of the seafarer's residence would assuage issues arising from lack of adjustment between social security and personal income tax provisions. Third, giving preference to the seafarer's country of residence might help to strengthen national recruitment and retention policies, to the extent that it will make labour-supplying countries the ones competent to adopt State aid measures.

This recommendation is not blind to the fact that the choice of the seafarer's country of residence will not resolve all coordination problems. From the comments made by the CEACR to EU member States on the implementation of the MLC, 2006, Croatia and Greece have indicated that they are experiencing difficulties in getting contributions paid by foreign shipowners. Specifically, they do not have mechanisms in place to force shipowners to pay contributions, which highlights an unsolved coordination problem requiring a cross-border framework. While the MLC, 2006, encourages ratifying countries to conclude bilateral and multilateral social security treaties,<sup>58</sup> Article 12 of the ILO Maintenance of Social Security Rights Convention, 1982 (No. 157),<sup>59</sup> signals the significance of coordination and mutual assistance between all parties and their

58. See Standard A4.5, paragraph 8, of the MLC, 2006.

59. See full text.



respective authorities with a view to preventing gaps in the provision of social security and to enhancing the functioning of social security schemes. The latter Convention is complemented by the ILO Maintenance of Social Security Rights Recommendation, 1983 (No. 167),<sup>60</sup> which provides two model frameworks for the conclusion of the said bilateral or multilateral social security instruments and their coordination. To date, Convention No. 157 has four ratifications only: Sweden, Spain, Philippines and Kyrgyzstan.

The EU has not provided for a multilateral framework as regards third countries, and the issue is entrusted to Member States that address labour migration to and from non-EU territories via bilateral and multilateral agreements.<sup>61</sup> In general, they are encouraged by instruments such as the European Social Charter to ensure the coordination of social security systems by any means,<sup>62</sup> but the reality is that the lack of a uniform coordination system is challenging the right to social security of many individuals (Strban, 2018). First, agreements depend on the international relations of each EU Member State, usually based on factors such as culture, language or geography that do not fully respond to the needs of global professions such as maritime ones. Second, bilateral agreements have a more or less comprehensive scope of application both *ratione materiae* and *ratione personae*. They may be restricted *ratione materiae* to, for example, only the funding of social security, i.e. just covering contributions but not benefits, while others may cover benefits, but only those attached to limited specified branches such as pensions for old age and invalidity. A further problem for the specific case of maritime professionals arises if the agreement does not cover schemes based on collective bargaining agreements, to the extent that these workers might then not get access to coverage in the event that, for example, sickness materializes. From a *ratione personae* scope, these agreements might be limited to nationals, which also implies a restriction as regards maritime professionals.

Third, bilateral agreements diverge in the way they apply the coordination principles. Even if covered, the equal treatment principle might not be applied to residents on the grounds that a third country not participating in the bilateral agreement is not obliged to treat nationals of the contracting States in the same manner as its nationals (Strban, 2018, p. 136). The exception would be represented by the *Gottardo* case law,<sup>63</sup> according to which all EEA/EU and Swiss

60. See full text.

61. See European Commission, Communication on the “External Dimension of EU Social Security Coordination”, 30 March 2012, COM(2012) 153 final, and Eisele (2018).

62. See article 12, paragraph 4, of the European Social Charter.

63. Case C 55/00, judgment of 15 January 2002, *Gottardo*, ECLI:EU:C:2002:16, and Administrative Commission for the Coordination of Social Security Systems, Recommendation No. P1 of 12 June 2009 concerning the *Gottardo* judgment, according to which the advantages enjoyed by a State's own nationals under a bilateral convention on social security with a non-member country must also be granted to workers who are nationals of other Member States, [2009] OJ C 106/47.

nationals have to be treated as nationals of a contracting State that is also an EU Member State. As to the aggregation of all relevant periods, a scattered approach might be preferred to a horizontal provision for all covered branches of social security as laid down in article 6 of Regulation (EC) 883/2004.<sup>64</sup> In fact, short periods of employment or insurance might not be taken into account, which again goes against the interests of maritime employees as short-term employment is increasing (Taha, Siegmann and Messkoub, 2015). Finally, provisions on administrative cooperation are more or less detailed, but their significance is recognized in all bilateral agreements.

As can be seen, there is a significant degree of divergence between bilateral treaties (Holzmann, 2016), but this is a challenge that could be overcome by multilateral coordination instruments (Strban, 2018, p. 145) or the further harmonization of agreement contents (Van der Mei et al., 2018, p. 85). In fact, the role of the European Labour Authority might prove essential in enhancing coordination activities within the EU that might have a positive spill-over effect in relation to third countries. In doing so, the EU would be attending to the call made by the MLC, 2006, in Standard A4.5, paragraph 8, as well as acknowledging other benefits of the move taken by this Convention to place labour-supplying countries at the centre of the seafarer's right to social security. In particular, it would acknowledge the fact that the residence factor seeks to simplify system coordination significantly in light of the mobility of the sector and, increasingly, the short-term employment pattern. Nevertheless, this overview of agreement divergence reinforces the choice made by the Court of Justice in granting to seafarers working on board foreign-flagged ships access to social security coverage based on their country of residence. In general, in a sector where private insurance arrangements are the rule, the MLC, 2006, is to be praised. The Convention acts to remind us that seafarers are no less entitled to the human right to social security, and it lays the foundations upon which to provide it. Going forward, the onus for action lies with national lawmakers.

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# The risk of under-insurance in the Finnish statutory pension scheme for self-employed workers: A trajectory analysis

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**Abstract** Using unique data on the contribution base, we investigate under-insurance within the statutory pension scheme for self-employed workers in Finland. Under-insurance is defined as the difference between pension-declared income and tax-declared income. The trajectory modelling technique applied has allowed us to estimate the levels of under-insurance for different subgroups and to identify possible explanatory factors. Under-insurance is found to be persistent and large. The analysis reveals six distinctive and homogenous sub-groups of self-employed workers. Close to 84 per cent of these workers pay too little in contributions, often leading to inadequate protection against personal risks. Especially for lower-income self-employed workers, this points to myopic behaviour as regards contributing to the self-employed statutory pension scheme and calls for fine-tuned economic incentives.

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The research data is confidential and thus not accessible.

[Correction added on 15 December 2020, after first online publication: The copyright line was changed.]

**Keywords** coverage, pension schemes, social security schemes, self employed, behaviour, statistical method, regression, Finland

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## Introduction

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Self-employed workers are those who work in their own firms, including freelancers and independent professionals, or who participate in firms as business partners. The labour markets for traditional employees and especially for self-employed workers have changed since the financial crisis in 2008. Self-employment has evolved differently across the Member countries of the Organisation for Economic Co-operation and Development (OECD), but there is a clear trend of a rising number of part-time self-employed workers (OECD, 2017). The increase of self-employed workers as “gig workers” reflects a larger restructuring of the labour market. Currently, there is a growing number of classes of self-employed workers active in different scopes of business. The majority run small businesses with no employees and are financially vulnerable, while others have paid employees and have high levels of income (e.g. Fachinger and Frankus, 2015; Schulze Buschoff and Protsch, 2008).

In this article, the focus of our study is the statutory pension scheme for self-employed workers in Finland. According to a European Commission survey, most countries provide some form of public old-age social security for self-employed workers (EU-SPC, 2018). In this sense, the European pension systems in general differ from that of the United States of America for example, where there are more voluntary schemes as well as individual options within schemes (see, for example, Nyce, 2007). With respect to risks, it is common that public social security arrangements include unemployment, parental, sickness and disability benefits. The objectives of public statutory old-age pension systems are diverse. Whitehouse et al. (2009) construct a framework for old-age pension systems that is comprised of six general objectives. Three are important from our point of view: i) pension coverage, ii) adequate retirement benefits, and iii) financial sustainability and affordability of pensions to taxpayers and contributors.

From the point of view of social insurance, the central question is whether the pension insurance available to different classes of self-employed worker is of an adequate level. Pension security is the most significant form of social insurance on an individual level. Typically, on leaving the workforce, it should provide an income for 22–25 years on average. In the event of prolonged under-insurance

during a worker's active working life, this would result in a considerable period of financial insecurity in retirement. Personal financial knowledge is considered important for adequately preparing for retirement. The question is whether people with different levels of financial knowledge prepare differently for old age? Angrisani and Casanova (2019) suggest that there is a general need to improve levels of preparedness for retirement. Consequently, they argue that all people, regardless of their different self-rated and objectives levels of financial knowledge, may benefit from financial literacy campaigns. Such campaigns should help address under-insurance to ensure that workers are protected adequately. At the policy level, under-insurance is already a European-wide concern that has caught the attention of the European Commission (EU-SPC, 2018).

According to data and statistics from administrative registers, the Finnish self-employed form a heterogeneous group in terms of levels of income earned from self-employed work. Most professionals are "traditional" self-employed persons with low earnings: for example, hairdressers and barbers, truck drivers, plumbers and construction artisans. These professions with their persistently low incomes have been recognized in other countries too (Williams, 1999). Other, much smaller, groups of self-employed professionals, such as medical specialists, medical doctors and pharmacists, have high income. In Finland, across the life course and professional career, the status of workers may shift between being self-employed and employed and it is possible to hold the status of being self-employed alongside that of being an employee. According to OECD data, the share of part-time self-employed persons among all self-employed persons in Finland was 29 per cent in 2016 (OECD, 2017). In fact, the majority of the self-employed work also as employees (Knuuti and Palomurto, 2015).

A survey conducted by the Actuarial Association of Europe reports that, in most countries, the pension contribution for self-employed workers is based on tax-declared earnings or profits. Finland, France and Spain are exceptions since individual self-employed workers in these three countries have the freedom to select their own contribution base (see AAE, 2018).

Since the 1970s, pension coverage for the self-employed in Finland has been regulated by the Self-Employed Persons' Pensions Act (Government of Finland, 2006), under which the self-employed make mandatory contributions to pension insurance. Statutory pension insurance for the self-employed provides coverage for the contingencies of permanent disability, the death of a spouse and for old age. As stated, self-employed workers in Finland set their own level of pension-declared income (income assessment base). Their pension accrues based on this level of pension-declared income. The ability to choose the level of pension-declared income has led a clear majority of the self-employed to set their income at a minimum level in order to pay low contributions. In other words, under-insurance is startlingly common. The pension security of the

self-employed is therefore much lower than that of regular employees.<sup>1</sup> Although there is a mechanism for the self-employed to voluntarily update or adjust the income assessment base in the statutory pension system, this is rarely used.

Three reasons may be presented to explain the observed tendency for under-insurance among self-employed workers. First, some self-employed workers prefer to pay a small statutory pension contribution and rely on individual savings and/or life insurance. This reflects low confidence in the efficiency or sustainability of the statutory pension system. Second, as already mentioned, the self-employed are a heterogeneous group in terms of income. The majority of the self-employed have fragmentary working lives with uncertain and variable income levels. Together with other budget constraints, this is an understandable reason for selecting a low pension contribution, at least in the short run. The mandatory pension contribution is a more-or-less fixed cost, and therefore the incentive to keep it lower than the real income requirement is strong. Third, certain mechanisms within the universal income-tested social security system (i.e. the national pension and guarantee pension)<sup>2</sup> assist low-income individuals. Some self-employed workers may choose to set their mandatory earnings-related pension contribution at a minimum level and rely on the universal income-tested scheme for old-age security (free-rider problem).

These problems indicate myopic behaviour. This is a serious problem, as statutory pensions play such an important role in Finland in providing an income in old age and in mitigating labour market and personal risks such as unemployment, sickness, permanent disability and the death of the spouse. A large proportion of self-employed workers are ill-prepared for these risks.<sup>3</sup>

In the economics literature, there are at least two possible explanations for this myopia. First, ill-informed individuals seem to respond systematically to their own misperceptions of pension incentives (Chan and Huff Stevens, 2008). Second, behavioural explanations propose “bounded rationality and self-control and suggest that at least some of the low-saving households are making a mistake and would welcome help in making decisions about their saving” (Thaler and Benartzi, 2004).

The heterogeneity of the self-employed implies further issues. A small share of the self-employed have well-established businesses or have ownership in enterprises. Typically, they are financially secure with no financial uncertainties

1. There are also other countries in the European Union where the income assessment base of the self-employed may lead to deficits in old-age security (EU-SPC, 2018).

2. For more information, see *Kansaneläke* and *Takuueläke* in the Finland country profile of SSA and ISSA (2018).

3. Benartzi and Thaler (2013) report similar findings for employees in the United States. Almost one quarter of those with access to an employer-sponsored retirement plan fail to join, and many lack sufficient savings.



concerning their future income. These workers can afford to pay high pension contributions. In Finland, such contributions are subsidized by the tax system. The higher the contributions and the taxable income are, the more favourable the subsidies. In fact, there is evidence that some groups of self-employed workers, mainly in the health-care sector, pay the highest pension contributions possible to receive the higher tax subsidies.

The concept of under-insurance used in this article includes a moral statement suggesting that the insurance arrangement, in practice, leads to inadequate pension security. The accompanying question, therefore, is the need to define adequate pension security. Clearly, the term “under-insurance” requires an operational definition in the pension context. For self-employed workers, it is a question of setting a correct income assessment base. A proper base should reflect the actual labour input of the self-employed worker. The taxable salary is a solid candidate for an income assessment base. It reflects the labour input in a consistent and reliable way. In addition, data on up-to-date taxable income is available from administrative registers.

Here, we examine under-insurance by assessing self-employed workers who persistently hold their pension-declared income (the base for contribution and income assessment) below their tax-declared income. Our research questions are the following:

- How common and persistent is under-insurance?
- Which groups of the self-employed are under-insured?
- What factors explain under-insurance?

For our research aims, it is essential to select a statistical method capable of finding homogenous sub-groups of the self-employed. The research topic itself, as well as the nature of the available data from administrative registers, requires longitudinal analysis. Trajectory analysis is one technique based on finite mixture modelling that can be used in this context. The latter can reveal interesting latent groups of self-employed that have different income levels. We can use the latent groups in subsequent analysis and characterize them using selected background information.

For this study, the authors have had access to confidential individual-level data about the self-employed in Finland. The data is drawn from the administrative registers of the Finnish pension system. The high-quality income data is merged with a number of background factors to analyse the pension contribution base during the period 2012–2016. The data and the trajectory method allow us to reveal income trajectories that manifest the nature of statutory pension insurance; namely, appropriate-insurance, under-insurance, or over-insurance.

In the following, we first give an overview of statutory pensions for self-employed workers in Finland and show the importance of pension-declared income in the context of social security. Next, we introduce the trajectory method and show the results of a statistical analysis based on which we have classified the

self-employed into several sub-populations according to their pension-declared income. We then analyse the factors affecting the probability of belonging to a certain sub-group of the self-employed. Finally, we conclude with a discussion of the results.

### **Finnish pension system for self-employed workers**

The Finnish pension system for traditional employees<sup>4</sup> and self-employed workers is statutory with comprehensive pension coverage. The statutory (first pillar) pension provision consists of a defined benefit earnings-related pension, which aims to preserve the pre-retirement income level to a reasonable degree. Universal programmes (the national pension and guarantee pension) ensure minimum security. Private pension insurance plays a relatively small role compared to the statutory scheme for both regular employees and the self-employed.<sup>5</sup>

By law (Self-employed Persons' Pensions Act), self-employed workers must take out statutory pension insurance if their financial activity or tax-declared income exceeds a certain limit and if their self-employment has continued for at least four months. The pension contribution rate of self-employed workers is determined based on that of the average private-sector employee. On average, the contribution rate of the self-employed is equal to that of regular employees.<sup>6</sup> Pension security accrues based on the pension-declared income.

In the Finnish statutory pension scheme for traditional employees and self-employed workers, the contribution provides coverage for the contingencies of permanent disability, the death of a spouse and old age. In addition, the same pension-declared income is used to determine eligibility for several benefits provided through the universal basic social security system. Figure 1 shows the benefits covered by pension-declared income.

The pension-declared income is an administrative yearly income base on which the pension contribution is paid. By law, the pension-declared income should equal the *value of the labour input* of the self-employed worker. The self-employed can negotiate this income with the pension provider (most commonly, a pension insurance company).<sup>7</sup> The tax-declared income is the taxable yearly tax-declared income from the enterprise, excluding investment income (capital income). In an ideal case, the tax-declared income should equal the pension-declared income, at least over the long run. About 90 per cent of the self-employed have some

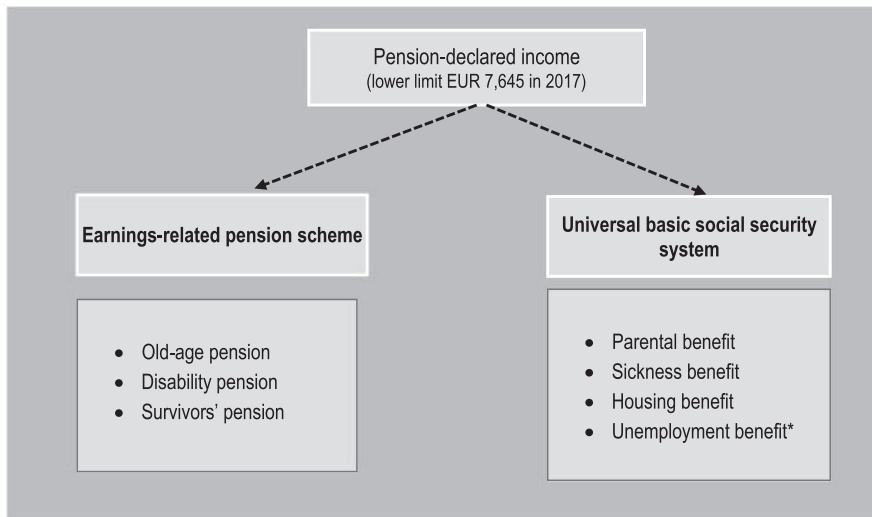
4. For more information, see *Työeläke* in the Finland country profile of SSA and ISSA (2018).

5. For a more comprehensive description of the Finnish pension system, see Lassila and Valkonen (2007).

6. However, employers pay the main part of the pension contribution of regular employees.

7. In Finland, "licensed non-profit insurance companies, pension funds, and foundations serve as carriers for the social insurance benefits and collect contributions"; see SSA and ISSA (2018).

**Figure 1.** Social security benefits covered by pension-declared income



Note: \*Lower limit for earning-related unemployment benefit is EUR 12,564.  
Source: Authors.

amount of tax-declared income on a yearly basis. The remaining 10 per cent have no such tax-declared income, and their pension-declared income is above the lower limit. In other words, these self-employed workers pay pension contributions to the pension scheme for self-employed workers although they have no tax-declared income from self-employment.

The self-employed can set their pension-declared income within certain limits. In 2017, the lower limit was 7,645 euros and the upper limit 173,625 euros (EUR). These upper and lower limits follow price indexation. The limits influence access to statutory pensions and the aforementioned universal social security benefits. In practice, the lower limit is restrictive, as many low-income self-employed workers find themselves ineligible for some benefits.

From year to year, the annual income of self-employed workers can vary greatly, but prolonged low income leads to low pension security. The upper limit is also significant as some professionals (e.g. medical doctors and pharmacists) use the upper limit to their personal benefit. As mentioned, these higher contributions are subsidized by the tax system. Regardless, the upper limit is important because it imposes a pension ceiling on a statutory pension system that otherwise lacks one.

The pension-declared income and lower contribution limits have been discussed repeatedly in Finland. Recently, the contribution base and future changes to the pension scheme of the self-employed were discussed in round-table talks between the Ministry of Social Affairs and Health (STM) and labour unions (STM, 2019).

There are no reserve funds collected in the statutory pension system for the self-employed, thus making it a pay-as-you-go scheme. As the running pension expenditure is not covered fully by pension contributions, the State participates in the financing of pensions for members of the self-employed scheme. In 2017, the State's share was 19 per cent of the pension expenditure, and it has financed an increasing part of the pension expenditure for several years. Thus, the financial sustainability of the pension system is at risk.

### Unique administrative register data

Our research uses primary data from administrative registers on self-employed workers in Finland. The data covers the years 2012–2016, with a total of 144,014 self-employed workers (that is, persons who work in their own firms, including freelancers and independent professionals, and persons who participate in firms as business partners) who pay statutory pension insurance. The data covers 46 per cent of all self-employed workers over the study period. The main part of the data is the pension-declared income and tax-declared income of the self-employed.

The additional background data includes information about investment income, type of enterprise, number of self-employed spells, share of working life as a self-employed worker, wages earned as a regular employee, earnings-related pension of retirees, as well as individual characteristics, such as gender, highest level of education, year of birth and occupation.

Table 1 shows that average income during the study period is stable. The figures in parenthesis indicate the share of self-employed workers who receive the type of income in question. For example, about 50 per cent received investment income

**Table 1.** Average self-employed earnings over study period 2012–2016, EUR/year<sup>a</sup>

	2012	2013	2014	2015	2016
Pension-declared income	19,290	19,440	19,460	19,390	19,190
Pension-declared inc./Tax-declared inc.	69%	70%	69%	67%	65%
Tax-declared income	28,130 (94%)	27,720 (93%)	28,140 (94%)	28,800 (94%)	29,710 (94%)
Investment income <sup>a</sup>	7,740 (51%)	7,950 (50%)	7,730 (49%)	8,600 (49%)	7,810 (48%)
Wage income <sup>b</sup>	24,270 (46%)	23,830 (42%)	23,000 (38%)	22,850 (36%)	23,140 (36%)
<i>N</i>	102,026	101,828	102,670	100,694	96,602

Notes: <sup>a</sup> For those who have some income (<0). <sup>b</sup> Wage earned as an employee.

Source: Authors, based on official data.

from their enterprise. A slightly smaller share worked also as employees and received a wage.

In the following analysis (see Table 3 and Table 4), we constructed several independent variables from the additional data. The independent variables are dichotomous, with class zero as the reference group.

The investment income is the taxable yearly capital income from the enterprise. Given that investment income is not a basis for the statutory pension in Finland, we did not use it in our analysis as a response variable. Instead, we used investment income as an indicator variable. In the following analysis, the sum of investment incomes was transformed into a dichotomous variable (0=no investment income, 1=some investment income).

The wage earned as an employee is a gross yearly wage from work as a regular employee. About 45 per cent of the self-employed worked also as employees at some point during the study period. We use wage income as an indicator variable, which shows if the self-employed worker had been a regular employee during the study period. In the following analysis, the sum of wages earned as an employee is transformed into a dichotomous variable (0=less than 5,000 euros, 1=5,000 euros or more).

We have constructed dichotomous variables from the individual measures in the following way: spells as self-employed (0=one spell, 1=more than one spell), share of working life as self-employed (0=less than 50%, 1=50% or more), highest education (0=low education (basic level and secondary level), 1=high education (university level)), gender (0=male, 1=female), age (0=older self-employed (born before 1965), 1=younger self-employed (born in 1965 or after)) and type of enterprise (0=self-employed, 1=business partner).

### **Modelling longitudinal data: Trajectory analysis**

Our data are longitudinal, with individuals followed over time. Traditional longitudinal data analysis methods often assume that the study population should be relatively homogeneous with respect to the study phenomena conditioned on background variables (e.g. Fitzmaurice, Laird and Ware, 2011). Our data are not homogeneous, but exceptionally heterogeneous. Heterogeneous longitudinal data analysis has its own methods, which depend on whether the response variable is continuous or categorical. If it is the former, then the methods used are based mainly on the theory of, so-called, finite mixtures. In such cases, the two main options are group-based trajectory analysis (GBTA; see Nagin, 1999 and 2005) and growth mixture models (GMM; see Muthén and Muthén, 2017). In GBTA, we assume that individuals within the group are very homogenous (independent measurements and the same variance), whereas in GMM an additional heterogeneity is accepted through random coefficients of the

assumed model. In our analysis, we used GBTA since we wanted the individuals within the groups studied to be as homogeneous as possible, to facilitate our ability to interpret them. This analysis also leads to a computationally somewhat more stable and faster solution, since GMM easily yields proliferation of the number of parameters to be estimated when the number of clusters grows.

Trajectory analysis has been applied in many fields of study, such as labour economics (Nummi, Salonen and O'Brien, 2017), sociology (Don and Mickelson, 2014), managerial science (Mani and Nandkumar, 2016) and health science (Franklin et al., 2013; Nummi et al., 2014 and 2017b). Trajectory analysis is based on finite mixture modelling that is applied to longitudinal data. Examples of the application of mixture modelling is given in Böhning et al., (2007), and comprehensive examples of the applications of trajectory analysis in psychology, the field from which the analysis originates, are presented in Nagin and Odgers (2010).

The semi-parametric<sup>8</sup> trajectory modelling can be described in the following way.

Let  $\mathbf{y}_i = (y_{i1}, y_{i2}, \dots, y_{iT})'$  represent the sequence of measurements on an individual  $i$  over  $T$  periods, and let  $f_i(\mathbf{y}_i | \mathbf{X}_i)$  denote the marginal probability distribution of  $\mathbf{y}_i$  with possible time-dependent covariates  $\mathbf{X}_i$ . It is assumed that  $f_i(\mathbf{y}_i | \mathbf{X}_i)$  follows a mixture of  $K$  densities

$$f_i(\mathbf{y}_i | \mathbf{X}_i) = \sum_{k=1}^K \pi_k f_{ik}(\mathbf{y}_i | \mathbf{X}_i), \quad \sum_{k=1}^K \pi_k = 1 \text{ with } \pi_k > 0, \quad (1)$$

where  $\pi_k$  is the probability of belonging to sub-group  $k$ , and  $f_{ik}(\mathbf{y}_i | \mathbf{X}_i)$  is the density for the  $k$ th sub-group. For modelling the trajectory mean in time  $t$ , simple linear models such as low-degree polynomials are usually applied. For example, the following simple linear model can be used to model the development within the sub-group  $k$  in time:

$$\mathbf{x}'\beta_k = \beta_{0k} + \beta_{1k}t \quad (2)$$

The mean model can also include other time-dependent covariates or time-stable covariates (risk-factors). For parameter estimation and sub-group assignment, the method of Maximum Likelihood (ML) is often applied (see Nagin, 1999; Jones, Nagin and Roeder, 2001; Jones and Nagin, 2007). The posterior probability for sub-group membership is defined by

8. The term semi-parametric means that the groups themselves are nonparametric constructs, but the development within the groups are modelled with parametric models.

$$w_{ik} = \frac{\pi_k f_k(y_i | X_i, \varnothing_k)}{f(y_i | X_i, \varnothing_k)} \quad (3)$$

under parameter estimates  $\widehat{\varnothing}_k$  and  $\widehat{\pi}_k$ . The updated sub-group probabilities are the

$$\widehat{\pi}_k = \frac{1}{N} \sum_{i=1}^N \widehat{w}_{ik}. \quad (4)$$

Once the model parameters have been estimated, the posterior probability estimates provide a way to assign each individual to a specific sub-group or developmental trajectory. Individuals can be assigned to the specific sub-group in which their posterior probability is the highest. Note that the sub-groups revealed by trajectory analysis are not fixed constructs like gender, social group, city or country. They are just approximations of a more complex reality. Therefore, each individual belongs to a specific group only with a certain probability.

In practice, the analysis involves several steps. The first step is to select the trajectory model. This involves selecting the appropriate outcome distribution (e.g. normal, binomial, Poisson), with the assumed model for mean development (e.g. low-degree polynomial). The second step involves selecting the number of sub-groups. This is determined with statistical information criteria (e.g. AIC or BIC)<sup>9</sup> and subjective evaluation. Using the final estimated mixture model, each individual's posterior probability to belong to the specific cluster can be calculated. It is then customary to assign an individual to a cluster using a maximum posterior probability. The analysis can further be extended using multinomial modelling to explain factors that affect sub-group memberships (see Jones, Nagin and Roeder, 2001; Jones and Nagin, 2007).<sup>10</sup>

## Empirical analysis

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### *Selecting the number of trajectory groups*

The first step of the analysis was to select the regression model for the trajectory groups and to make assumptions about the distribution of the outcome (pension-declared income). We chose a simple low-degree time polynomial as

9. AIC = Akaike information criterion; BIC = Bayesian information criterion.

10. Trajectory analysis is a readily available technique in many statistical software packages, such as R, Mplus, Stata and SAS. An overview of trajectory modelling software is presented in van der Nest et al. (2020). We have used the SAS Proc Traj procedure for our analysis (e.g. Jones, Nagin and Roeder, 2001; Jones and Nagin, 2007).

our regression model and the normal distribution for the outcome variable. The next step was to identify the number of groups or mixture components from the sample (in our case, the population) using BIC information criteria.<sup>11</sup> The investigation of the number of groups started from four groups and concluded with seven. The seven-group solution yields best BIC value, but for practical reasons, a six-group solution seems to be the most relevant considering natural interpretations. This is also because seven groups or more would yield groups too small to be useful in practice. For the group-specific mean trajectory model, we simply fitted straight lines in time “year”. In addition to time, we also used tax-declared income as a time-dependent covariate in the trajectory model.

The group-specific trajectories of the pension-declared income in Figure 2 are based on group averages from the original data. Figure 2 also includes the averages of tax-declared income in the same groups. Figure 2 further includes upper and lower limits of the pension-declared income (dotted lines). Note that the upper limit is the same as the contribution ceiling. For simplicity, the fit of the group-specific regression models are not drawn in Figure 2. However, before we explain the results in more detail, we will comment on the fit of the statistical model. The goodness of the fit can be evaluated by posterior group membership probability means, which define which group an individual is assigned to. The values are the following: 0.96, 0.93, 0.99, 0.90, 0.96 and 1.00. High probabilities indicate that the self-employed can credibly be grouped into six distinctive sub-groups.<sup>12</sup>

### *Main results*

Overall, the figures indicate a constant share of *under-insurance* over the study period, which is not surprising. The sub-groups revealed by the trajectory analysis have some common features. We can see that the smallest groups have a high pension-declared income that is above the tax-declared income. These groups are named *over-insurance* (Groups 1, 4 and 6). The two largest groups have a pension-declared income that is below the tax-declared income. They are named *under-insurance* (Groups 3 and 5). One group has a pension-declared income that roughly equals the tax-declared income. It is named *appropriately-insured* (Group 2).

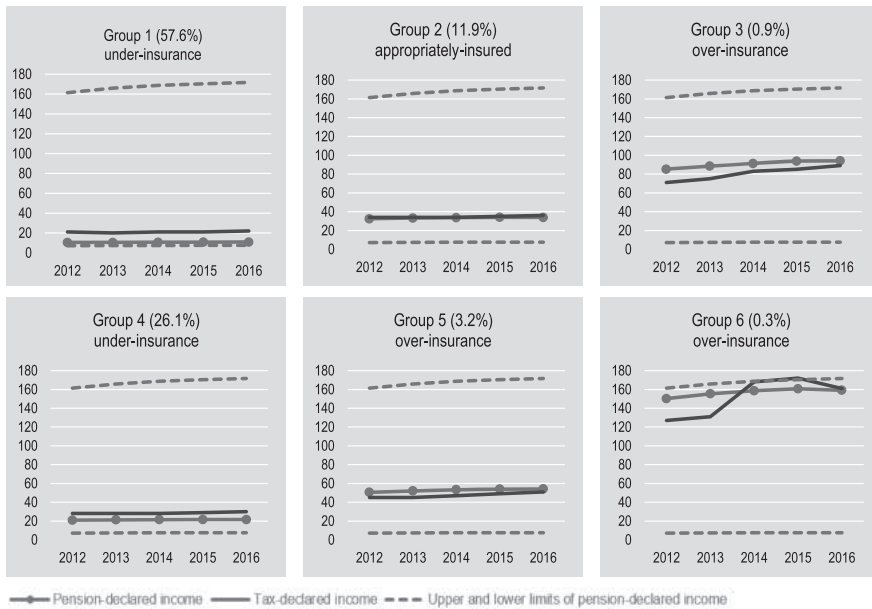
The pension-declared income is above the tax-declared income in Groups 3 (0.9%), 5 (3.2%) and 6 (0.3%). This means that roughly 4 per cent of the self-employed pay more for their pension insurance than their actual

11. The corresponding BIC values ( $N=144,014$ ) are: -1,732,497, -1,685,484, -1,652,955 and -1,639,755.

12. Nagin (2005) states that 0.7 is the minimum level for solid group assignment.



Figure 2. Income trajectories over study period 2012–2016, average EUR 1,000.



Notes: Dotted lines indicate the upper and lower limits of the scheme. Circle-marked and solid lines indicate the income trajectories.

Source: Authors, based on official data.

tax-declared income would require. In Group 3, the pension-declared income is about EUR 94,100 and the tax-declared income about EUR 88,500. Thus, the difference of pension-declared income to tax-declared earnings is relatively large. In Group 5, the pension-declared income is about EUR 54,100 and the tax-declared earnings EUR 50,800. In the smallest group (Group 6), the pension-declared income is about EUR 159,100 and the tax-declared earnings EUR 161,500 at the end of the study period.

In the vast majority of cases, the pension-declared income is below the tax-declared earnings. Groups 1 (57.6%) and 4 (26.1%) include 84 per cent of the self-employed. In Group 1, the pension-declared income is about EUR 10,900 and the tax-declared income about EUR 22,400. Correspondingly, in Group 4, the pension-declared income is about EUR 21,500 and the tax-declared income about EUR 30,100. Group 1, which is the largest group, also shows a large difference between the pension-declared income and the tax-declared income. We can note that the levels of pension-declared income and tax-declared income are low in any case. For instance, if we compare the tax-declared income of Group 1 to private-sector workers, the level for the

self-employed fall short of the private-sector workers. The average tax-declared income of private-sector workers was EUR 37,300 in 2015, which is 1.8 times greater than the tax-declared earnings of the self-employed in Group 1 over the same period.

Group 2 (11.9%) has a pension-declared income of EUR 33,900 and a tax-declared income of EUR 35,500. In other words, the tax-declared income roughly equals the pension-declared income. This group, which is the smallest, is of special interest. It consists of self-employed workers whose tax-declared income and pension-declared income are high. In practice, a number of these self-employed workers choose to set their pension-declared income at the upper limit. Their tax-declared income is also at the same level.

What would happen to the pension contribution if the contribution base of the self-employed were to change from the pension-declared income to the tax-declared income drawn from tax registers? Let us consider the largest group (Group 1: 57.6%). In 2016, the average annual contribution based on the pension-declared income of the self-employed in Group 1 was EUR 2,627 (contribution rate: 24.1%\*10,900 euros). If the contribution base would be the tax register, the average contribution would be EUR 5,423 (24.1%\*22,500 euros).

Finland's economy has been struggling since the financial crisis in 2008, encompassing the study period, with a growing number of enterprises going bankrupt (Statistics Finland, 2017). This could explain part of the under-insurance, as low-income self-employed workers often work as artisans or run small businesses (e.g. beauty salons and single-person construction firms). The public social security system has mechanisms in place to assist low-income individuals. Some self-employed workers may select to set their earnings-related pension contribution at the minimum level and rely on a public minimum pension and other means-tested benefits for old-age security.

### *Probability of trajectory group membership*

The next step of the analysis is to find the risk factors (see background information) that affect the probability of group membership. We examined the connection of background material to trajectory group membership by specifying the probability of trajectory group membership to follow a multinomial logit model. The multinomial logit model with coefficient odds ratio estimates were estimated simultaneously with the trajectory estimates of the trajectories themselves. We have taken into account the individual-level risk factors as described in the previous section. The results are presented with Group 2 (*appropriately-insured*) as the reference group. Table 2 shows the odds ratios of

**Table 2.** Predictors of trajectory group membership (odds ratio)

Risk factor	Odds ratio, Group 2, ref (11.9%) appropriately-insured				
	Group 1 (57.6%) under-insurance	Group 3 (0.9%) over-insurance	Group 4 (26.1%) under-insurance	Group 5 (3.2%) over-insurance	Group 6 (0.3%) over-insurance
Female	1.2***	1.2***	1.2***	0.9***	1.5***
Highly educated	0.2***	2.6***	0.2***	0.4***	5.3***
Business partner	0.5***	0.7***	0.4***	0.8***	0.3***
Several spells as self-employed	1.2***	0.9***	1.3***	1.0***	0.2***
High share of working life as self-employed	1.2***	0.8***	1.3***	1.0***	0.8***
Younger self-employed	0.6***	1.7***	0.5***	0.8***	4.6***
Investment income	0.9***	1.0***	0.5***	1.2***	2.3***
Wage income as regular employee	1.0***	0.9***	1.7***	0.9***	0.3***

Notes: Estimates from Multinomial Logit regressions. \*\*\*, \*\*, and \* indicate significance at the 1%, 5% and 10% level, respectively.

Source: Authors, based on official data.

the background material. As a rule, the odds ratios indicate the differences between the reference group (Group 2) and other groups.

Groups 1 (1.2), 3 (1.2), 4 (1.2) and 6 (1.5) are more likely than the reference group (Group 2) to contain females. Group 5 (0.9) is less likely to do so. The risk factor of having a high educational level is different in the various groups. Compared to Group 2, Groups 3 (2.6) and 6 (5.6) are more likely to include highly educated people. The probability is smaller in Groups 1 (0.2), 4 (0.2) and 5 (0.4). The risk factor of being a business partner is smaller in all other groups than in the reference group (Group 2). The risk factor of having several spells of self-employment varies between the groups, but the statistical significance is low in some cases. It is less likely for people in Group 6 (0.2) to have several spells of self-employment compared to those in Group 2. Several spells of self-employment are more likely in Groups 1 (1.2) and 4 (1.3) than in the reference group.

The risk factor of having a long active career as self-employed differs between the groups, yet the statistical significance is low in some cases. Groups 1 (1.2) and 4 (1.3) are more likely than Group 2 to have long working lives. Those in Groups 3 (0.8) and 6 (0.8) are less likely to have long working lives than those in Group 2. Those in Groups 3 (1.7) and 6 (4.6) are more likely to be

younger self-employed persons than those in Group 2, while this is less likely for those in Groups 1 (0.6), 4 (0.5) and 5 (0.8).

The risk factor of drawing investment income from self-employment varies between the groups. Those in Groups 5 (1.2) and 6 (2.3) are more likely to have investment income than those in Group 2, while this is less likely for those in Group 5 (0.9). The risk factor of working as an employee also varies between the groups. The probability is higher among those in Group 4 (1.7) than among those in Group 2, while this is less likely for those in Groups 5 (0.9) and 6 (0.3).

The self-employed in the *under-insurance* groups are more likely to be blue-collar workers compared to those in the *appropriately-insured* group. The self-employed in the *under-insurance* groups are less likely to be highly educated, young or business partners. They are also more likely to have several spells as self-employed and long self-employed working lives. The self-employed in the *under-insurance* Group 4 (26.1%) are less likely to draw investment income from their enterprise and are more likely to have employment contracts outside their own enterprise.

The *over-insurance* groups differ from each other. The smallest of them, Groups 3 (0.9%) and 6 (0.3%), share some common features. They are more likely to consist of blue-collar workers, and workers who are highly educated and young compared to those in the reference group. They are less likely to be business partners, to have several spells as self-employed or to have long self-employed working lives. The self-employed in *over-insurance* group 5 (3.2%) are more similar to the self-employed in the *under-insurance* groups. Interestingly, the self-employed in the *over-insurance* groups are less likely to have wage income as employees.

### *Sensitivity of trajectory group membership probabilities*

Next, we elaborate the analysis further. The configuration of risk (or background) factors can be used to predict the probability of trajectory group membership (e.g. Nagin and Odgers, 2010). Table 3 shows the impact of ten scenarios with eight predictor variables. Scenario 1 assumes all predictors are equal to zero. This is the same as when counting group membership probability for the self-employed with none of the risk factors. Scenarios 2 to 9 report the same probabilities for self-employed persons with only one of the eight risk factors included in the model. This calculation illustrates that each risk factor increases the probability of membership in one or more of the sub-groups. Some individual risk factors shift the probabilities away from those in a no-risk scenario (1).

For example, consider scenario 4 (Business partner) and scenario 7 (Younger self-employed). The composition of these groups is different compared to the

**Table 3.** *Predicted trajectory group membership probabilities*

Scenario	Group 1 under-insurance	Group 2 appropriately-insured	Group 3 over-insurance	Group 4 under-insurance	Group 5 over-insurance	Group 6 over-insurance
1. No risk factors	72.9	6.0	0.1	20.3	0.7	0.0
2. Female self-employed only	61.2	9.9	1.0	24.3	3.1	0.4
3. Highly educated only	52.1	15.2	2.3	22.9	6.6	0.8
4. Business partner only	45.5	18.4	1.2	29.1	5.6	0.2
5. Several self-employed spells only	63.8	9.3	0.6	23.9	2.4	0.1
6. High share of self-employed working life only	56.3	12.0	0.7	27.6	3.0	0.3
7. Younger self-employed only	49.8	15.1	1.5	28.4	4.5	0.6
8. Investment income only	51.4	14.5	1.0	29.0	3.7	0.4
9. Wage income only	68.5	8.6	0.7	19.5	2.6	0.1
10. All the above risk factors	46.1	20.9	2.4	25.6	5.1	0.0
Population base rate	57.6	11.9	0.9	26.1	3.2	0.3

Source: Authors, based on official data.

**Table 4.** Five most common professions or businesses by trajectory groups over study period 2012–2016. Frequencies in parentheses

	<b>Group 1 (57.6%) under-insurance</b>	<b>Group 2 (11.9%) appropriately-insured</b>	<b>Group 3 (0.9%) over-insurance</b>	<b>Group 4 (26.1%) under-insurance</b>	<b>Group 5 (3.2%) over-insurance</b>	<b>Group 6 (0.3%) over-insurance</b>
1	Barbers and hairdressers (6,922)	Taxi drivers (1,416)	Private medical service providers (284)	Barbers and hairdressers (3,190)	Private medical service providers (531)	Pharmacists (244)
2	Builders (6,164)	Truck drivers (1,254)	Pharmacists (255)	Builders (2,975)	Other health service providers (327)	Private medical service providers (50)
3	Other health service providers (3,952)	Builders (1,062)	Dental service providers (106)	Taxi drivers (2,506)	Dental service providers (286)	Dental service providers (16)
4	Beauty service providers (2,584)	Other health service providers (1,028)	Business consultants (31)	Truck drivers (2,189)	Truck drivers (212)	Lawyers (5)
5	Construction engineers (2,302)	Physiotherapists (607)	Other health service providers (26)	Other health service providers (1,539)	Taxi drivers (187)	Business consultants (5)

Source: Authors, based on official data.

no-risk scenario. The largest group gets smaller and other groups grow respectively. Of note, the reference group (*appropriately-insured*) is significantly larger in the above scenarios. Another example concerns scenario 3 (Highly educated) and Groups 1 and 6 with the lowest and the highest pension-declared income, respectively. The statistical model predicts that the probability of membership in Group 1 is 52.1 for highly educated self-employed persons who have none of the other risk factors. The counterpart prediction for membership in Group 6 for these self-employed workers is 0.8. In contrast, the predicted probabilities of membership in Group 1 and Group 6 for the self-employed with no risk factors are 72.9 and 0, respectively. Thus, being highly educated reduces the probability of membership in Group 1 and increases the probability of membership in Group 6. The presence of all risk factors (scenario 10) results in changes in group probabilities, but the order of the groups remains the same.

In the following section, we study the group composition in more detail in terms of occupation type and statutory pension.

### *Trajectory groups and occupation*

In Finland, the self-employed are most often engaged in professional occupations or in running small-scale enterprises. The most common professions or enterprises are construction firms and beauty salons. Table 4 shows the five most common professions by trajectory group. The *under-insurance* groups (1 and 4) and *appropriately-insured* group (2) consist of professions such as hairdressers and barbers, truck/taxi drivers, health-care professionals and construction professionals. The *over-insurance* groups (3, 5 and 6) consist mainly of medical and business professionals. Pharmacists, for example, are almost exclusively in Group 6. When considering pension-declared incomes and groups, the division is clear. The largest groups are low-income groups in terms of both self-employed tax-declared and pension-declared income.

### *Trajectory groups and the retired self-employed*

About 8 per cent of the self-employed ( $n=11,020$ ) in our data sample retired by the end of the study period. About 75 per cent of those are old-age retirees. We can thus evaluate the real level of statutory pension security in the trajectory groups. This essentially represents the outcome for the entire working life, which should cover income needs for the remaining life course. Two things need to be explained before making further comparisons. First, the statutory pension consists of earnings-related and universal but income-tested public pensions. In the Finnish pension system, the role of earnings-related pensions is far greater

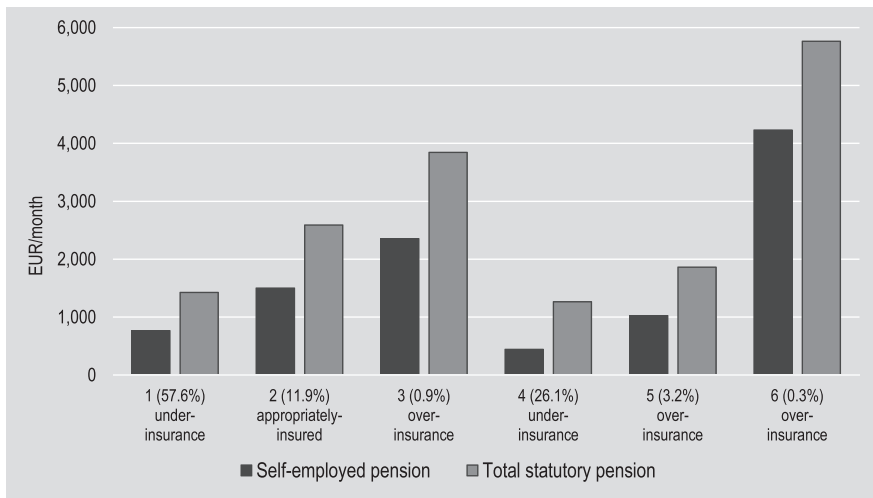
than that of public pensions. However, in individual cases, especially considering the self-employed, the role of income-tested public pensions is important for old-age income. Second, the pension for the self-employed may consist of pension income from regular employment as well. Periods working also as an employee are common among the self-employed. Thus, the low pension accrual from self-employment is somewhat compensated by the pension from employment.

Figure 3 shows that statutory old-age social security differs from group to group. The old-age pension (euros/month) from self-employment is the lowest (440) in Group 1 (57.6%) and the highest (4,200) in Group 6 (0.3%). The second highest (2,300) self-employed pension is found in Group 3 (0.9%). In Group 1 (57.6%), the pension is 760. In Group 2 (11.9%), the self-employed pension is 1,500.

Figure 3 also shows that the total statutory old-age pension is clearly higher than the self-employed pension in all groups. The total old-age pension is highest in Groups 3 and 6. By any standard, EUR 4,000–6,000 is a high monthly pension in the statutory pension scheme. In Groups 1 and 4, the pension income security is less than EUR 1,500, which is low considering both the maturity of the pension system and cost of living in Finland.

The trajectories have strong implications for pension income adequacy. Trajectories and sub-groups revealed by this analysis predict different pension outcomes. Naturally, the pension is a sum of accruals throughout the entire

**Figure 3.** Statutory old-age pension by trajectory group over study period 2012–2016, EUR/month on average, in 2016 prices



Source: Authors, based on official data.



working life, yet our short-period sample predicts the pension level accurately. As the trajectories show, the groups with low pension-declared income (Groups 2 and 4) also contain future low pension sub-groups, or at least large numbers of individuals with a severe risk of a low level of old-age income security. According to Figure 2, the tax-declared income from self-employment in these groups was persistently above the pension-declared income.

## Conclusion and discussion

In this article, we have studied the Finnish statutory pension system for self-employed workers, wherein self-employed workers set their own level of pension-declared income (income assessment base). This freedom to choose is set within upper and lower limits, but opens up the possibility of myopic behaviour with regard to self-employed workers' relationship with their pension system. Using trajectory modelling, we assessed how persistently and to what extent the pension-declared income of the self-employed is below (or above) their tax-declared income.

According to our results, the self-employed do not form a homogenous population, but the group-based trajectory modelling revealed six distinctive and homogenous sub-populations with different levels of pension-declared income. Two groups, with the respective sizes of 26.1 per cent and 57.6 per cent of the sample, show significant and prolonged under-insurance. Hence, nearly 84 per cent of self-employed select to under-insure themselves systematically.

The “under-insurance” groups are more likely to be blue-collar self-employed compared to those in the group “appropriately-insured”. The under-insurance groups are less likely to include the highly educated, young workers or business partners. The self-employed in the under-insurance groups are more likely to have several spells working as self-employed and long self-employed working lives. Group 4, with 26.1 per cent of the self-employed, is less likely to draw investment income from their enterprise and is more likely to have employment contracts outside their own enterprise. This could indicate that budget constraints, asymmetric information or simply preferences help to promote under-insurance. However, the analysis revealed that especially Group 1 “under-insured” (including 57.6 per cent of the self-employed) has very inadequate protection against personal income risks.

Despite evidence of under-insurance in the statutory pension scheme, the majority of the self-employed are not faced with the likelihood of absolute poverty in old age. The overall livelihood of self-employed workers is decent, since they commonly also have spells of employment as regular employees during their working lives. Commonly, they also have savings, life insurance or other assets. However, under-insurance is a serious problem, as the majority of

under-insured workers do not have adequate protection against the contingencies of disability and the death of the spouse. Moreover, a large number of self-employed workers are at a severe risk of a low level of old-age income security. These observations call for fine-tuned economic incentives or binding legislation for self-employed persons. For example, tax-rules could be permanently more favourable for low-income self-employed workers. According to our results, it would be logical to use tax-declared income as the income assessment base (i.e. the pension-declared income) for pensions and other related social security benefits.

The analysis reveals an interesting small sub-group of medical professionals and pharmacists (0.3%), whose tax-declared income and pension-declared income are high. From a legal perspective, their contributory behaviour is in line with the principles of the statutory pension system. Nonetheless, this finding also indicates the need for an upper contribution limit in the statutory pension scheme. Policy rules, such as a contribution ceiling (upper limit), is a desired feature to prevent some higher-earning self-employed persons from misusing the statutory scheme.

Finally, we assume that the presented trajectory modelling used in this study is potentially useful also in other social security contexts where longitudinal data is available, and where it is important to identify latent sub-groups following similar paths of temporal development.

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# Mortality analysis of persons with disabilities in Argentina by age, sex and duration of benefit, 2015–16

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**Abstract** This article describes the differential mortality of Argentina’s disability pension beneficiaries during the 2015–16 period, based on National Social Security Administration (*Administración Nacional de la Seguridad Social* – ANSES) payment records. It compares data for those with an assessed disability with overall population data, as well as with available international data (from Canada, Chile, Mexico, and the United States of America). In addition to breaking down mortality rates for people with disabilities by age and sex, it also factors in duration of benefit, establishing an inverse correlation between benefit duration and mortality.

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The article was written while all the three authors worked in the Department of Social Security Studies at Argentina’s National Social Security Administration (*Administración Nacional de la Seguridad Social* – ANSES). The views expressed here are those of the authors alone. All three authors contributed equally to the article.

**Keywords** disability benefit, mortality, Argentina, Canada, Chile, Mexico, United States of America

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## Introduction

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Disability is a state in which individuals are assessed as not having the full use of their capacities, be these physical, psychological or mental. An important loss of capacity leads in the majority of cases to a continuous reliance on third parties as regards carrying out everyday activities. According to the World Health Organization (WHO) *International classification of functioning, disability and health* (ICF),<sup>1</sup> a loss of capacity is considered to be:

a temporary or permanent loss of or abnormality in psychological, physiological or anatomical structure or function. This includes the existence or emergence of an anomaly or defect in a limb, organ or body structure or the loss thereof, or a defect in a functional system or body mechanism (WHO, 2001; translated from Spanish).

Disability is one of the contingencies cited for social security benefits by the International Labour Organization (OIT, 2019).

Conventionally, when an assessed loss of capacity effectively prevents a person from carrying out paid work, social security systems will grant some kind of disability benefit (both financial in nature and in the form of health-care coverage) to provide replacement income to those unable to continue in work (Banks et al., 2019; Mitra et al., 2017). In the case of Argentina, current legislation establishes that:

disability pensions are available to scheme members who: a) have a total physical or intellectual disability, regardless of cause. Total disability is understood as that which reduces one's ability to work by at least sixty-six per cent (66%), excluding social or income-related disabilities; and b) have not yet reached official pensionable age and do not receive a pension as a result of early retirement. The reduction in a member's capacity to work will be determined by a medical board who will make a technical judgement in accordance with the procedures set out in both this law and its regulatory decree (Art. 48 of Law 24.241, translated from Spanish).

1. See also the Fifty-Fourth World Health Assembly (WHA54.21, 22 May 2001 Agenda item 13.9); and WHA Executive Board (EB107/SR/12, 22 January 2001, Agenda item 3.5).

Although there are no nationality requirements linked to receipt of this benefit, recipients must have paid into the Argentinian social security system.

There is nothing groundbreaking in stating that social security benefits (including those linked to disability) help to reduce social inequalities in health (Deaton, 2013). Nonetheless, exposure to the risk of disability varies: some jobs are more hazardous than others, and some offer higher levels of social protection than others. While disability and mortality may seem to be chance events at particular stages of life, there are determinants that link poor working conditions with a higher level of exposure to risk (Alfers and Rogan, 2015; Aronsson et al., 2002; Burgard and Lin, 2013). Furthermore, disability generates additional expenses for those directly affected and their families, which constitutes yet another factor in social inequality and requires special investment in appropriate responses for those affected (Mitra et al., 2017).

In Argentina, a disability pension is effectively granted for life, mainly because the disability threshold required for a worker to receive one is so high that his or her reintegration into the labour market (as well as for non-labour market reintegration more generally) is so unlikely as to be virtually impossible (Belliard et al., 2012). As this benefit has no maximum duration, except in very particular cases (in other words, it does not automatically convert into another type of benefit at a given age or as an individual's condition evolves), virtually all disability pensions that are initially granted on a temporary basis become permanent. As such, the benefit will cease to be paid only on the death of the recipient.

Only those in formal employment who meet the requirements for an assessed disability have access to a contribution-based disability pension. As a result, disability pension beneficiaries represent a relatively small proportion of the total number of Argentinians with a disability (using the term in its broadest sense), much as is the case in other countries (Mizunoya et al., 2016). Globally, for example, the ILO estimates that just 27.8 per cent of people with a serious disability receive disability benefits (OIT, 2019, p. 34).

In turn, the mortality risk of people with a disability is a differential risk and one that is greater than that faced by the population as a whole (Fried et al., 1998; Kattainen et al., 2004; Majer et al., 2011). This has become evident, for example, in the compilation of various mortality tables. In Latin America, to date, two data sets illustrate this discrepancy between the overall mortality rate and that of disability pension beneficiaries. Specifically, Chile's disabled mortality (MI) tables, produced by the country's Superintendency of Pensions (SPC), most recently for 2006; and Mexico's EMSSIH-97 and EMSSIM-97 tables (setting out mortality demographics for disabled men and women, respectively, based on 1997 data), as compiled by the country's National Population Council (*Consejo Nacional de Población* – CONAPO). Added to this is the detailed work carried out by Yañez Acosta (2005) for the 1997–2002 period, which analyzed a sample of people in

receipt of Mexican Social Security Institute (*Instituto Mexicano del Seguro Social – IMSS*) pensions, identifying mortality differentials over time from the disability pension start date up to a five-year period in the case of one particular cohort. It is important, therefore, to be able to present data highlighting an issue not previously quantified in Argentina.

In social security administration, establishing mortality risks enables forecasts to be made regarding financial flows linked to beneficiary life expectancy as well as the duration of benefit payments (Antolin, 2007). Furthermore, determining differential mortality patterns among those in receipt of disability benefits is a key step in recognizing the heterogeneity and diversity that exists in health status (Yañez Acosta, 2005).

This article seeks to illustrate the differential mortality risks among disability pension recipients. It also introduces the notion of duration of benefit as a differential in mortality rates, with a view to determining if there is a specific period in which the risk of death is higher during receipt of this benefit. Unfortunately, many tables showing disabled mortality data cite average mortality by age and sex, without considering duration as a possible risk differential. Given that the causes of disability (pathologies) vary and differ in intensity, it is reasonable to presume that there is a greater risk of death earlier on in disability, when there is a concentration of new benefit recipients facing serious difficulties or terminal illness (Yañez Acosta, 2005).

It also seeks to compare the results of the present study with the experiences of other countries in the Americas. In addition to the aforementioned figures for Chile and Mexico, two other countries, Canada and the United States of America, have also produced tables presenting consolidated national data. Regrettably, there are no other studies from the Americas based on recent data (where any comparisons, while imperfect, would still be valid) that enable a correlation to be drawn between disability, mortality and duration of benefit at a national level (the latter of which is only possible in the Mexican, United States and Canadian studies). There is much variation between countries when it comes to levels of informal unregistered employment and, therefore, the coverage and exposure of potential beneficiaries. As such, it is possible that there is some degree of selection bias in favour of Latin American countries with larger informal economies (Bertranou and Casanova, 2014).

Differences exist between countries' legal and conceptual definitions of disability pensions, as well as across issues specific to their respective labour markets and the data they have at their disposal, which permit comparisons to be drawn between potentially less-visible aspects. Moreover, and of importance, the key issue here is to determine general patterns for Argentina and identify consistencies in the data trends before investigating the scale of any divergence. It is important to clarify that this article does not address the situation of those in receipt of



non-contributory disability benefits (for which the requirements are very different) or those who self-identify as disabled. Our focus, as previously mentioned, is placed only on those receiving pre-retirement disability benefits wherein such entitlement is linked to their (formal) employment.

This article has two objectives. First, to estimate the mortality of Argentina's disability pension beneficiaries factoring in age, sex and duration of benefit – something that previously has not been done. Second, to compare the resulting data with available international data.

### Methodology and sources

The National Social Security Administration (*Administración Nacional de la Seguridad Social* – ANSES) database of benefit payment records was used to estimate disability levels in Argentina (for all data, see Appendix Tables A1–A3). This database details individual benefits, including variables such as a disability pension beneficiary's date of birth, sex, date of initial payment and date of death. This data set has previously been used to estimate the mortality of all benefit recipients (Bramajo and Grushka, 2019; Rofman, 1994), but not to establish the mortality of disability pension beneficiaries specifically. As this database comprises the data of almost 200,000 individuals, one year's worth of data (from 1 July 2015 to 30 June 2016) is considered sufficient to produce a mortality estimate (evidently, a longer study period would lead to a more robust estimate). It is important to underline that, given the 66 per cent disability threshold, all the cases under analysis represent an assessed severe disability.

This mortality analysis involved individuals up to age 99; there is a lack of high quality and consistent data for older ages. For the purposes of simplicity, we disregarded new affiliations during the period under study, since these have minimal impact on overall mortality rates. Following the award of a disability pension, it is assumed that death is the only reason for payments to cease.

The mortality analysis conducted was primarily rate-based, given that the approach taken was chiefly descriptive and exploratory in nature. First, we defined the specific disabled mortality rate (*Tasa específica de mortalidad de inválidos* – TEMI) by five-year age groups ( $x, x+5$ ) as the ratio of deaths in the 2015–16 study period to estimated average population. The average population was calculated by deducting half of the deaths from the initial population, assuming a uniform distribution of deaths over the course of the year. These rates were then adjusted using an exponential function, as this is best suited to their pattern.

The mortality rate of disability pension beneficiaries was compared to that of the population as a whole using central mortality rates by five-year age groups ( ${}_5m_x$ ), as

taken from the overall 2008–10 national mortality tables produced by the national statistics and census institute, the *Instituto de Estadísticas y Censos* (INDEC, 2013). Although these statistics may seem somewhat dated, they constitute the most up-to-date source of precise national mortality figures.

Disability and its related mortality are affected by age and sex distribution. Accordingly, a decision was taken to use standardized disabled mortality rates (*Tasas estandarizadas de mortalidad de inválidos* – TESMI) by age and sex, taking as the standard the number of years lived per person ( ${}_5L_x$ ) for both sexes, as published in the 2008–10 mortality tables for the various age groups.

Similarly, estimates of life expectancy for disability pension beneficiaries drew on another summary mortality indicator: life expectancy at age  $x$  or “ $e(x)$ ”. These estimates were calculated in accordance with the accepted procedure (Preston et al., 2001; Rowland, 2003).

These results were also compared with the data in the INDEC’s 2008–10 mortality tables. To finalize the mortality tables for people with disabilities, where the upper age limit was set at age 99, the INDEC data were used based on the assumption that there were unlikely to be significant differences in the mortality rates in both groups among those aged 100 or older.

For duration of benefit, this was calculated as the number of years that had elapsed between the first payment and the start date of the study period (1 July 2015). The database contains a number of errors (unknown durations, quality issues relating to old records), but since these represent less than one per cent of all cases, they had negligible impact on the study and could be disregarded. Taking duration of benefit into account, various TEMI estimates were produced by sex and age for Argentina.

Drawing on data published for other countries (relating to different periods, but within a reasonable timeframe), the TEMIs obtained in this study were compared to those used by Argentinian insurance companies – namely the MI-06 tables produced by Chile’s Superintendency of Pensions (2008). These are not observed rates, but rates that are suggested to, or imposed upon, insurance companies (without detailing either the data calculation or the deaths in question) for the purposes of calculating premiums and/or estimating the reserves required should the disabled individuals survive (annuities). These were compared also with Mexican data for 1997, the experiences of the United States across 2001–05, and for Canada in 2011. Mortality by duration of benefit was calculated for Canada, Mexico and the United States using specific rates for five-year age groups based on the data in the tables, as proposed by Preston et al. (2001).

As mentioned, the rates suggested for Chile are those conventionally used by Argentina’s insurance companies, since they are based on shared definitions of disability for the purposes of social security (Mexico’s definition is also similar).

The United States definition of disability differs from Argentina's in that it does not necessarily infer permanence. It is defined as:

the inability to engage in any substantial gainful activity (SGA) by reason of any medically determinable physical or mental impairment. The impairment must be expected to result in death or to last for a continuous period of at least 12 months (Zayatz, 2011, p. 2).

So, even though the phenomena being measured are not identical (given the virtually lifelong nature of disability in Argentina), it is still useful to compare experiences and note the consistent patterns in terms of age and sex.

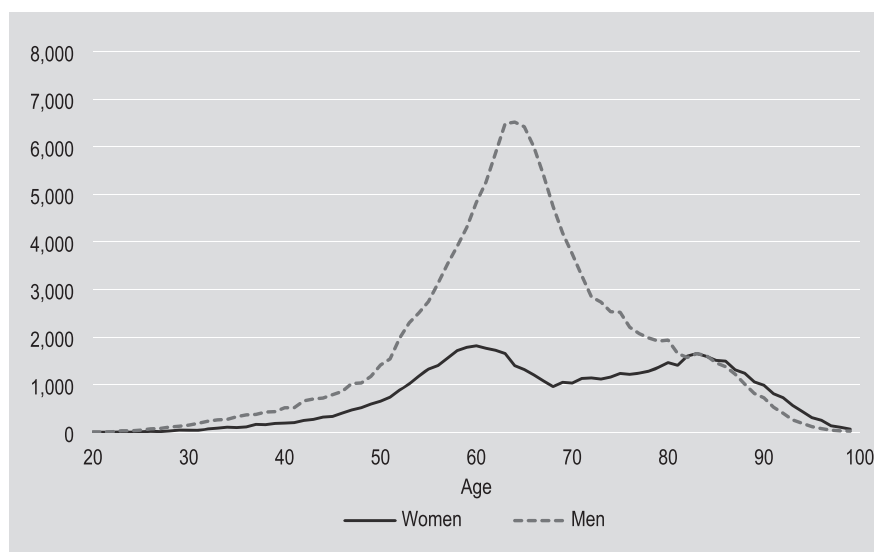
In the case of Canada's pension schemes (OCA, 2015), access to disability benefits requires a severe and prolonged disability (whether mental or physical), and each case must be diagnosed as such by a medical board. A disability is considered severe if the applicant is unable to work on a regular basis in a substantially gainful occupation and classified as prolonged if it is likely to last indefinitely or to result in death. At age 65, disability benefits cease and are converted into an ordinary pension. These disabled mortality tables draw on data relating to 2011 but published in 2015, as well as data for differential mortality by duration published in 2011, relating to the period between 1999 and 2008.

For Mexico, we have used the EMSSI mortality tables (Secretaría de Gobernación, 2015), taking 1997 as a benchmark year. We also referenced calculations made by Yañez Acosta in 2005, which were intended primarily to separate out the effects of mortality by duration in a cohort of IMSS beneficiaries. This said, two factors in this latter study make international comparisons of mortality patterns difficult. The first is that it only provides estimates by duration up to a period of four years following the onset of disability. In addition, when retirement age is reached in Mexico (age 60 for men; age 55 for women), beneficiaries may opt to receive an old-age pension rather than a disability pension. The former involves less bureaucracy and is simpler to obtain (Yañez Acosta, 2005), thereby altering the composition of the group of disability pension beneficiaries.

## Results

### *Composition of the population: Age, sex and descriptive statistics*

As previously mentioned, the study population relates to individual ANSES benefit-payment records. The target population comprises more men than women (Figure 1). The highest concentration of beneficiaries are in the age range of age 55 to age 85 for both sexes, although for women the range is wider.

**Figure 1.** Disabled population distribution by sex and age – ANSES (July 2015)

Source: Compiled by the authors based on Table A1 (Appendix).

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For men, the distribution is unimodal (age 65), while for women there are two clear modes (at age 59 and age 83).

Table 1 details further characteristics of the target population. Around 70 per cent of disabled beneficiaries are male. The mean age is age 66 (age 65 for men; age 69 for women) and there are 13,056 recorded deaths, representing some 6.5 per cent of all beneficiaries.

Following some preliminary observations, when it came to analysing the various TEMIs, the decision was taken to set the lower limit for inclusion at age 30 for men and age 40 for women, due to the low numbers of deaths below these ages. The deaths presented in the table therefore reflect these limits.

**Table 1.** Population and deaths by age, Argentina

Concept	Women	Men	All
<b>Population July 2015</b>	61,499 (31%)	137,010 (69%)	<b>198,509</b>
Mean age	69.5	65.0	66.4
Coefficient of variation	20.6%	18.0%	19.3%
<b>Deaths 2015/16</b>	3,972	9,084	<b>13,056</b>

Source: Compiled by the authors based on ANSES data.

### General mortality, by beneficiary sex and age

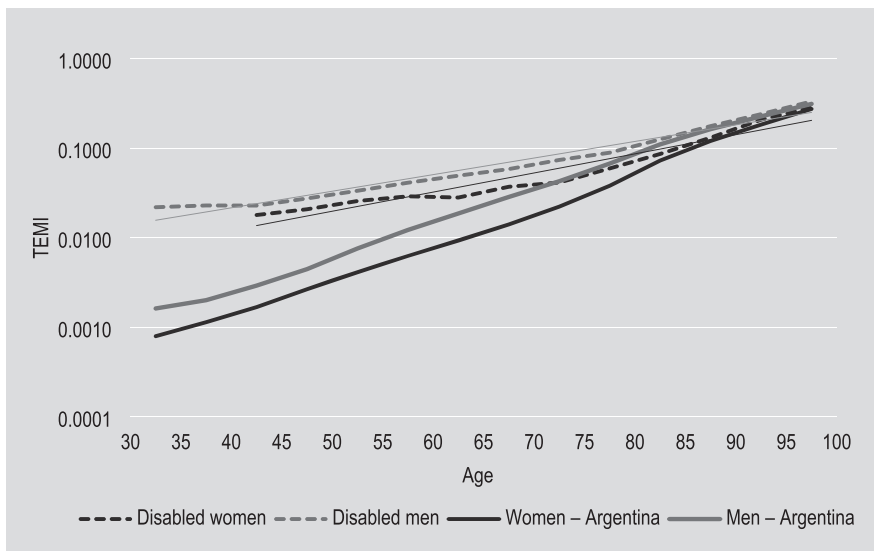
Table 2 presents the overall mortality rate for disabled people (TGMI) – in other words, the weighted average of the different TEMIs; the standardized mortality rate for disabled people (TESMI); and the standardized mortality rate (TEM) for the country between 2008 and 2010. Calculations were based on a population aged 40–99 (to present rates relating to the same age ranges).

**Table 2.** Selected mortality rates for people with disabilities (2015–16) and the overall population aged 40–99 (2008–10), Argentina

Mortality rate (per thousand)	Sex		
	Women	Men	All
TGMI	65.8	67.5	67.0
TESMI	40.4	58.6	52.5
TEM country-level	21.0	33.5	26.0
Relative risk TESMI/TEM	1.9	1.7	2.0

Source: Compiled by the authors based on ANSES and INDEC (2013) data.

**Figure 2.** TEMI (ANSES, 2015–16) and general population  ${}_5m_x$  (INDEC, 2008–10) comparison by sex, Argentina – semi-logarithmic scale



Source: Compiled by the authors based on ANSES and INDEC (2013) data.

The standardized mortality rate for disabled people is, as one might expect, much higher than that for the country as a whole, showing twice the relative risk. Sex differences among disabled people are visible with respect to the standardized figures, ranging from a similar level to a difference of 18 points per thousand (or a 45 per cent increase) for men.

Figure 2 shows TEMIs by five-year age group and sex, as well as the central mortality rates ( ${}_5m_x$ ) taken from the INDEC mortality tables for 2008–10 for the general population (INDEC, 2013).

For both sexes, the TEMIs are higher than the equivalent rates for the country as a whole, which supports the data shown in the previous table. The biggest differences between groups tend to arise at younger ages. With increasing age, the gap narrows. In both cases, mortality tends to rise exponentially with age (as shown in Figure 2) and male TEMIs are higher than female ones.

### *Life expectancy at selected ages*

Given the aforementioned restriction, we used estimations of life expectancy at age 40 and age 65 as summary measures of mortality. Table 3 provides evidence of a marked difference – a gap of more than 13 years for both sexes – between the  $e(40)$  of disabled people and that of the general population in Argentina. At age 65, this gap reduces to 3.5 years for men and 4.1 for women.

It is to be borne in mind that the most recent mortality tables published in Argentina date from 2008–10. As such, this comparison does not incorporate potential improvements that may have come about since then. In any case, as gains in adult life expectancy are relatively modest (Grushka, 2014), the gaps are unlikely to have changed radically in the intervening period.

**Table 3.** *Life expectancy at selected ages for people with disabilities (2015–16) and the overall population (2008–10), by sex – Argentina*

Age	Women			Men		
	Disabled	INDEC	Difference	Disabled	INDEC	Difference
40	27.7	40.9	-13.2	21.8	35.2	-13.4
65	14.9	19.0	-4.1	11.5	15.0	-3.5

Source: Compiled by the authors based on ANSES and INDEC (2013)

**Table 4.** *Selected characteristics of disability pension beneficiaries by duration of benefit and sex – Argentina, 2015–16*

Category	Women	Men	All
Population in July 2015	59,264	135,598	194,862
Mean duration (years)	18.52	13.25	14.85
Maximum duration (years)	56	54	56
Standard deviation (years)	13	11	12

Source: Compiled by the authors based on ANSES data.

### *Differential risk by duration of benefit*

Table 4 shows the principal indicators for duration of disability benefits. Any benefits containing errors or omissions at the start date were not included for this section. The average duration of benefits is higher for women (18 years) than for men (13 years), which is consistent with men's higher mortality and later retirement. The degree of dispersion is certainly striking (the deviation exceeds 20 per cent of the mean), with a maximum value of 56 years.

### *Mortality by sex and age according to duration of benefit*

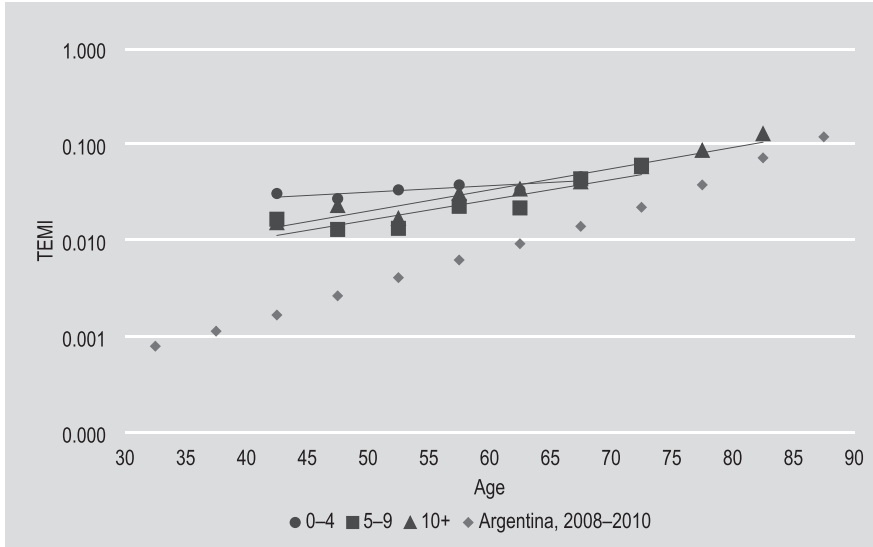
Given the number of cases available, the duration-of-benefit variable was broken down into three groups: 0 to 4 years, 5 to 9 years and 10 years or longer (meaning that it is not possible to break down the impact of duration by single years). Another limitation of the data is that it does not distinguish between the types of disability giving rise to the benefit or between causes of beneficiary death. One must also bear in mind that the various possible durations relate to the age group analysed: in other words, a disability duration of 15 years is not to be expected in a group of 30-year-old beneficiaries, while a duration of five years is unlikely among those older than age 70.<sup>2</sup> This also resulted in fewer observations for each category when it came to estimating TEMIs (by five-year age groups).

Figure 3 illustrates that the mortality rate of the "0 to 4 years" group is considerably higher than that of the other two groups and that its increase with age is noticeably lower. To put this another way, in the early years of disability,

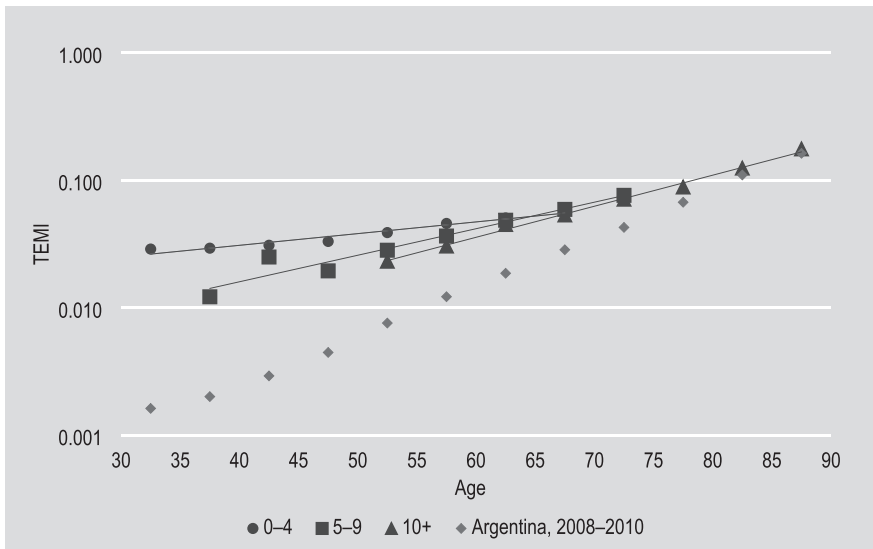
2. The minimum retirement age in Argentina is age 65 for men and age 60 for women. Once retirement age is reached, new benefits are allocated on the basis of age, as opposed to an assessed disability. Regardless, any existing disability benefits are maintained (unlike in other countries where they transform into old-age pensions).

**Figure 3.** TEMIs (2015–16) by duration of benefit and general population  ${}_5m_x$  (INDEC, 2008–10) – semi-logarithmic scale, Argentina.

a. Women



b. Men



Source: Compiled by the authors based on Table A2 (Appendix) and INDEC (2013) data.



the risk of death does not vary much according to age. The “5 to 9 years” and “10 years or longer” benefit-duration groups do not differ significantly, and age-related mortality increases in line with increasing duration of benefit in both cases. The mortality rate of disabled people is higher than that of the general population across all age and duration-of-benefit groups, with the gaps reducing over time in both cases.

### Comparison with other countries

#### *Disabled mortality rates by sex and age*

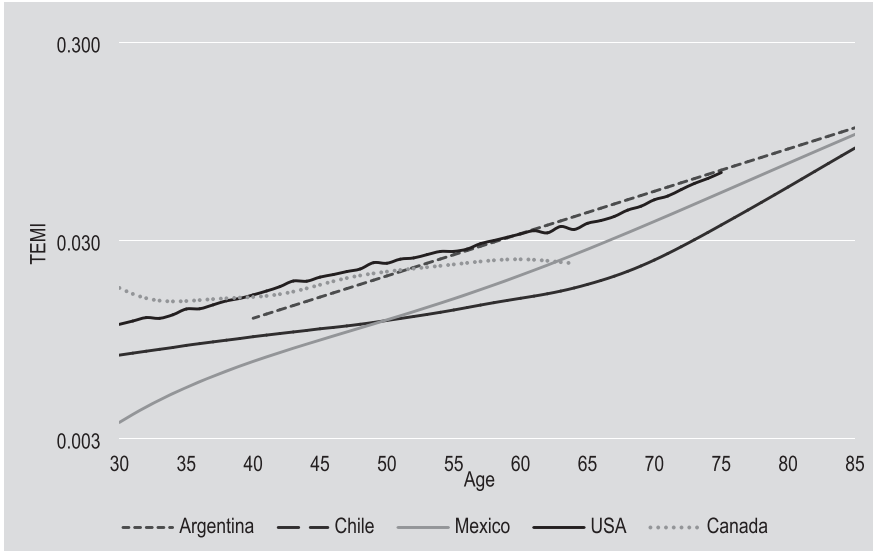
Here, we compare Argentina’s TEMIs with those suggested for Canada (2011), Chile (MI-06), Mexico (EMSSI-97) and the United States of America (2001–05). Since the data stemming from these studies has already been adjusted (and published in simple age intervals), it seems sensible to do the same for Argentina’s TEMI estimates. This adjustment involves using the functional parameters established, considering the satisfactory adjustment of Argentina’s TEMIs (opting for a more parsimonious adjustment over other more sophisticated methods, since the ultimate goal is to provide a general overview of this subgroup’s mortality).

Figure 4 shows that, for women, mortality increases with age in almost all cases. The exception is Canada, where the pattern is not quite as clear (mortality does not vary greatly between different age groups). There are significant discrepancies between the Canadian data and the data contained in the tables proposed by Chile’s Superintendency of Pensions (MI-06) and Mexico’s Ministry of the Interior/CONAPO (EMSSI-97), particularly for younger age groups, in favour of the MI and EMSSI tables. However, for older people, these gaps narrow as mortality rises at a faster rate. It is important to recall that both Mexico and Chile grant disability benefits for life (notwithstanding the previously mentioned exception for Mexico), while in the United States and Canada rehabilitation and reintegration into the labour market remain a possibility. Although Argentina and the United States differ in their definitions of disability, their TEMIs show a number of similarities across the different age groups analysed.

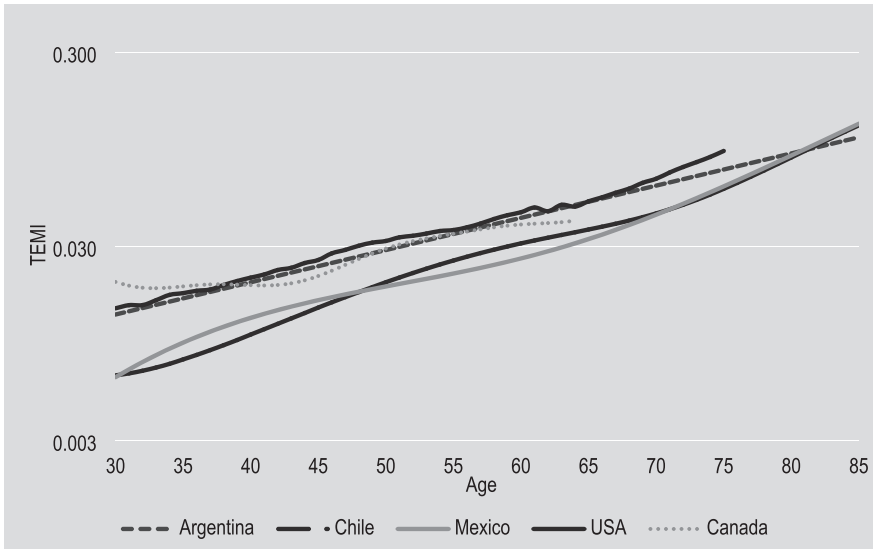
The same can be said for the male data: Argentina’s TEMIs are higher than Chile’s, suggesting that the MI-06 (produced by Chile’s Superintendency of Pensions, but used by Argentinian insurance companies) underestimates disabled mortality in Argentina. Just as in the case of women, the Chilean, Mexican and Argentinian TEMIs tend to converge in higher age groups. Comparisons with the experiences of the United States and Canada show no major variances with Argentina’s TEMI estimates.

**Figure 4.** Disabled mortality rates in Argentina (ANSES, 2015–16), Chile (MI-06), Mexico (EMSSI-97), United States (Zayatz, 2011) and Canada (OCA, 2015) – semi-logarithmic scale.

a. Women



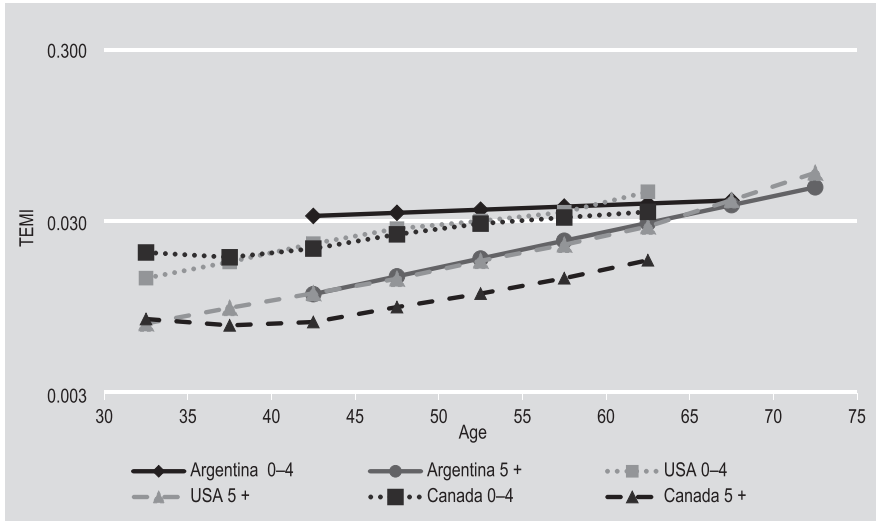
b. Men



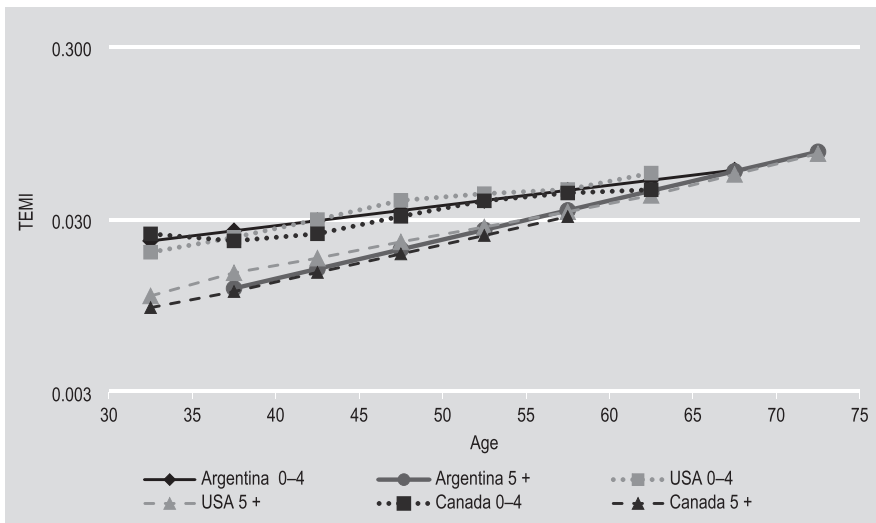
Source: Compiled by the authors based on Table A3 (Appendix).

**Figure 5.** Disabled mortality rates in Argentina (ANSES, 2015–16), United States (2001–05) and Canada (1999–2008), by duration and age group – semi-logarithmic scale

a. Women



b. Men



Source: Compiled by the authors based on Table A2 (Appendix).

*Disabled mortality rates by duration, sex and age, by country*

In addition to comparing TEMIs by age and sex across different countries, this study also looked at duration of benefit where data sources permitted.

The disaggregation of mortality rates by duration of benefit is possible in the United States' tables and in a second Canadian study (OCA, 2011) for the 1999–2008 period. Chile's MI-06 tables do not differentiate by duration. Owing to the availability of data, duration-related comparisons can be drawn between Argentinian, United States and Canadian TEMIs by looking at just two categories: up to five years, and five years and longer. Likewise, the mortality rate for each five-year age group was calculated as a simple average of the more specific rates falling within it.

In all cases depicted in Figure 5, the shorter the duration of benefit, the higher the TEMI. Levels are similar across the three countries, with the exception of women in Argentina, who appear to have a slightly higher mortality rate than their peers in the United States and Canada in the “younger” group with a shorter duration of benefit. This could be the result of limitations related to the shorter study period used. It is also noteworthy that Argentinian women in receipt of benefits for between 0 and 4 years are the group with the flattest gradient, though it is clear that in a low-duration group, age will have less of a bearing on mortality.

It is also evident that estimated rates for the group of Canadian women in receipt of benefits for more than five years come in below those of their peers in the United States and Argentina, although their gradients follow a similar trajectory. For men, the TEMIs of both duration groups seem similar across these three countries and, in all cases, duration of benefit has the anticipated impact. While the risks may appear similar across the three countries, it is important to remember that different definitions of disability and different data periods apply. Caution is necessary therefore when analysing this data.

### **Conclusions and other considerations**

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This study illustrates the differential mortality of disability pension beneficiaries by sex and age when compared to the country as a whole, for the 2015–16 period. It also depicts mortality differentials according to duration of benefit. Within the wider context of a highly fragmented and informal labour market, not just in Argentina but in Latin America more generally, the people with disabilities covered by this study belong to a very specific group – formal workers with an assessed disability.

The vast majority of those in receipt of disability benefits are men, who also have a higher mortality rate. In both sexes, disabled mortality increases exponentially with age.

The mortality rate of people with disabilities (aged 40–99) was twice that of the population as a whole in the period between 2008 and 2010. Consequently, life expectancy at age 40 is 13 years shorter for people with disabilities than for the overall population, for both sexes, which constitutes a significant gap. As people age, the gap between the specific disabled mortality rate (TEMI) and the overall national mortality rate narrows.

As far as duration of benefit is concerned, there is an inverse correlation with mortality: in other words, a disabled person's risk is greater in their early years as a benefit recipient. It is important to highlight, too, that for the group with a shorter duration of benefit, the risk is similar across the various age groups, with the gradient steepening at longer durations. Thus, age seems to have little bearing on the risk of death at the onset of disability. It is likely that further breaking down the duration-related risk into specific ages would emphasize the greater concentration of risk at the beginning of disability (Yañez Acosta, 2005), but it is currently not possible to do this for all age groups owing to a lack of data, as well as because our study period is limited to a single year. Generating a more robust estimate in this regard is clearly something towards which future studies in this field should aim.

Regarding other countries' experiences, disabled mortality in Argentina is similar to that recorded in the United States (2001–05) and Canada (2011), but higher than that found in the tables studied for Mexico and Chile, which were used as benchmarks for the calculation of benefits in Argentina. Furthermore, Chile's disabled mortality tables do not indicate any differential risk linked to duration of benefit. As previously mentioned, since there may be some degree of selection bias in Latin American countries resulting from the large informal workforce, the true impact of disability may in fact be even greater. Due to the existence of different definitions across countries of the term "disability", we suggest avoiding making direct comparisons and quantitative interpretations. However, qualitative interpretations ("in A the trend is increasing while in B the trend is decreasing") should be acceptable. It is therefore preferable to focus on assessing the trends in disability in each country, rather than directly measuring the differentials across countries.

When it comes to looking at the impact of duration of benefit on mortality rates, the experiences of the United States and Canada support the existence of an inverse correlation between duration and mortality, with similar curves in most cases.

As well as using data collected over a longer period of time to produce more precise and robust estimates (we have mentioned the likely advantages offered by breaking down duration data in the initial group by specific ages), future lines of

research could look at regional or income disparities, or incorporate the causes of disability (and even death, if possible) among other variables. In the meantime, we believe that this study has – for the first time – succeeded in providing a satisfactory picture of the differential mortality of Argentinian workers in receipt of disability pensions in 2015–16, establishing differentials by duration of benefit and comparing the resulting data not only with overall population data, but also – despite certain recognized limitations – with the experiences of other countries in the region.

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## Appendix

Table A1. Deaths and disabled population by age group and sex – Argentina, 2015–16

Age	Deaths			Target population		
	Men	Women	Total	Men	Women	Total
30–34	24	*	24	1,094	341	1,435
35–39	44	*	44	1,917	714	2,631
40–44	71	22	93	3,101	1,225	4,326
45–49	134	48	182	4,874	2,305	7,179
50–54	326	115	441	9,734	4,468	14,202
55–59	726	226	952	17,617	7,780	25,397
60–64	1,429	235	1,664	28,941	8,350	37,291
65–69	1,564	208	1,772	26,741	5,602	32,343
70–74	1,120	231	1,351	15,142	5,575	20,717
75–79	953	377	1,330	10,686	6,336	17,022
80–84	1,058	666	1,724	8,416	7,711	16,127
85–89	1,038	868	1,906	5,874	6,606	12,480
90–94	502	732	1,234	2,089	3,515	5,604
95–99	95	244	339	285	857	1,142
Total	8,989	3,972	12,717	136,511	61,385	197,896

Source: Compiled by the authors based on ANSES data.



Table A2. *TEMI by age group, sex and duration of benefit – Argentina, United States and Canada.*

Age	ARG 15-16						USA 01-05						CAN 99-08					
	Men			Women			Men			Women			Men			Women		
	0-4	5-9	10+	5+	0-4	5-9	10+	5+	0-4	5+	0-4	5+	0-4	5+	0-4	5+	0-4	5+
0-4	0.029	0.012	*	0.011	*	*	*	0.0194	0.0109	0.0140	0.0076	0.0248	0.0088	0.0197	0.0081			
30-34	0.029	0.012	*	0.011	*	*	*	0.0237	0.0148	0.0174	0.0094	0.0226	0.0093	0.0185	0.0075			
35-39	0.031	0.025	*	0.020	0.031	0.017	*	0.0300	0.0180	0.0222	0.0115	0.0249	0.0115	0.0208	0.0078			
40-44	0.033	0.020	*	0.019	0.027	0.013	0.015	0.0388	0.0223	0.0271	0.0139	0.0314	0.0148	0.0251	0.0095			
45-49	0.039	0.028	0.023	0.023	0.034	0.013	0.023	0.0425	0.0272	0.0300	0.0177	0.0386	0.0190	0.0290	0.0114			
50-54	0.046	0.037	0.031	0.033	0.038	0.023	0.017	0.0449	0.0333	0.0338	0.0219	0.0428	0.0243	0.0315	0.0140			
55-59	0.051	0.049	0.045	0.043	0.034	0.022	0.031	0.0559	0.0415	0.0444	0.0279	0.0447	0.0313	0.0340	0.0178			
60-64	0.058	0.059	0.054	0.055	0.046	0.044	0.035	*	0.0549	*	0.0397	*	*	*	*			
65-69	-	0.076	0.071	0.073	*	0.061	0.041	*	0.0724	*	0.0572	*	*	*	*			
70-74	*	*	0.089	0.089	*	*	0.059	*	*	*	*	*	*	*	*			
75-79	*	*	0.125	0.125	*	*	0.087	*	*	*	*	*	*	*	*			
80-84	*	*	0.177	0.177	*	*	0.130	*	*	*	*	*	*	*	*			
85-89	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*			

Sources: Compiled by the authors based on data from ANSES, OCA (2011) and Zayatz (2011).

## Mortality analysis of persons with disabilities in Argentina

Table A3. TEMI by specific age, sex and duration of benefit for selected countries. Values shown per thousand

Age	ARG 15-16		CHI 06		MEX 97		USA 01-05		CAN 2011	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
30	13.4	7.4	6.5	7.9	6.4	3.6	14.5	11.3	19.8	17.3
31	14.0	7.8	6.7	8.1	7.0	4.0	15.0	11.8	18.9	16.1
32	14.5	8.2	6.9	8.3	7.6	4.3	15.0	12.3	18.4	15.4
33	15.1	8.6	7.2	8.5	8.3	4.7	15.9	12.2	18.3	14.9
34	15.6	9.1	7.5	8.7	8.9	5.1	17.0	12.7	18.5	14.8
35	16.3	9.5	7.9	8.9	9.6	5.4	17.3	13.5	18.7	14.9
36	16.9	10.0	8.3	9.1	10.2	5.8	17.8	13.6	19.0	15.0
37	17.5	10.5	8.8	9.2	10.9	6.2	18.1	14.2	19.2	15.2
38	18.2	11.0	9.3	9.4	11.6	6.6	19.1	14.9	19.2	15.3
39	18.9	11.6	9.9	9.6	12.2	7.0	20.0	15.3	19.1	15.5
40	19.7	12.2	10.6	9.8	12.8	7.3	20.8	16.0	19.0	15.6
41	20.4	12.8	11.3	10.0	13.4	7.7	21.6	16.7	18.9	15.8
42	21.2	13.4	12.0	10.2	14.1	8.1	22.8	17.6	19.1	16.1
43	22.1	14.1	12.8	10.4	14.6	8.6	23.4	18.8	19.4	16.6
44	22.9	14.8	13.7	10.6	15.2	9.0	24.7	18.7	20.1	17.2
45	23.8	15.6	14.6	10.8	15.8	9.4	25.6	19.6	21.2	17.9
46	24.7	16.3	15.5	10.9	16.4	9.9	27.7	20.2	22.6	18.7

(to be continued)

Mortality analysis of persons with disabilities in Argentina

**Table A3. TEMI by specific age, sex and duration of benefit for selected countries. Values shown per thousand – continued**

Age	ARG 15–16		CHI 06		MEX 97		USA 01–05		CAN 2011	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
47	25.7	17.2	16.5	11.1	16.9	10.3	28.9	20.9	24.2	19.4
48	26.7	18.0	17.5	11.3	17.5	10.8	30.4	21.6	26.0	20.0
49	27.8	18.9	18.6	11.6	18.0	11.3	31.5	23.2	27.7	20.5
50	28.8	19.9	19.7	11.9	18.6	11.9	32.1	23.1	29.4	20.9
51	30.0	20.9	20.8	12.1	19.1	12.4	33.5	24.2	30.8	21.3
52	31.1	22.0	22.0	12.4	19.7	13.1	34.2	24.5	32.1	21.7
53	32.3	23.1	23.1	12.7	20.3	13.7	35.1	25.5	33.1	22.0
54	33.6	24.2	24.3	13.0	20.9	14.4	36.1	26.4	34.0	22.4
55	34.9	25.4	25.5	13.4	21.6	15.2	36.6	26.5	35.0	22.7
56	36.3	26.7	26.6	13.8	22.3	16.0	37.8	27.2	35.9	23.1
57	37.7	28.1	27.8	14.2	23.1	16.8	39.5	29.0	36.9	23.5
58	39.1	29.5	29.0	14.6	23.9	17.8	41.7	30.0	37.8	23.9
59	40.7	31.0	30.1	15.0	24.8	18.8	43.6	31.2	38.5	24.1
60	42.3	32.5	31.2	15.3	25.8	19.9	45.1	32.4	39.0	24.1
61	43.9	34.2	32.3	15.7	26.8	21.0	47.7	33.7	39.4	24.0
62	45.6	35.9	33.4	16.2	28.0	22.3	45.7	32.8	39.7	23.7
63	47.4	37.7	34.5	16.7	29.3	23.7	49.3	35.3	40.1	23.3

(to be continued)

## Mortality analysis of persons with disabilities in Argentina

Table A3. TEMI by specific age, sex and duration of benefit for selected countries. Values shown per thousand – continued

Age	ARG 15–16		CHI 06		MEX 97		USA 01–05		CAN 2011	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
64	49.2	39.6	35.6	17.3	30.7	25.2	48.3	34.2	40.8	23.0
65	51.1	41.6	36.8	18.0	32.3	26.8	51.4	36.7	*	*
66	53.1	43.7	38.0	18.9	34.1	28.5	53.9	37.9	*	*
67	55.2	45.9	39.4	19.8	36.0	30.3	56.9	39.7	*	*
68	57.4	48.2	40.9	21.0	38.1	32.3	59.7	42.7	*	*
69	59.6	50.7	42.6	22.3	40.4	34.5	64.0	44.7	*	*
70	61.9	53.2	44.5	23.9	42.9	36.8	67.2	48.2	*	*
71	64.3	55.9	46.8	25.8	45.7	39.3	72.3	50.4	*	*
72	66.8	58.7	49.3	27.9	48.7	42.0	77.2	54.3	*	*
73	69.4	61.7	52.3	30.3	52.0	44.8	81.8	58.3	*	*
74	72.1	64.8	55.7	33.0	55.6	47.9	87.0	61.8	*	*
75	74.9	68.1	59.6	36.0	59.6	51.1	93.4	66.2	*	*
76	77.9	71.5	63.9	39.2	63.8	54.6	*	*	*	*
77	80.9	75.1	68.8	42.8	68.4	58.4	*	*	*	*
78	84.0	78.9	74.1	46.8	73.4	62.3	*	*	*	*
79	87.3	82.9	80.0	51.1	78.9	66.6	*	*	*	*
80	90.7	87.1	86.4	55.9	84.7	71.1	*	*	*	*

(to be continued)

**Table A3. TEMI by specific age, sex and duration of benefit for selected countries. Values shown per thousand – continued**

Age	ARG 15–16		CHI 06		MEX 97		USA 01–05		CAN 2011	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
81	94.2	91.5	93.4	61.3	91.0	75.8	*	*	*	*
82	97.9	96.1	100.9	67.1	97.7	80.9	*	*	*	*
83	101.7	100.9	109.0	73.5	105.0	86.3	*	*	*	*
84	105.7	106.0	117.5	80.4	112.8	92.0	*	*	*	*
85	109.8	111.3	126.6	88.0	121.1	98.1	*	*	*	*

Sources: Compiled by the authors based on data from ANSES, SPC (2008), Secretaría de Gobernación (2015), OCA (2015) and Zayatz (2011).

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# Payment of Universal Credit for couples in the UK: Challenges for reform from a gender perspective

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**Abstract** Universal Credit has been rolled out gradually in the United Kingdom since 2013 as one integrated means-tested benefit replacing six different transfers with a single monthly payment. Previously, these benefits were awarded for distinct purposes and, for couples who claimed them, were potentially payable to different partners. Concerns about Universal Credit's single payment include the opportunities it may create for facilitating domestic abuse, the fostering of more unequal power relations within couples, the reduction of financial autonomy for individuals, and the de-labelling of benefit payments. This article explores debates about the prospects for individual payments to partners in couples of Universal Credit as a jointly assessed integrated means-tested benefit, including different approaches emerging from the United Kingdom's devolved governments (mainly Scotland and Northern Ireland). Whilst payment to each partner is likely to be more feasible where there are separate rather than integrated means-tested

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benefits, it concludes that genuine financial autonomy for partners in couples is best pursued via individually based non-means-tested benefits.

**Keywords** social security reform, means test, gender, payment of benefits, United Kingdom of Great Britain and Northern Ireland

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## Introduction

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The United Kingdom's (UK) latest reform of means-tested benefits, the introduction of Universal Credit (DWP, 2018), involves the replacement of six benefits and tax credits for working-age people and their children by an integrated "super means-tested benefit". Universal Credit provides income support in or out of employment and helps with certain costs. With the exception of means-tested help with local taxation (Council Tax Support), which remains separate, Universal Credit replaces:

- Income Support, income-based Jobseeker's Allowance and income-related Employment and Support Allowance for those out of work or with minimal earnings;
- Working Tax Credit, for the low paid and households on a low income with an earner;
- Child Tax Credit, for those on low incomes in and out of work with a child/children;
- Housing Benefit, to help those on low incomes with their rent.

Universal Credit was proposed in 2010, to be paid eventually to some 19 million individuals or 8 million households (DWP, 2010a, p. 37). Roll out began in 2013. After several delays, the goal by February 2020 was for full implementation of Universal Credit by September 2024 (Mackley et al., 2020). A pilot to migrate existing claimants on to it was subsequently paused because of the COVID-19 crisis.

There has been much debate about the advantages and disadvantages of Universal Credit in official documents (e.g. National Audit Office, 2018; Work and Pensions Committee, 2017–2019), as well as in analyses from academics (e.g. Millar and Bennett, 2017), and in publications from third sector organizations (e.g. Woudhuysen, 2019) and think tanks (e.g. Gardiner and Finch, 2020). One key line of commentary has related to the gender implications of Universal Credit, which have been highlighted by women's groups, the Scottish Parliament

and the Work and Pensions Committee, amongst others. For example, Universal Credit weakens incentives for many “second earners” in couples to earn, or to earn more (Finch and Gardiner, 2018), despite its extension of work-related conditionality to those in work, and to partners in couples with one earner and/or children. “Second earners” in couples are more likely to be women. It also amalgamates benefits designed for different purposes – including means-tested income maintenance for those out of work, supplementation of low income for those in work, and help with housing and childcare costs – into one instrument. There is no longer any labelling of the different “elements” to denote their purpose. In addition, and of most relevance to this article, there is a default single payment of Universal Credit for couples, which must be paid into one bank account (Bennett, 2011). Owing to these features, Universal Credit has been seen as exacerbating the challenge for women in couples of achieving an independent income via earnings, and individual financial autonomy and access to personal income more generally.

In this article, we focus on the payment arrangements for couples claiming Universal Credit, in the context of this radical design for an integrated means-tested benefit. Debates about how to pay benefits to couples more generally are most common in relation to payments for children’s needs, especially in the international development literature (Mokomane, 2017). The usual practice is that mothers are paid these benefits, because of women’s presumed “compulsory altruism” (Land and Rose, 1985) and/or as a route to women’s empowerment (Molyneux, 2008). In Australia, during the 1990s, means-tested benefits for unemployed working-age married couples changed from being paid almost entirely to the man to being paid primarily to the woman (Bradbury, 2004). Yet, there is in general less discussion about the issue of the benefit recipient within couples in the global north, and in particular in continental Europe, perhaps because of the greater significance of non-means-tested benefits for income maintenance, which may be payable to individuals within couples in their own right.

We discuss below the ongoing debates that started during the legislative process introducing Universal Credit, and for which the payment arrangements described above were of particular concern to women’s and welfare rights organizations. We argue that they raise a range of issues. These include the impact on financial autonomy for partners in couples, the contradiction between individualized conditionality and a lack of individual access to benefit, and the increased risk of financial coercion and abuse. They likewise involve complex questions concerning individuals’ (gendered) roles in relation to both caring and management of the household budget in low-income families.

We also describe the different ways in which some of the devolved administrations in the UK are trying to modify the default single payment



arrangements, beyond the discretionary exceptional “split payments” arrangements, and the dilemmas that arise in doing so. These differences highlight the potential for alternative approaches, although in practice this is inherently limited given the variation in devolved powers and the reliance of the devolved national administrations<sup>1</sup> on delivery of Universal Credit by the United Kingdom Department for Work and Pensions (DWP). We conclude by suggesting ways forward – including looking beyond Universal Credit – to place greater emphasis on non-means-tested benefits, if a key goal is to achieve genuine financial autonomy and independence for women and men. First, in the next section we consider the recent history of paying means-tested benefits to couples in the UK. Decisions about the appropriate recipient have proved contentious over the years, in particular because of their gender implications.

### Arrangements in previous means-tested benefits

Means-tested benefits have a long history in the UK and are a central plank of the social security system. Outrage amongst families forced to depend on their adult sons and daughters in the Great Depression of the 1920s and 1930s led to most assessments of income and assets for means-tested benefits in the post Second World War welfare state being narrowed from the wider, or complex, household to the individual or couple and any dependent children living together. Some rules have been common across such benefits. For example, Universal Credit does not change the assumption that for couples living together their resources and needs will be aggregated for means testing, although this may be resented by partners who experience this (Griffiths et al., 2020).

There has been more change for couples in relation to the identity of both claimant(s) and payee(s) for means-tested benefits, however. A European directive in 1979 (79/7) on equal treatment in social security outlawed discrimination. Nonetheless, one partner in a couple was still identified as the claimant, who had to fulfil the requisite conditions (including availability for work) and report changes of circumstances, whilst the other partner was the “dependant”, without such obligations – but also without income from that benefit (Bennett, 2002). Means-tested out-of-work benefits included additions for children as well as for the dependent adult, also paid to the claimant – though non-means-tested child benefit was paid separately, and by default to the mother.

On taking office in 1997, the Labour Government initially had some interest in gender and social security (Department of Social Security, 1998), although this faded rather quickly. From 2001, however, joint claims for income-based

1. Namely, the Northern Ireland Assembly, the Scottish Parliament and Senedd Cymru (the Welsh Parliament). There is no devolved national administration for England.

(means-tested) Jobseeker's Allowance were introduced for younger childless couples, and extended to older childless couples later. Both partners in a couple, henceforth, had to be available for and actively seeking work, if appropriate. The main aim appeared to be to reduce the number of workless households (Bennett, 2002), and to lessen dependence on Jobseeker's Allowance through extending conditionality to partners, which was seen by the British government as increasing the chances of employment for both partners (Bonjour et al., 2001).

Joint claims also involved both partners having responsibility for reporting changes of circumstances and for repaying any overpayments (which can be recovered from both partners or only one of them, even if that partner was not the one who was overpaid). But they were not paid part of the benefit each. This was despite an argument that the individual payment of benefit was more appropriate in return for individual conditionality; in both Australia and Denmark, individual entitlement to means-tested benefit for partners accompanied individual activity testing (Ingold, 2011; see also Millar, 2004). Joint-claim couples could choose the bank account for payment, but the benefit could not be split. In female/male couples, the payee in unemployed couples was almost always the man (Bennett, 2018). There were, however, exceptional arrangements in out-of-work means-tested benefits for split payments for couples where necessary, to protect the interests of claimants or their dependants (as indeed there are now in Universal Credit, as described below).

“In-work benefits” have existed in the UK since the early 1970s. A new tax credits system, introduced in 2003, replaced Working Families Tax Credit (WFTC) – introduced by the Labour Government in 1999. These transfers were all called tax credits, but were means-tested benefits to help families on low incomes with an earner. Although there was pressure to pay the previous in-work benefit (Family Credit, introduced in 1988) through the pay packet, the then Conservative Government had changed its mind at the last moment and paid it instead as a benefit, usually to mothers. Payment of WFTC was also going to be through the pay packet, to identify it with the tax system rather than with benefits. However, based on evidence showing that money going into the household via the (woman's) “purse” rather than the (man's) “wallet” was more likely to be spent on children (Goode et al., 1998), Labour was also forced to rethink, and couples could choose which partner received it.

Until Working Tax Credit (WTC) was introduced in 2003, such in-work help was restricted to those with children, and there was similar help for disabled people; but it was then extended to childless single people and couples who were not disabled. WTC was originally paid via wages, but from 2006 was paid as a benefit – to the earner in a couple, if there was only one; if there were two, the couple could choose the payee. A separate tax credit covered children's needs – Child Tax Credit (CTC). This was paid to the main carer, nominated by the

couple. CTC was also the last means-tested benefit to be withdrawn as income from earnings increased, leaving the main carer with some resources after other payments were extinguished. CTC was extended to families on means-tested benefits, out of work as well as in, so main carers in these couples also received it. In the vast majority of cases, this is paid to the female partner (Bennett, 2018) – though some small-scale research highlights how some male partners claim it instead (Warburton Brown, 2011), often in the context of coercive control (Howard and Skipp, 2015). The childcare element of WTC was also paid to the main carer, who was seen as more likely to have responsibility for childcare costs.

Benefits for children have thus been routed via the mother or main carer in the UK. This was done originally for benefits that were non-means-tested (family allowances, followed by child benefit), but more recently also if they were means-tested, for families in and out of work. This has altered the previous practice of paying the whole of means-tested benefits when out of work to one partner. Woolley (2004) has argued that there is both a “maternalist” and a “feminist” case for giving payments for children to the mother. The “maternalist” case is that money paid via the woman is more likely to reach the children; as Daly and Rake (2003) argued, women are seen as better “conduits”. The “feminist” case is that women may suffer if they have no assured access to resources within the couple, and they are less likely to have earnings of their own because of their caring responsibilities (Lewis, 2001a). Thus, only part of this argument concerns individual income and access to resources within what may be gender unequal partnerships, and situations of financial coercion and abuse; the other part is based on the (gendered) division of labour in households. These two issues have surfaced again in relation to the payment arrangements for couples on Universal Credit.

### Universal Credit

As noted above, Universal Credit replaces a range of means-tested benefits in the UK for those of working age both in and out of employment. The ideas behind Universal Credit came from the Centre for Social Justice (CSJ) think-tank, and were based on a diagnosis of poverty emphasizing “worklessness” and “welfare dependency” across generations. A major aim was therefore to create better incentives to work and earn more: “our proposals will ultimately succeed in achieving social transformation if they change attitudes towards work” (CSJ, 2009, p. 306). The focus was also more on supporting (traditional) families and avoiding family breakdown than on individuals or on unequal gender relations (CSJ, 2006).

One CSJ co-founder, Iain Duncan Smith, went on to become Secretary of State for Work and Pensions and introduced what became Universal Credit under the

Coalition Government in 2010 (DWP, 2010a). The relevant legislation was passed in 2012 and the roll out began in 2013. The broad aims included simplification of the means-tested benefits system and improving incentives (Millar and Bennett, 2017). The Government also wanted to save on administrative costs; reduce fraud and error; and tackle poverty, both by improving take-up (through integrating benefits, so that claiming one was claiming (almost) all) and by increasing the numbers going into employment and progressing in work (e.g. see DWP, 2016).

Couples must make a joint claim for Universal Credit (DWP, 2019a). Payment is made monthly in one lump sum in arrears, following each monthly assessment. The couple must choose who receives the Universal Credit and enter the name and bank details on the (online) claim form. The nominated account for payment can be joint or individual. If the couple cannot decide, the DWP makes the nomination (UK Government, 2013). During debate on the regulations, a Minister stated: “Couples will decide which bank account their universal credit payment will be paid to but, in cases where couples cannot decide, we will make payment either to the main child-carer or, if there are no children, to the person responsible for paying the bills” (Freud, 2013, col. 876). Other than this, the only exception at the time of writing is that DWP staff have discretion to split payments, as they did under the former out-of-work legacy benefits, in exceptional circumstances of financial mismanagement or domestic abuse (discussed below).

Owing to the integrated nature of Universal Credit, payment is made monthly in one lump sum, and can thus be significantly higher compared to previous benefit payments. This has been described as having (almost) “all your eggs in one basket” (cited in Rotik and Perry, 2011). For couples, this potentially means an even larger sum going into one account, which could result in (almost) all your eggs being in the *other* partner’s basket.

In addition, as Universal Credit integrates benefits paid for different purposes, it de-labels such payments. This may make it less likely that the child element will be spent on the child/children (Lundberg et al., 1997). The labelling and separate payment of different benefits could formerly make it easier to understand how much was available for different purposes and facilitate budgeting (Goode et al., 1998; Griffiths et al., 2020, p. 114). At a time when behavioural economics is becoming more important to policy-making,<sup>2</sup> it therefore seems counterintuitive to remove such signals. However, it may be explained by the much stronger commitment of Universal Credit’s architects to promoting certain behaviours in other spheres, seen as appropriate for those in work (who were envisaged as being on a monthly salary).

2. For example, for the UK see the Behavioural Insights Team.

Concerns about the single payment of Universal Credit also involve the signals this sends regarding equality between partners. One payment may symbolize financial dependence (Griffiths et al., 2020), and highlights aspects of women’s poverty linked to gender norms that deprive women of the resources and power with which to access a range of social, civil and cultural rights (Campbell, 2018). Further, it is argued that the Universal Credit single payment could facilitate or legitimate abuse by a controlling partner. This is an issue raised in reports of the UN Committee on the Elimination of Discrimination against Women (e.g. UN-CEDAW, 2019) and by Philip Alston, while holding the mandate (June 2014 to April 2020) as the UN Special Rapporteur on Extreme Poverty and Human Rights, following his visit to the UK (United Nations General Assembly, 2019, para. 70). Domestic abuse, which disproportionately affects women, involves a pattern of coercive and controlling behaviour, encompassing financial abuse (Women’s Aid, n.d.; Sharp-Jeffs, 2015). The single payment could place more power in the hands of an abusive partner, with more money available to them in the lump-sum payment than under previous benefits/tax credits. Having only one payment can “set the scene” for abuse (Sharp-Jeffs, 2018). However, government spokespeople suggested that payments to individuals within couples are not the best way to address domestic abuse (Malthouse, 2018a). They cited instead initiatives such as staff training and specialist officers in each Jobcentre.

Payments of Universal Credit can be split between partners; but operational guidance (DWP, 2019b) states that this is discretionary, temporary and only relevant in cases such as financial mismanagement and domestic abuse (which may include financial coercion). To access this on domestic/financial abuse grounds, survivors must disclose and provide proof of abuse. However, they are often reluctant to disclose to DWP staff, many fearing that this information will not remain confidential, or that they would not be believed, and/or that asking for a split payment could worsen the abuse when the abuser finds out (Howard, 2019; Howard and Skipp, 2015).

In this article, we refer to these exceptional arrangements as “split payments” and to any alternatives not based on exceptional criteria as “separate payments”.

### **Government arguments for a single payment of Universal Credit to couples**

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Which bank account is “chosen” by a couple may often reflect which partner begins the claim, as they may just enter their own details. The DWP argued originally that “encouraging payments to a joint bank account might allow both partners to have access to the money” (DWP, 2011, para. 3a). This statement was cautious, and rightly so, as couples’ financial practices can be more or less joint or equal with individual or joint accounts (Lewis, 2001b, p. 165); having a

joint account does not guarantee access for both partners to the money, or the sharing of power in managing or controlling household finances (Bennett and Sung, 2014). Benefits in low-income families, especially those with children, are often paid into women's bank accounts, particularly if the man earns the main wage (often paid into the joint account) (Griffiths et al., 2020).

Research into perceptions of “welfare reform” and Universal Credit prior to its introduction (Rotik and Perry, 2011) showed that a joint payment was seen as acceptable by most respondents; but people thought the choice of account into which it would be paid would depend on the couple's situation and preferences – a view supporting greater flexibility. Concern was expressed about the risks of the (almost) “all-in-one” nature of Universal Credit, which would be exacerbated rather than mitigated by payment into one account. Respondents were concerned about a single payment for those in less stable or problematic relationships, including transient couples, or cases of drug or alcohol abuse, problem gambling or domestic violence. There was a view that joint household payments could result in a “purse to wallet” transfer in some relationships, which would be a matter of concern. It could also be argued that joint payments represent a risk for entering into the committed relationships that the Government of the time was keen to encourage.

These and other arguments were presented during the passage of the legislation, in briefings from the Women's Budget Group (2012), amongst others. The then Government had suggested that it recognized inequality within households, in particular to the detriment of women: “Research has suggested that, particularly in low-income households, the ... assumption with regard to income sharing within couples is not always valid as men sometimes benefit at the expense of women from shared household income” (Grayling, 2011). Nevertheless, the Government justified a single payment for couples in several ways. These justifications were countered by the Women's Budget Group, as summarized in Howard (2018).

First, it argued that only 7 per cent and 2 per cent of cohabiting and married couples, respectively, manage their finances completely separately (Malthouse, 2018a), so the payee for Universal Credit would make little difference to outcomes. However, these statistics from the Families and Children Study (Maplethorpe et al., 2010, p. 221) refer to families with children only, whose finances are more likely to be joint. In any case, deciding whether to pool resources and how to deal with these is a different issue from who is the recipient. The literature on the management and allocation of household resources discusses the significance of the identity of the income recipient (e.g. Bennett, 2013). In its Equality Impact Assessment for Universal Credit, the Government undertook to consider the potential impacts of payment to one partner (DWP, 2010b); it is unclear whether it has done so.

In 2018, the then Minister also argued in correspondence (Malthouse, 2018b) that Universal Credit, although comprising a standard allowance and additional amounts, does not have any specific elements, being not an umbrella benefit but a unified concept, and that some 40 to 50 per cent of claimants have other income in addition to Universal Credit. The Minister stated that this integration of different benefits avoids the need for a priority order in setting income against different elements of the total award, or in tapering benefit away (precisely the previous system, described above, that had allowed main carers to keep some resources for longer). In addition, the Minister argued that separate payments to each partner by default would require both to have a bank account, and that joint accounts would not be able to be used.

One point that was raised by the Minister had been discussed previously by researchers with a gender perspective (e.g. Goode et al., 1998): that splitting the payment of benefit equally (or possibly in another way) between the partners might risk one partner – perhaps the man in particular – considering their share to be personal spending or “pocket money”, rather than being intended for the household as a whole. Or one partner might feel, the Minister wrote (Malthouse, 2018b), that they could not ask the other partner to share bills. This highlights the need for the careful design of separate payments and clear communication about the purpose of payments; misuse of benefit income may be more likely with the introduction of Universal Credit, when distinct benefit labels no longer exist.

The payment issue also raises questions about the gendered division of roles within the household. Women in low-income families with children have been seen as the “shock-absorbers” of poverty (Lister, 2006), a role which can also be seen as part of women’s unpaid caring work. When the household has few resources, women have tended to be the main managers of the household budget (Griffiths et al., 2020). On the one hand, this can be a source of pride (Goode et al., 1998), and may give some (limited) agency (Bennett and Sung, 2014). On the other hand, in low-income families, in which female management is more likely, control of the budget may be, in practice, about trying to attain peace of mind rather than power (Bennett et al., 2010).

The payment of benefit to the main carer may be argued for either in recognition of – and perhaps in part compensation for – gender inequalities in access to resources within households, or as reinforcing such inequalities by confirming the gendered division of roles.<sup>3</sup> Attitudes towards this may differ depending on whether the issue is about the main carer receiving just the money for the child/children, or also income for their own needs – and possibly their partner’s

3. As stated, it is generally agreed that this results in a greater likelihood of such benefits reaching the child/children (Fisher, 2014; Lundberg et al., 1997).



too, as is potentially the case with Universal Credit. In addition, whilst in the UK the main carer (chosen by the couple) in most cases has reduced conditionality to fulfil, under schemes which pay conditional cash transfers in many other countries the recipient of the children's benefit, usually the mother, often has additional duties in return (Molyneux, 2008; Soares and Silva, 2010).

In response to widespread concerns about the single payment – especially after the Work and Pensions Committee's inquiry into Universal Credit and domestic abuse (Work and Pensions Committee, 2018) – the Government announced in early 2019 that it would “nudge” couple claimants with children into nominating the main carer to receive the entire payment (Rudd, 2019), via a strong hint on the online claim form. Even before this, however, Malthouse (2018b) had noted that by early 2018 more female partners in joint claims received Universal Credit (45 per cent compared with 38 per cent, with payment into a joint account for others). Further, in a later ad hoc study, the DWP found that 59 per cent of online Universal Credit claims from couples in which the account holder's gender could be identified (some 60 per cent) had the woman as payee (DWP, 2019c). However, it is impossible to tell whether these statistics relate to an individual or joint account (with two account holders, but only one name entered on the form). As suggested, these findings might result partly from women being seen as holding the responsibility for managing the household's money in such couples. A potential drawback of paying the whole award to the main carer is that they receive all the Universal Credit, with less conditionality, whilst in principle the main jobseeker/earner's conditionality is not modified to recognize any caring responsibilities – and neither do they receive any payment themselves. It would not be surprising if this led to resentment. Thus, most supporters of separate payments of Universal Credit to individuals in couples would not find the Government's solution of paying it all to the main carer satisfactory – and in any case, this covers only couples with children, leaving those without children with no remedy (except the discretionary exceptional split payments, described above).

### **Differences in devolved administrations**

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Some social policy areas are the responsibility of the UK's devolved nations (Scotland, Wales and Northern Ireland), though each country's devolution settlement differs. Traditionally, social security was one policy area reserved to the Westminster (UK-wide) government.

In Northern Ireland, social security is devolved but there is a long-standing principle of parity between the two governments; so entitlements are similar, but with some variations in recognition of Northern Ireland's distinctive socio-demographic circumstances and history of conflict (McKeever, 2017; Patrick



and Simpson, 2020; Simpson and Patrick, 2019). These include measures to mitigate the impact of some of the UK government's welfare reforms. There has been an agreement that Northern Ireland (as well as Scotland) can depart from some practices in relation to Universal Credit, and this includes provision for different payment arrangements, including separate payments to partners in couples.

In Scotland, following the 2014 referendum on Scottish independence, which resulted in a narrow vote to stay in the UK, the Smith Commission – set up to fulfil the promise that a vote against independence would not prevent some devolution measures – recommended limited social security devolution. Although Universal Credit is reserved to the Westminster government, the Smith Commission recommended that decision-making powers over “alternative payment arrangements” (APAs), including split payment, should be devolved. These were considered “administrative” (Smith Commission, 2014, p. 18) – though, in our view, they involve policy decisions.

In Wales, no Universal Credit responsibilities have been devolved. Although it has no power to do so, the Welsh Government has accepted in principle a Welsh Assembly Committee recommendation (National Assembly for Wales, 2019)<sup>4</sup> that payment flexibilities, as in Scotland, should be devolved to Wales (Deputy Housing Minister, 2019).

With regard to separate payments of Universal Credit for partners in couples specifically, Northern Ireland and Scotland differ in their approach.

In Northern Ireland in October 2014, the then Minister in the Department of Social Development (the DWP equivalent in Northern Ireland, now the Department for Communities (DfC)), wrote to church leaders detailing measures that had been agreed with the DWP. Rather than a default Universal Credit “single payment”, claimants should have a range of options. In addition to the single household payment into one bank account or into a joint account, as elsewhere in the UK, there should be a choice to have payments split “on the basis of the main carer and children”, to be determined by the Department and paid into separate bank accounts (Bowers et al., 2015, p. 20). Whilst Westminster government Ministers had assured their Northern Ireland counterparts that the IT capability would enable them to split payments (McCausland, 2012), the online application process and digital payment system in effect make two separate payments<sup>5</sup> into different bank accounts impossible, as only one bank account can be nominated (Work and Pensions and Northern Ireland Affairs Committees, 2019). Currently, couples can have separate payments on request in

4. In May 2020, the official name of the National Assembly for Wales was changed to Senedd Cymru (in Welsh) or the Welsh Parliament (in English).

5. In fact, these are known usually as “split” payments; we use the term “separate” for the reasons given earlier in this article.

Northern Ireland. However, unlike the DWP operational guidance for staff decision-making on discretionary, exceptional split payment APAs, there are “no preconditions” for granting a separate payment (Meharg, 2019). In essence, such decisions can be made on the basis of choice alone. To put into effect previous Ministers’ steer to make separate payments, the DfC currently apportions each partner’s entitlement as a 50:50 split, in our understanding. In practice, in 2019, the DfC had granted only two couples (four people) payments of this kind, and the Women’s Resource and Development Agency has been concerned about whether this choice has been sufficiently publicized (Work and Pensions Committee and Northern Ireland Affairs Committee, 2019).

In Scotland, the intention is to make separate payments to individuals in couples, and the Scottish Government has been working with the DWP on options:

“... to ensure that everyone has access to an independent income based on their individual circumstances,<sup>6</sup> and to promote equality in the welfare system. It is our view that entitlement to financial independence is a human right, and this aligns with the Scottish Government’s rights based approach to social security more broadly” (Somerville, 2019).

At the time of writing, the Scottish Government has not yet announced a final policy option; but having to consider the detail of how to operationalize the policy can highlight a range of factors that need to be considered (see below).

### **Implications of IT for policy development by devolved administrations**

As noted above, the Universal Credit IT system was built on the basis of a single payment by default, so currently two separate payments cannot be made electronically (so discretionary split payments are delivered manually). Hence, making a separate payment and deciding how much to allocate to each partner is difficult to operationalize, as this would undermine the “autopay” and “autocalc” IT functions (Couling, 2018a), and the DWP has stated that “ideally we would like to automate everything in the system” (Couling, 2018b). Thus, the scope for policy divergence in Scotland and Northern Ireland is limited as the DWP controls delivery, through the IT system for claims and payments – despite earlier promises that there would be system capability to make separate payments. It has also been noted elsewhere that the IT system was not designed for policy variation in a

6. As noted in the conclusion to this article, we do not ourselves see separate payments of the integrated, means-tested Universal Credit as “independent” income when entitlement to Universal Credit depends on partner resources, as discussed in the text. We agree that financial independence should be considered a “right”.

devolved context (Paun et al., 2019). There are also wider concerns about Universal Credit automation driving policy, such as when challenging decisions (when claimants have to move to a paper-based system) (Howes and Jones, 2019) and how earnings are assessed (Maxwell, 2020). Regarding technological developments as separate from policy, rather than interlinked, and the increasing use of automated decision-making, are issues being experienced by social protection systems worldwide (Alston, 2020).

### Issues and options

Under the standard approach, exceptional discretionary split payments are rare. As of February 2020, only 115 had been made; in the main, these were in England, with only eight in Scotland.<sup>7</sup> Split payments were also available in the former means-tested out-of-work benefits on the same basis as those used for Universal Credit, but these were also rare.<sup>8</sup>

The single payment default, and IT systems built around this, mask some of the choices and dilemmas about payments to couples only recently explored by the Scottish Government in deciding on their options. A report from the Women’s Budget Group (Howard, 2018) set out criteria by which alternative payment systems for individuals in couples could be developed – whilst recognizing that changing payment arrangements for Universal Credit by itself would not give women an independent income or be a solution to domestic abuse. It suggested that these criteria should include: narrowing the scope for financial abuse; helping to ensure that money for children is spent on them; promoting the financial autonomy of both partners in a couple, with each having access to some income; and improving gains to “second earners” from paid work. Such arrangements should also be transparent: claimants should know what contribution each partner is making to household income and be aware that Universal Credit is for household rather than personal spending. Had there been an open debate about methods of payment, these criteria might have been discussed more widely, and three related questions would have become salient.

Currently, as this article has explained, there is in effect a “default” system of one household payment.

The first question is whether payments to couples should be determined by choice or by default. In Northern Ireland, the original position was for “choice”, but now the position seems to be “on request”. Is this really a choice? As noted earlier, this then raises a number of questions, including: what are the constraints

7. Figures from the DWP’s Stat-Xplore website.

8. See the evidence provided by the DWP’s Senior Responsible Officer for Universal Credit to the Work and Pensions Committee inquiry into domestic abuse (Couling, 2018c).

on choice within relationships when there are power differentials?; and how should choice be operationalized as a meaningful decision by each partner when such power differentials may exist?

In contrast, “two payments by default” was the position put forward in an amendment to the Social Security (Scotland) Bill. This amendment was not subsequently adopted by Scottish Ministers because post-legislative checks indicated that this provision modified a reserved benefit, which the Scottish Government did not have the power to do. Nevertheless, the policy commitment to separate payments remained (Freeman, 2018). Related to the “choice versus default” question is whether a default of one payment should enable partners to choose which one of them is the payee (as is now the case in Universal Credit). Alternatively, should there be some “preference” for one partner over the other – for example, the main carer in couples with children? This was previously more explicit in child tax credit and now takes the form of a “nudge” in the Universal Credit claim form.

Unless there is a choice of having one payment or two, the second question concerns whether claimants should have to meet certain criteria in order to have a non-standard payment. For example, if two payments of Universal Credit are the default, should any variation from this be by choice, or should claimants have to meet some criteria before this can be done? The UK nations vary in their approach. Split payments can currently be made only in exceptional and very limited circumstances. The exception is Northern Ireland, where no reasons are required. In effect, as defined above, separate payments exist now in Northern Ireland. The proposed amendment to the Scottish legislation also indicated that, with “two payments by default”, claimants could request an opt-out, although it was unclear whether this opt-out would be able to be done on request or would require certain criteria to be met. As discussed by the Work and Pensions Select Committee, there are other possible options for the selection of criteria for split payments that are unrelated to the current grounds for an exception (i.e. domestic abuse or financial mismanagement), such as a general budgeting need.

Third, and most challenging, is the question of how each part of the total Universal Credit award should be calculated if there are two separate payments (such as by proportion or by entitlement, as discussed above). It is also the case that some elements, such as housing costs, are related less to individual entitlement than to household needs (Work and Pensions Committee, 2018, paras 30–33). One concern about a 50:50 split is that, like the single payment, it bears no relation to individual need, so could potentially disadvantage those with caring responsibilities and take money away from women (Malthouse, 2018b). In the context of an integrated benefit such as Universal Credit (unlike the former out-of-work benefits), one question is how any other forms of income – from sources such as other benefits, savings, earnings, etc. – should be treated. For

example, should the other income of one partner just reduce her or his own share of the Universal Credit award? Should both partners' incomes be combined and notionally divided in half, so that the same amount of income is deducted from each partner's individual maximum award? Or should the amount of the final net award itself simply be divided in half? Deducting earnings in a 50:50 share from each partner could mean that the lower-income partner (more likely to be the woman) could receive proportionately less because the higher-income partner's earnings reduce her percentage of the award.

This is consistent with the joint assessment of earnings in means tests for couples (which, as we have discussed, it is not within the powers of the Scottish Government to change), but raises questions about which is the fairest way to calculate separate payments as well as about potential impacts on work incentives and budgeting. Dealing with other income is one of the challenges for the Scottish Government's separate payments policy. More generally, it highlights that separate payments are difficult to operationalize within an integrated, jointly assessed, in- and out-of-work means-tested benefit, such as Universal Credit.

## Conclusion

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Within means-tested benefits, there is a long-standing practice of aggregating a couple's income, assets and needs. In the United Kingdom, in conjunction with the development of joint claims by couples, in the decade to 2010 there was some interest in considering whether the increase in individual responsibilities in terms of more activation should be reciprocated with an individualized payment of benefit. This may have been easier to contemplate in the context of a range of benefits/tax credits payable for different purposes, and potentially to different members of a couple. Under tax credits, it was also possible for one partner to receive the WTC (if they were the main earner) and for the other partner to receive CTC and the childcare element of WTC (as the main carer). This, however, involved assumptions about how couples organized the care of children within the family.

As an integrated benefit, payable to a range of claimants, and awarded regardless of the employment status of either partner, Universal Credit creates a context in which the "choice" of payee for the benefit is a more momentous decision for couples and in which moves to individualize payments to partners within a couple are significantly more challenging. Discretionary powers to enable an award to be split between partners have broadly been carried over from out-of-work means-tested benefits, but using the same rules in the context of an integrated in- and out-of-work benefit is misplaced – and may risk further abuse if used.

A former UK Secretary of State asserted that “one payment per household is an established feature of the welfare system (Housing Benefit, for example, has always been paid in this way)” (Rudd, 2019). However, Housing Benefit is usually paid to the person liable to pay the rent (though where there is joint liability, only one person can claim the benefit). Furthermore, Housing Benefit is paid for a specific and limited purpose – to help towards housing costs – and thus differs from Universal Credit, as an integrated multi-purpose benefit. This does not seem to be an accurate analogy, therefore.

In the UK, two devolved governments have different approaches to making separate payments to partners in couples in this new context. In Northern Ireland, the DfC can decide how to divide a Universal Credit award between the partners in a couple, which the authors understand is currently done on a 50:50 basis. These separate payments are available on request (though, perhaps because requests depend on widespread public awareness, few have been made in practice). The Scottish Government is actively looking at options for “individualizing” payments, and in the process has undertaken more policy development in this area than anyone has done previously. At the time of writing, it is not known which option the Scottish Government will choose; but the fact that it is looking seriously at how to do so marks an important development, and could be an opportunity for policy learning.

However, regardless of any improvements that may be made in facilitating access to personal income for individuals by introducing separate payments of Universal Credit for partners within couples, it remains a means-tested benefit, and so subject to joint assessment for couples living together. This means that the income available to one partner will continue, inevitably, to depend on the presence, resources, needs and actions of the other partner. Therefore, although separate means-tested benefits could in our view give partners in couples some access to income, we believe that true financial autonomy for individuals within couples – which is particularly important for women – can more appropriately be achieved through sources of income such as individual earnings, and non-means-tested benefits with individual entitlement conditions (Howard, 2019).

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# Extending pension coverage in Cambodia: The governance and investment challenges of the Social Security Investment Fund

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**Abstract** Rapid economic growth, declining fertility and changes in family structures have encouraged the Kingdom of Cambodia to reform its old-age pension system. The Government of Cambodia reached an important milestone in 2019, when the Law on Social Security was promulgated. The Law includes provisions for a compulsory defined benefit pension scheme, establishing a sound framework for extending compulsory pension coverage beyond the public sector to formal private-sector workers. As a future step, the compulsory pension scheme should be extended to informal workers. To accompany the reform, the investment policy for the pension scheme's reserve funds, including the supervisory regime and investment strategy, will be essential for the modernization of the Cambodian social security system. In this regard, Cambodia has successfully sought policy advice. However, the country should continue to seek further advice, and to act on this. Otherwise, the necessary and increasingly pressing policy ambitions of Cambodia to develop an adequate and sustainable social protection system may not be fully realized.

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**Keywords** pension scheme, social security financing, coverage, social protection, Cambodia

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## Introduction

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With the introduction of the National Social Protection Policy Framework 2016–2025 (NSPPF), the Royal Government of Cambodia has launched an ambitious programme to reform social protection (Royal Government of Cambodia, 2017). The Government reached an important milestone in 2019, when the King of Cambodia promulgated the Law on Social Security. This law establishes the general principles, procedures, mechanisms and management structures of the country’s social security schemes, which include pensions, health insurance, and working injury and unemployment schemes (see Kwon and Keo, 2019). A key policy development is that the law guarantees the introduction of pension benefits for workers and employees in the private sector.

Rapid economic growth, declining fertility and changes in family structures have encouraged countries of the Asia and Pacific region to introduce or reform pension systems (Holzmann et al., 2000). The Pacific Economic Council (2010, pp. 41–42) has identified population ageing as the main driver for countries in the region to invest in pensions. Other drivers are the growth of atypical employment relationships, that have expanded with growing industrialization and urbanization which, in turn, leads to additional household expenditure needs, including for health care costs and pension benefits. Regional economic development has also led to growing numbers of international migrant workers, created increasing demand for cross-border social security agreements, including for pensions.

The Organisation for Economic Co-operation and Development has stressed that a greater focus on social policies in this region will also support the stimulation of aggregate domestic demand. In this regard, structural reforms would help to create a more favourable environment for strengthening private consumption levels (OECD, 2019a). At the same time, some countries in the Asia and Pacific region have started to focus on “inclusive growth” which aims to share equitably the fruits of economic progress (Alekhina and Ganelli, 2020). From a Bismarckian perspective, it may be argued that the aim of “inclusive growth” is to allow all, but especially the working classes, to enjoy the benefits of economic growth, thereby fending off calls in society for more radical political reforms.

In their respective studies of pension policies in Asia and the Pacific, Asher and Kimura (2015), Holzmann et al. (2000) and Yeh et al. (2020) have underlined the main policy prescriptions followed. Specifically, countries have tried to avoid pension policy errors by adopting an integrated view on retirement income

provision, with the aim of balancing individual and social equity with efficiency considerations, averting fiscal unsustainability and integrating public- and private-sector pensions. Other features of pension policies across the region involve the drive for innovation by moving toward a multi-pillar structure, prudently extending coverage, trying new approaches to reduce administrative costs and extending social risk management through informal support and safety nets. Finally, countries in the region have combined pension policies with the goal of fostering the development of financial markets, a process that entails decentralizing pension fund management; implementing and enforcing governance, regulation and supervision structures; as well as creating or supporting the provision of new investment instruments.

Although significant progress has been made in strengthening social protection systems and building appropriate national social protection floors in the Asia and Pacific region, the ILO (ILO, 2017a) has underlined that only around 40 per cent of the population is effectively covered by at least one social protection scheme providing cash benefits. There are concerns regarding persistent coverage gaps in the areas of maternity and unemployment protection. In the wider context of longer-term demographic change and short-term austerity-driven fiscal pressures, there is general concern about the adequacy and coverage of many social protection benefits and pensions in particular.<sup>1</sup>

Globally, there are four groups of factors expediting changes in pension policy: demographic (increasing life expectancy and decreasing fertility rates: population ageing); social (inequality issues and changes in employment structures); economic (globalization, economic crises); and political (social policy as a positive force for social cohesion, inclusive growth and stability).

Applying these factors to Cambodia suggests there is an urgent need to strengthen pension legislation and policy design, including the management of the investment of social security funds. Coverage extension is also required, to provide workers in the informal sector with access to the mandatory social insurance schemes administered by Cambodia's National Social Security Fund (NSSF) (You, 2020). Despite advancements, Cambodia continues to have a fragmented social protection system and a low level of domestic resources is allocated to social protection (You, 2020). Generally, public spending on social protection is low compared with other countries in the region (OECD, 2017).

This article sets out proposals to help achieve an adequate pension system in Cambodia. It does so through placing a specific focus on the challenge of

1. The International Labour Organization (ILO, 2017a) emphasizes the key social and economic roles played by social protection in national development strategies, to promote human development, political stability and inclusive growth and to reach the United Nations sustainable development goals (SDG). Social protection ensures that people enjoy income security and have effective access to health and other social services and are empowered to take advantage of economic opportunities.

establishing an investment policy for the social security system, guided by the recommendations of international organizations and European Union-level best practices. The two research questions to be addressed are: i) what challenges lie in the path of the construction of the pension system in Cambodia; ii) and how should the investment strategy for social security funds be developed.

To help answer these questions, a literature review was completed and interviews undertaken (between March 2019 and February 2020) with key policy-makers and policy actors in Cambodia from the General Secretariat of the National Social Protection Council (NSPC), the Ministry of the Economy and Finance (MoEF), the National Social Security Fund (NSSF), the National Bank of Cambodia and the International Labour Organization's (ILO) regional office for Asia and the Pacific.

The remainder of this article is structured as follows. The next section reviews the history of social protection in Cambodia. This is followed by a discussion of the political engagements for pension policy development and the pension system's regulatory framework. Before presenting the conclusions, we outline challenges and opportunities for the social security system's investment policy in Cambodia.

### The development of social protection in Cambodia

The first social security system in Cambodia was established by Royal Decrees No. 55 and No. 306 in 1955 (ILO, 2012). These provisions were abolished by the genocidal Khmer Rouge regime that was in power from 1975 to 1979, which killed more than two million people in Cambodia (around 25 per cent of the population) (Heuveline, 2001). The reconstruction of public institutions started slowly. In 1993, the Department of Social Security was established to implement social security protection for private-sector workers, with the first Labour Law passed four years later. In 2002, the first Law on the Social Security Scheme for Persons Defined by the Provision of the Labour Law was established.

The 2002 social security law stipulated the introduction of social insurance benefits, including employment injury benefits and old-age, invalidity and survivors' pensions, with other benefits to be specified later (ILO, 2012). Although the law covered pensions, including the description of some parameters, a pension scheme was not implemented. In 2002, Cambodia had requested ILO experts to help with the design of its first employment injury scheme. However, it was not until 2007 that the National Social Security Fund (NSSF) was established<sup>2</sup> to replace the Department of Social Security and assume responsibility for social security schemes, which were specified as mandatory provisions for employers under the new Labour Law. In 2008, the agency started

2. The NSSF was operational in late 2008 (ILO, 2012, p. 20).

operations, first by introducing mandatory employment injury insurance for larger enterprises in Phnom Penh and then, later, in the other provinces, covering all enterprises with more than eight workers and/or employees.

Legislation was also passed in 2008 establishing the National Social Security Fund for Civil Servants (NSSF-C), which administers social security benefits for public-sector workers, and in 2010 for the National Fund for Veterans (NFV), which administers social security benefits for war veterans and to personnel of the Royal Cambodian Armed Forces and the National Police Force. It is important to note that the NSSF-C was established without consideration of its financial sustainability (ILO, 2012). No assets were allocated to the scheme to cover pension liabilities accrued in the past. However, a *Prakas* (Ministerial Regulation) was adopted, stipulating that the scheme would be financed from salary contributions set at 24 per cent of civil servants' salaries, to be split between the Government as the employer (18 per cent) and civil servants (6 per cent). However, no contributions were to be collected for those pensions already in payment. The payment of benefits to civil servants was to be provided on a pay-as-you-go (PAYG) basis. The NSSF-C's function was to calculate benefits and carry out payments.

As recently as 2015, social protection in Cambodia was still at an initial stage of development. There were many challenges to overcome, since most Khmer people had little or no effective coverage, particularly so amongst the most vulnerable. In contrast, civil servants enjoyed a comprehensive benefit package financed through the state budget.

The most comprehensive contributory (social insurance) programmes are administered by the NSSF, which administers work injury insurance, maternity benefits and, most recently, health insurance to 1.2 million workers in the private sector. However, legally and practically, coverage has been limited to large enterprises. Workers in the informal economy, representing 90 per cent of the labour force, still have no access to coverage under NSSF programmes, including the new pension provisions (ILO, 2020).

Since the early 2000s, after tumultuous decades, Cambodia's economy has grown at a record rate with booming garment, tourism and construction sectors. Between 2000 and 2015, annual gross domestic product (GDP) growth averaged 7.8 per cent, raising GDP per capita to USD 1,225 and reducing poverty rates dramatically from over 60 per cent to 13.5 per cent (OECD, 2017, p. 17). In 2015, the country was recognized as a lower middle-income country by the World Bank. The greatest reduction in poverty has occurred in rural areas where the level of relative deprivation is higher than in the cities. However, the increase in the proportion of salaried persons has alleviated urban poverty as well. Despite this progress, low wages and precarious employment conditions are linked with in-work poverty. A 2015 report by the ILO and Asian Development Bank (ADB and ILO, 2015)



highlighted six major challenges and constraints for building more productive employment in Cambodia: sustaining long-term growth and the macroeconomic environment; skills acquisition and productive employment; agricultural productivity growth and rural development; reducing vulnerable employment; and limited social protection and a need to improve industrial relations.

The National Social Protection Policy Framework (NSPPF) 2016–2025 was approved by the Cambodian Government in March 2017 (Royal Government of Cambodia, 2017). The NSPPF embraced the vision of providing social protection to all citizens in their old age, including workers in the informal economy with contributory capacity. As a consequence, a process towards a significant expansion of social security, especially in the pension field, has begun.<sup>3</sup>

To help implement the reform envisioned by the NSPPF, the Government approved a Royal Decree establishing the inter-ministerial National Social Protection Council (NSPC). The NSPC includes an executive committee and a technical secretariat. The Law on Social Security, promulgated on 2 November 2019 by the King of Cambodia, was a major step towards the NSPPF's goals. The aim of the law is to establish the social security system to ensure social justice, equity and to promote the welfare and living standards of citizens. The law defines general principles, procedures, mechanisms and the management of the social security system of the Kingdom of Cambodia, which includes pensions, health insurance, working injury and unemployment schemes. The law will guarantee workers and employees in the private sector the same pension benefits as for civil servants. The law equally covers all people working in the public sector and those protected by the Labour Law (adopted in 1997).

Article 36 of the Constitution of Cambodia declares that “Every Khmer citizen shall have the right to obtain social security and other social benefits as determined by law”. Further, article 72 affirms that “The health of the people shall be guaranteed. ... Poor citizens shall receive free medical consultation in public hospitals, infirmaries and maternity hospitals”.

However, prior to the passage of the 2019 Law on the Social Security, public-sector employees alone were covered by all social insurance schemes (work injury, unemployment, sickness, maternity, death, old-age, disability, and

3. Cambodia is considered to be a young country with those aged 65+ accounting for only 5 per cent of the total population in 2015. However, along with other Asian countries, Cambodia has experienced a rapid decline in fertility with the total fertility rate declining from 6.31 in 1985 and 2.53 in 2017. Life expectancy at birth in 2015 was estimated at almost 67 years for males and 71 years for females. Life expectancy has increased considerably over the last 20 years, by about 12 years and, from an average of 69 years in 2015, it is expected to increase to 81 by 2065 (Ramirez-Lopez, 2018). Cambodia's population expanded rapidly from 10 million people in 1995 to 15.6 million in 2015, which represents an average annual growth of 1.9 per cent. Nevertheless, the population growth trend has gradually declined from 2.26 per cent in 2000 to 1.65 per cent in 2014 (Royal Government of Cambodia, 2017).

survivors). Private-sector employees were not covered fully by these mandatory schemes. Moreover, health insurance lacked effective implementation for both the public and private sectors (Kwon and Keo, 2019). Before the 2019 Law, coverage was defined by the Law on Social Security Schemes for Persons Defined by the Provisions of the Labour Law adopted in 2002, while the procedures for social security contribution payments for work injury and health insurance were adopted in 2014. Older legislation regulates special social protection measures for various social groups.

The existing pension schemes in Cambodia are organized separately for different targeted groups. The social security system includes the following institutions: the National Social Security Fund (NSSF), National Social Security Fund for Civil Servants (NSSF-C), National Fund for Veterans (NFV) and the People with Disability Fund (PWDF). The NSSF-C included 189,000 active members as of June 2016; the number of active members of the NFV is unknown. Approximately 45,000 old-age and invalidity pensioners are covered by the NSSF-C, and 87,000 pensioners by the NFV as of December 2015 (ILO, 2017b). These institutions provide protection against income insecurity for contingencies such as illness, employment injury, disability, maternity or old age, for their respective targeted groups of civil servants, veterans, and people with disabilities.

The pension schemes for civil servants and veterans under the NSSF-C and NFV are fully funded by the state budget. Between 2015 and 2017, the PAYG rate, which is the contribution rate necessary to pay benefits from the state budget, oscillated between 16 per cent and 22 per cent for the NSSF-C and between 22 per cent and 33 per cent for the NFV (ILO, 2017b).

### **Political engagement for pension policy development**

Even before the adoption of the NSPPF in 2017, it was obvious that increasing industrialization and urbanization as well as growing rural to urban migration had created a need to cover salaried employees against the risk of old age in Cambodia. These “modernizing” developments generally weaken traditional forms of support, such those provided through the family and communities. In the case of Cambodia, these forms of support also included solidarity within the extended family and food donations provided to the poor and needy at Buddhist temples. As stated, the urgency to include private-sector workers in the pension scheme was further driven by the fact that Cambodia, among other Asian countries, is projected to undergo rapid population ageing in the next decades. In 2015, for every person in Cambodia older than age 60 there are ten people aged 15–60. In the coming five decades the ratio will worsen, with only 2.5 persons for each elderly person (EU-SPS, 2019). Without a well-functioning old-age

pension system, a large number of retirees could fall into poverty, which might also go hand in hand with a growing financial burden placed on families providing care to the elderly. Generally, it is to be expected that an adequate and comprehensive old-age pension system will help to support aggregate demand and inclusive economic growth.

A 2012 ILO report on social security in Cambodia had anticipated the introduction of social security pensions, as specified in the Social Security Law of 2002, to be implemented in 2015 by the NSSF (ILO, 2012). The Labour Ministry promised to finalize and implement a new pension scheme for private-sector employees under the umbrella of the NSSF in 2017. According to the initial plan, a pension could be drawn at age 63 after at least 20 years of contribution to the fund (Sokha, 2016). The pension contribution, matched by an equal payment from employers, may be around 5 to 7 per cent of a worker's gross salary. In March 2018, Prime Minister Hun Sen told workers in the garment sector that they would have access to retirement benefit coverage starting in 2019 (Kunthea, 2018). In this statement, the Prime Minister envisaged that the pension would be 80 per cent of the employee's salary, with the pensionable age of 60.

The design of any pension scheme involves a large number of choices. Of these, two in particular stand out and are often used as the basis on which to characterize the scheme as a whole: i) whether the basis of the pension calculation should be related to active life earnings or linked tightly to contributions paid (i.e. defined benefit (DB) or defined contribution (DC)); and ii) whether the financing of the scheme should be based on contributions needed for each year's benefit payments (pay-as-you-go) or based on the advance accrual (from higher contribution rates) of assets from invested reserved funds (ILO, 2017a). Generally, governments should seek to strengthen the management of social security funds: social security financing should be sustainable, with the State assuming general responsibility for this; social security funds should be protected as far as possible against mismanagement, cyclical fluctuations and market failures; and the purchasing power of benefits in payment should be maintained by adjusting them in relation to the cost of living (ILO, 2017a).

When the NSPPF was created in 2007, the Government had already established retirement benefits for civil servants, consisting of a lifetime pension payable after 20 years of service (minimum) at the normal retirement age of 55. The minimum benefit is 60 per cent of the final basic salary plus allowances (excluding the "lump sum" retirement allowance, which comprises a substantial portion of the total final salary). The maximum benefit is 80 per cent of the final base salary (without extra salary items) for 30 years of service (ILO, 2017b).

Extending the design of the public-sector scheme to the private-sector workers was not a sustainable solution because of its high benefit levels and the absence of sufficient accumulated funds to cover the accrued liabilities (ILO, 2017b). In

addition, the precariousness of the Cambodian labour market demands that careful attention must be given to the design of any proposed pension scheme to ensure that workers receive adequate pensions. Typically, salaried work is short-term in nature, with shifts between formal and informal arrangements commonplace. In 2015, NSSF members with coverage for health insurance and work injury insurance paid contributions, on average, only for 60 per cent of the year (7.2 months) (ILO, 2017b). The important garment sector prioritizes the employment of younger workers, while older workers (aged 40+) are far more likely to be in the informal sector. In such a context, where it would be difficult for many workers to satisfy the length of service requirement for a full pension, defined benefit pension schemes may be ineffective. However, as one possible alternative, the Cambodian economy would also face challenges as regards a fully-funded DC pension scheme for which pension contributions are invested in financial instruments.

The OECD states that all pension systems should define their core objectives (e.g. poverty relief, redistribution, sustainability and consumption smoothing) and identify the risks that they must address (demographic, social, labour, macroeconomic and financial) (OECD, 2018). According to the OECD, “[a] robust safety net for pensioners, as well as a diversified and balanced pension system that incorporates a funded component, is important”. The funded component – backed by assets – may be used to promote and reallocate national savings toward long-term investment. Moreover, “well-designed pension systems need automatic mechanisms that align benefits with economic and demographic realities” (OECD, 2018, p. 13; see also OECD, 2019b).

Following the publication of the World Bank’s seminal report on pensions in 1994, *Averting the old age crisis* (World Bank, 1994), the Bank has promoted “multi-pillar” pension reform or “pension privatization” as a policy model (Orenstein, 2008). An early response to the Bank’s position authored by officials of the ILO and International Social Security Association (ISSA) voiced opposition to pension privatization (for a detailed critique of the Bank’s position in 1994, see Beattie and McGillivray, 1995). These conflicting views have also played out in the Cambodian pension policy debate.

In July 2015, the government established a Technical Working Group (TWG) for the development of a social security strategy (EU-SPS, 2019). Also in 2015, the MoEF hired a private consulting firm to develop a framework for the pension system that was meant to serve as the basis for the policy. The timeline specified for the completion of the process was originally the end of 2015, but this was extended to the first quarter of 2016. The short period of time allowed for the completion of this exercise did not permit the consultants to produce an in-depth assessment of – and multi-stakeholder dialogue on – all policy options and their consequences. The consultants recommended a DC pension system for

Cambodia, without discussing the pros and cons of DC and other options, such as a DB system, or indeed hybrid systems.

In 2015, the ILO entered into discussion with the MoEF and NSSF. A first technical note was shared by the ILO in 2016. To support informed dialogue on financially sustainable and socially responsible outcomes in the pension policy area, funding provided by the European Union Social Protection Systems Programme (EU-SPS) permitted a high-level training workshop to be organized to strengthen the capacity of the MoEF and other Cambodian Government actors around technical aspects of pension systems. The workshop used data from the ILO study. The workshop agenda including time to debate the conditions for and consequences of DC and DB pension systems, and hybrids thereof. Through dynamic exercises and group work, participants were successfully encouraged to discuss the advantages and disadvantages of each system. Actuarial training provided by ILO Training Centre in Turin also supported the process.

Following the workshop organized by the EU-SPS and the ILO, the MoEF requested the ILO to carry out an actuarial review, which was to provide data on the pension system options. The ILO actuarial review (ILO, 2017b), a detailed 199-page document, proposed a three-tier pension system centred on a contributory DB scheme. The first tier would be a universal non-contributory social pension financed from general government revenues. This non-contributory tier acknowledged that the experience of short duration contracts and time spent working in the informal sector disadvantaged many workers as regards realizing future full eligibility to benefits under contributory schemes. The second tier would be a contributory DB scheme, with coverage extended only to a limited portion of the private-sector workforce initially. The third tier would be an optional funded DC scheme based on voluntary contributions.

With the adoption of its National Social Protection Policy Framework (NSPPF), Cambodia chose to follow the ILO Conventions and Recommendations on social security and to develop a DB scheme. Thus, work commenced to develop a contributory pension scheme for private-sector workers in which both employers and employees would contribute to a DB scheme (Royal Government of Cambodia, 2017). However, as part of this, a national basic pension was not to be implemented. Instead, a means-tested pension targeted at the poor was designed for those workers unable to contribute adequately for an earnings-related pension.

### **The Cambodian pension system's regulatory framework**

The 2019 Law on Social Security confirms that a pension scheme for employees in the public sector as well as for employees subject to the provisions of the Labour

Law (including airline, maritime, and domestic workers) must be a compulsory contribution-based system. Employers and employees are both obliged to pay contributions. As one of the first steps to implementing the Law on Social Security, the Ministry of Civil Service released a letter on 28 November 2019 addressed to senior leaders of all institutions in the Kingdom announcing a change in the retirement age of civil servants. In compliance with Article 26 of the Law on the Social Security Fund, civil servants, regardless of framework, will retire at age 60 (previously, aged 55). Nearly 2,000 officials who had been set to retire at the end of 2019 were obliged to continue in employment.

The legislation implementing the new pension scheme for private-sector employees, financed by social insurance contributions, is in preparation. It has been agreed with the social partners that the monthly pension contribution for private-sector employees shall consist of 4 per cent of earnings divided equally between employer and employee. This is lower than the 8 per cent calculated by the ILO (ILO, 2017b, p. 90), and as was originally agreed by the different parties. The percentage rate was lowered by the Government to 4 per cent as a result of pressure exerted by employers. There are plans to increase the contribution rate to 8 per cent after a five-year period, followed by a 2.75 percentage point increase once every ten years. The branches of health insurance and work injury insurance operate with a contribution payment ceiling, and the issue of a possible cap on pension contributions has been discussed. Given the unequal distribution of earned income in Cambodia, and especially the very low level of the lowest income, a possible contribution cap would greatly undermine the financial sustainability and legitimacy of the pension scheme.

The challenges facing the implementation of the pension scheme can be identified at an institutional, financial and regulatory level. There is institutional fragmentation across the administrations of the different social insurance schemes (pensions, work injury, and health). The main inconsistency concerns the difference between the existing public-sector pension scheme and the new scheme. There is political will to merge the schemes at some future date. At present, however, full consideration has not been given to the questions of an early voluntary exit for civil servants or to the level of benefits, or of other allowances, which should be amended to reflect social changes and recent developments affecting workers in the public administration. The risk is that private-sector contributions will subsidize the underfunded public-sector scheme. However, to merge the schemes would first require detailed actuarial calculations, which are not yet available. The stakeholders (including the social partners) are aware of the risk, which helps to explain why the Law does not propose such a merger of the schemes. Rather, it would be more advisable to close the existing scheme wherein all existing beneficiaries (perhaps excluding

those very close to retirement) are transferred to the new scheme. A first step in this direction has already been taken with the tough decision to increase the retirement age for all current civil servants.

The Law on Social Security delegates the administration of the pension scheme to the National Social Security Fund (NSSF) (operator) under the Ministry of Labour and Vocational Training, while the supervision will be handled by the National Social Protection Council (NSPC) (regulator). The details of the pension scheme will be defined in sub-decree statutes. The regulations of relevant bodies do not currently clearly indicate the roles of the NSSF and NSPC with regard to the investment of social security funds. However, article 11 of the Law on Social Security indicates that the Social Security Regulator is obliged to identify regulatory provisions, operational standards and related documents. There is also a need for capacity building among employees of the NSSF and NSPC, to develop regulatory, operational, and investment “know how” and capacity.

The anticipated level of benefits will involve a potentially sharp expenditure increase when the first pensions are paid. It is to be noted that pension contribution collection did not start at the beginning of 2020, but was postponed at least until mid-year 2020. On a positive note, the NSSF has for a number of years been collecting contributions for the health and work injury schemes from employees.

The Law on Social Security requires that the voluntary pension system be established and it allows persons who lose their job with earnings before age 60, but who are able to pay contributions, to participate in the voluntary pension system. However, the existing legislation provides a framework to operate compulsory pension schemes only. The public and private sector supervision framework does not fully meet the required technical and financial sustainability standards.

The Law on Social Security outlines a framework for implementing a sustainable pension system. Still left open, however, are many crucial questions ranging from the contribution level (which has been agreed for the short term) to benefits rules (which may present difficulties at a later stage). With the progressive enactment of sub-decrees that will define all the remaining parameters of the pension system, it is possible that contribution collection will start before the benefit levels have been finally determined. This may act as a disincentive to employees, especially workers in the informal economy whose entry is voluntary, to contribute to the system. It is to be reminded that the most important issue in Cambodia with regard to coverage extension is to incorporate informal workers into the system. The NSSF has planned pilots to extend social protection to domestic workers, tuk-tuk<sup>4</sup> drivers and construction workers (You, 2020) who are, usually, informally employed.



## The social security fund investment policy in Cambodia

The Cambodian population remains young, with an average age of around 27 years. Under these demographic conditions, but also depending on the benefit and contribution levels specified in the subsequent legislation, the inflow of pension contributions should be well above that required to pay out benefits (Cruz, 2017). Moreover, pension benefits are not to be paid in the first years of the scheme's operation. This implies the accumulation of financial reserves, which, inevitably, should be invested safely, responsibly and profitably in assets.

To help cover future pension system payment liabilities when Cambodia's population structure starts to age, the Social Security Investment Fund was created. Based on the assumptions of the 4 per cent contribution rate, full compliance and no contribution caps (the latter two of which are very optimistic assumptions), it is expected that the NSSF will collect around USD 800 million in 2021 (calculated from the Cambodia Socio-Economic Survey 2017 data; see NIS, 2018). This projected figure is calculated assuming that contributions are to be paid without ceilings for all household wage income. Moreover, with expanding levels of salaried employment, increasing wages and an expected rise in the contribution rate, it is to be expected that substantial reserves will be generated in the coming years.

Several international organizations have drafted detailed guidelines for the investment of social security funds. For instance, the ILO has issued country-specific recommendations on investment policy for the Kingdom of Cambodia (Cruz, 2017), the OECD has developed *Guidelines on Pension Fund Asset Management* (OECD, 2006), and the ISSA has produced and updates *ISSA Guidelines on the Investment of Social Security Funds* (ISSA, 2019).

According to the ILO, investment policy should consider that different schemes have to adopt different approaches and policies to build adequate portfolios (Cruz, 2017). The ILO maintains that the investment policy should be implemented by an operational body that is adequately endowed with resources. Of necessity, the staff should have the appropriated skills to implement the investment decisions made by the executive body. One operational risk associated with the implementation of the investment policy is conflict of interest. The ILO recommends measures to avoid potential conflicts of interest. Specifically, operational staff involved in and responsible for investment implementation should be different from those who are responsible for the risk assessment procedures and monitoring of investments. The ILO advocates reporting procedures that will ensure correct evaluation and which clearly determine the feasibility of an investment.

4. Most commonly, a three-wheeled motorized taxi.



The contents of the OECD and ISSA Guidelines overlap to a large degree, both emphasizing the importance of the good governance of investment institutions. The institutions should have regulatory and legal frameworks that are at arm's length from government; a clearly stated mission statement to guide investment policy; an oversight board accountable to the competent authorities and to members; and transparency regarding investment and risk management to ensure accountability to the stakeholders (OECD, 2006 and 2018; ISSA, 2019).

The question of the investment of social security funds in Cambodia has been under consideration since 2012, when the ILO's 2012 report *Cambodia: Social security for the formal economy. Outlook and challenges ahead* called for the sound investment of reserves, in particular the adoption of adequate risk management provisions (ILO, 2012). The ILO report asserted that risk management provisions were required to address investment risk, conflicts of interest, fiduciary risk and the risk of the political misappropriation of social security reserve funds.

In 2017, the ILO published a report on investment strategies and financial governance recommendations for the NSSF (Cruz, 2017). The report envisaged an investment governance structure and an investment policy for the existing NSSF work injury branch reserves and for the reserves that would result from the soon to be established old-age pension scheme. The key recommendations concern investment governance principles, investment governance structures, investment governance bodies, and investment processes as well as separate investment guidelines for reserves allocated to immediate contingencies and, finally, investment guidelines for reserves allocated to deferred contingencies.

The core message of these investment recommendations, which are general as well as Cambodia-specific, concerns investment governance (OECD, 2006 and 2018; ISSA, 2019; Cruz, 2017). The main task is to create social security reserve funds (in the pension, health and work injury branches) and to elaborate related investment guidelines (including investment policy and the designation of supervisory bodies). In practical terms, this would first require revising legislation in relation to the investment of social security reserve funds. This should go hand in hand with capacity-building for social insurance actors as regards knowledge about recent developments in the Cambodian financial market as well as concerning international best practice in the investment of social security reserves. The next steps would include building a performance management system and an actuarial valuations system, as well as evaluating transitional requirements and scenarios in the creation of the new pension system framework.

Cambodia does not currently have a sufficiently developed financial market with the capacity to invest and manage the volume of social security investments that are expected to be generated, and to do so using a portfolio of assets that are in

accordance with the long-term investment risk profile of social security pension reserves. As of 2020, there were only five listed companies and three corporate bonds in the bond market. There is no government bond or deposit insurance system, although there are plans to pass legislation in these areas. One-year term banking deposits are the longest maturity savings instruments available. Current social security reserves from the health and work injury schemes are invested in short-term deposits in two commercial banks. Despite the strong commitment of the Securities and Exchange Commission of Cambodia to introduce corporate bonds and attract new companies to the stock exchange, it is not expected that the market will have enough potential to absorb the NSSF's current, let alone projected, reserves (Ramirez-Lopez, 2018).

Government bonds would offer a low-risk investment option. However, as stated, there is no government bond market, despite the wider need to channel funding for national social and economic development objectives, including for investment in infrastructure. The Government is instead relying on low interest rate concessional loans from China and the Asian Development Bank (ADB, 2020; Pisei, 2020). Although there is a need for greater investment in national social and economic development and infrastructure, the terms and conditions of concessional loans may act to limit the possibilities for the investment of pension fund reserves in infrastructure projects. Another obstacle to more diversified social security fund investments is that the Cambodian currency, the riel (KHR), has limited use in the financial system.<sup>5</sup>

Article 11 of the Law on Social Security dictates that the Social Security Regulator is obliged to determine a Guideline on the Investment of the Social Security Fund. Article 16 discusses the management of social security funds. Each social security scheme must fall under the oversight of the Social Security Investment Trustee Board of the NSSF. The Board of Trustees is required to define the principles to be adopted for fund management, investment management, investment planning, and the investment portfolio, which are then submitted to the NSSF Board of Directors to evaluate and approve, pending final approval by the MoEF. In executing its role, the Board of Trustees must prepare a report on the maintenance and management of social security funds to the NSSF Board of Directors, the Social Security Regulator and the NSSF Director General. The composition, prescribed qualifications, preparation of decisions, and the functioning of the Trustee Board shall be determined by statute.

It is recommended that the supervisory and management roles of the Social Security Investment Fund should be delineated clearly in the legislation and this should specifically identify roles at the political, stakeholder, executive and operational levels. At the political level, the Government establishes transparent

5. For cash transactions, the economy is estimated to be 90 per cent dollarized.

and accountable supervisory authorities (governing bodies) and the financial accounting system, as well as formulating the investment policy according to the relevant legislation. At the stakeholder level, the National Social Protection Council determines investment goals for each separate portfolio. However, this would require including representatives of the trade unions and employer organizations (the tripartite principle), as well as other government institutions and independent experts in the NSPC, which would also help improve the legitimacy of and trust in the social protection system.

The current legislation is most developed as regards roles at the executive level, where the roles of the Social Security Investment Fund and Board of Trustees of the NSSF are defined. Nevertheless, more detailed directives are needed to formally charge the Board of Trustees with a more complete set of duties, including ensuring integrating periodic review of liabilities in the investment strategy, adopting adequate valuation methodologies, approving benchmarks for performance evaluation and approving a policy of procurement of eligible service providers.

At the operational level, the NSSF has been given the administrative mandate. However, it is not yet clear whether the NSSF will directly perform the actual investment of the fund's reserves or whether this will be conducted through an external fund manager (selected by a decision of the National Social Protection Council (NSPC)). Given the lack of in-house experience and capacity, hiring external expertise through an approved procurement policy may be a more viable option. Nonetheless, and besides the regulatory and supervisory role assigned to the NSPC, further measures necessary to ensure the good governance of social security investments can be identified. At a specialized level, independent external consultancies perform periodic reviews for the NSSF of each of the social security scheme's liability profiles and performance benchmarks. The external supervision is delegated to outside institutions, such as the National Bank of Cambodia, which is responsible for the external supervision of reserve fund accounts for banking products, and the Securities and Exchange Commission of Cambodia, which is responsible for the external supervision of reserve fund accounts for other investment products (corporate bonds, stocks, equities, etc.).

The primary objectives for investments made by the Social Security Investment Fund are security (the investments should assist the social security scheme to meet its commitments in a cost-effective way) and profitability (the investments should achieve maximum returns, subject to acceptable risk). Investment by the Social Security Investment Fund should be made with a view to achieving a reasonable balance between the objectives of security and profitability. Transparent social security investment operations are of paramount importance to build trust in, and the legitimacy of, the legislated pension scheme.

## Conclusions

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Cambodia's 2019 Law on Social Security has established a sound framework for implementing a compulsory pension scheme for both public- and private-sector workers. As a following step, the compulsory pension scheme should be extended to workers in the informal economy. To fully implement the scheme, the onus lies with National Social Protection Council (NSPC) to prepare additional legislation defining its key parameters, including contribution and accrual rates. A coherent social security investment policy and the creation of a pension reserve fund are key elements to ensure the sustainability of the pension system, which will guarantee income security for future generations. The investment strategy of the reserve fund must also take into account the potential negative effects of social and economic risks. Moreover, beside the investment policy, a modern pension policy should provide adequate and targeted income support for the whole population, encourage participation in the labour market, and ensure uniform access and transparency. As the social protection regulator, the NSPC also has the key task of preparing regulation for the social security investment policy and the pension reserve fund to guarantee the payment of adequate benefits for future generations.

Thus, the development of a coherent social security investment policy and the creation of the pension reserve fund should become key elements for social investment in Cambodia. They would ensure the sustainability of the pension system and provide the guarantee of income security for future generations irrespective of social and economic risk events. The purpose of creating the Social Security Investment Fund in Cambodia is to ensure the budget stability of the National Social Security Fund (NSSF), and to cover future benefit liabilities when Cambodia makes the demographic shift to an ageing population. These objectives require to define the Social Security Investment Fund investment policy and to ensure its proper application by means of appropriate management and supervision. It is to be reaffirmed that the primary objectives for the investment of social security reserve funds are profitability and security, and that investments should be made with a view to achieving a reasonable balance between these two objectives.

By way of a conclusion, which confirms a similar view expressed by Kwon and Keo (2019) in their analysis of the implementation of health insurance in Cambodia, the Government of Cambodia faces a steep challenge to address all the institutional changes and financing requirements that will be necessary to successfully implement the new pension scheme and the associated investment policies for the reserve fund. The investment of social security reserve funds, based on prudent fiduciary conduct, should have economic as well as social objectives, ideally to create decent employment as well and to improve the overall

quality of life of the population. This demands that appropriate investment policy and management principles and structures for the pension reserve fund be adopted as regards the financial sources, investment principles, management, supervision, accounting, and the use of the pension reserve fund. Exchanges about and analysis of international pension policy best practice are key to the effective design or reform of the pension system and for setting out the policy to guide the investment of social security reserve funds. As discussed, Cambodia has sought policy advice, but it should continue to seek good advice, and look to act on this. Otherwise, the necessary and increasingly pressing policy ambitions of Cambodia to develop an adequate and sustainable social protection system may not be fully realized.

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**BOOKS**

## BOOK REVIEW

Standing, Guy. **Battling eight giants: Basic income now.** London, Bloomsbury, 2020. 139 pp. ISBN 978-0-7556-0063-2.

The author of this volume is a Professorial Research Associate at the University of London, and co-founder and honorary co-president of the NGO Basic Income Earth Network that promotes basic income.

This book originated from a report prepared as a contribution to a policy discussion in the United Kingdom (UK). The original report sought to address major social concerns affecting the UK. These concerns cover the current unprecedented incidence of poverty in households that have people in jobs (60 per cent), the highest levels of inequality for 100 years, the risks to humanity resulting from severe climate change, and the increasing automation of production that forces millions of people to live in precarity. Basic income is presented as the only possible solution to this conundrum, and the author's intent is to convincingly explain how to address the "eight giant evils" of modern life (namely, inequality, insecurity, debt, stress, precarity, automation, populism, and the risks associated with climate change),<sup>1</sup> by enabling citizens to share the wealth and freedoms of the modern economy.

The book consists of five chapters, dealing respectively with: 1. Slaying giants with basic income; 2. The immorality of Universal Credit; 3. Why basic income beats the alternatives; 4. Piloting basic income in Britain; and 5. Taking the first steps. It includes three appendices clarifying basic policy issues: Appendix A: Experience with pilots (for launching basic income projects); Appendix B: Why a job guarantee would be no alternative; Appendix C: Why "universal basic services" would be no alternative.

This book appears in the current context of the COVID-19 pandemic, which highlights the growing damage of the eight evils of modern life that the author considers as threatening citizens quality of life. There is an urgency to develop a viable strategy to eliminate the eight evils, which, the author argues, can be achieved with basic income. Basic income is presented as part of the following strategy to:

- Reduce poverty and inequality substantially and sustainably;
- Ensure that no one in the bottom half of the UK's income distribution is worse off;
- Enhance economic security across the UK;
- Avoid any significant increase in income tax;
- Avoid any dismantling of public social services, while being compatible with a strategy to regenerate public services, after the depredation of austerity;
- Reduce the number of people depending on, and subject to, means-testing and behaviour testing;
- Contribute positively to reversing ecological decay.

1. In contrast to the "five giant evils" defined by the Beveridge Report in the United Kingdom in 1942: want, disease, ignorance, squalor and idleness.



So, what is basic income? Essentially, it is a modest regular payment to each person for the purchase of life's necessities, which should help to foster a greater sense of security. Yet, there is no prescription in the concept to indicate its monetary value or any indication why it should be prioritized instead of any other policy, or indeed how it should be financed. The main purpose of this book is to offer a positive case for the introduction of basic income.

The author underlines that the main reasons for a basic income are ethical and moral. Its introduction is a matter of social justice that would help to surmount the eight evils by granting citizens a right of subsistence. This is a right traceable to two English constitutional documents from the thirteenth century. First, in *The Charter of the Forest* of 1217 and in, what has come to be known as, the *Magna Carta*, which asserted that everyone had a "right of subsistence" from "the commons", which the author defines as the common resources and amenities, natural or social in origin, bequest to the citizens as a society.

Basic income is paid to all, equally, regardless of any notion of behaviour or merit since, it is argued, most of the existing wealth and income in society is the result of efforts and outcomes of past generations. A major ethical justification of basic income is that it would encourage personal and community freedom, strengthen people's ability to reject oppression and exploitation in personal relationships, and strengthen people's ability to make decisions without depending on permission from those in positions of power. Other ethical justifications for basic income are that it provides every recipient and family with basic security, while not depriving others. It moreover strengthens social solidarity and human relations, which have been eroded by excessive individualism and competition. An absence of basic income, the author notes, reduces people's ability to make rational decisions and threatens health and well-being.

It is suggested that basic income can address current major social, moral and economic concerns in a viable manner, and which, the author argues, cannot be adequately addressed by traditional social assistance and welfare policies that rely on means-testing and behaviour testing and sanctions. For these reasons, the author considers the latter to be unacceptable, morally and ethically.

The primary objective of basic income is to improve lives while building a global income distribution system that leaves nobody economically insecure and worse off. Basic income should be:

- Used to significantly improve the income of low earners, providing basic security;
- Delivered in cash, or an acceptable substitute, and be spent at will;
- Paid continuously at regular intervals (unlike means-tested or behaviour-tested benefits that can be changed, reduced or time-limited);
- Paid to every individual member of society regardless of gender, race, marital or household status, income or wealth, employment status or disability, paid equally to men and women, with a lower amount paid for each child under age 16 paid to the mother or primary carer;
- Paid without imposition of behavioural conditions such as job-seeking;
- Paid to every legal resident in the country and not be withdrawn as income, residence or personal circumstances change (except for changes in legislation).

The detailed description of the social, economic and moral ills provoked by "the eight modern giants" and the potential of basic income to remedy these ills on the one hand, and the major shortcomings of traditional social welfare to fully address these on the other hand, are useful for policy-makers and researchers in their quest for policy improvements.

Chapter 2 analyses the adverse impact of the UK welfare reforms over the past four decades, which have weakened its moderating effect on inequality and have contributed to increased

insecurity, private debt, stress and precarity. The author notes that putting overwhelming emphasis on employment, including jobs that deplete natural resources, the current system ignores the ecological crisis. Its divisiveness and adverse impact on insecurity have contributed to the growing support for populist politics and the erosion of social solidarity. While these claims are strong, so is the evidence of decisions in the 1980s and 1990s to combine the shift to flexible labour markets, which in themselves increased economic insecurity, with the shift to greater reliance on means-testing, intended to target state benefits on those most in need (i.e. “the poor”). A second problem is the creation of poverty traps: the transition from the receipt of means-tested benefits into a job paying an above-poverty wage leads directly to loss of benefits. In flexible modern, service-oriented labour markets, the wages and jobs for a person receiving benefits are low and uncertain. This results in a poverty trap, creating an “immoral” hazard, enticing people (who earn so little and who lose benefits) to enter the “black economy”, risking loss of entitlement to certain benefits and, possibly, even to face prosecution. This vicious circle leads from a poverty trap to a precarity trap. The delays associated with the delivery of the UK’s new integrated means-tested Universal Credit (UC) also creates a vicious circle of delayed benefits and a risk of losing access to short-term jobs. A summary of the main flaws of UC includes the low take-up of means-testing, which leads to poverty and precarity traps; high administration costs; inefficiency due to complexity and arbitrary tests; delays in payment, resulting in stress, debt, hardship, child poverty, homelessness, ill health, higher rates of suicide; sanctions; and lack of due process and unfairness. Taken together, these result in limits to freedom.<sup>2</sup> Generally, research in several countries, including Britain, reveals that means-tested social assistance schemes involve high exclusion errors that deprive people of benefits to which they are entitled.

Chapter 3 considers the many reasons why basic income surpasses the alternatives, over and above the ethical justification of basic income and its potential to fight the “eight modern giants”. These additional arguments include that it permits to create a new approach to distribution in society, for example, by complementing housing policy, including reversing the decline in social housing and imposing rent controls. Basic income could also reward unpaid work, encourage people to spend more time doing care work, which is important at a time of a growing “care deficit”, direct a higher share of per capita income to lower-income regions, and encourage inter-regional mobility. Various other positive opportunities also exist for basic income to target a variety of social and economic “inclusion” projects.

The last section of this chapter answers potential objections to basic income. Common criticisms dealt with by the author are that basic income would not work, is unaffordable (without a large increase in tax revenue), would reduce work and encourage laziness, would threaten the welfare state, would weaken trade unions and collective bargaining, and would subsidize low wages.

Chapter 4 looks to piloting basic income in the UK, and provides an interesting overview of pilots in the UK, and in India – the experience of the latter, in which this book’s author was involved, has been deemed positive (this journal published a book review of this Indian pilot; see Vol. 69, No. 3–4 (2016)).

This interesting book deserves the attention of economists, sociologists, policy-makers, public servants, business leaders, trade unions and NGOs for its contribution to the feasibility of basic income projects in different national and regional contexts. The aim is to create the conditions that

2. For a critical review of Universal Credit in the UK from a gender perspective, see the article by Marilyn Howard and Fran Bennett in this issue.

will lead – even if only locally and for the duration of a pilot project – towards an equitable and fair economy and society. In this regard, Appendix A, contrary to claims by some critics that there is no evidence on the impact of basic income, provides findings of a series of local experiments in various countries. Though it acknowledges that most of them were not complete basic income pilots, they have important features of basic income, notably their non-conditionality. The Appendix describes the outcomes of these experiments that were undertaken in Canada, Finland, Germany, India, Kenya, Namibia, the Netherlands, the United Kingdom and the United States.<sup>3</sup>

Given the growing interest in this humane and new socioeconomic project, it would have been useful to see, and the book's message strengthened by, a little more information. Welcome would have been a section dealing with how basic income projects are financed and by whom, how they are to be organized and checked, as well as other data related to the financial aspect of such projects.

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3. For a recent list of countries that have experimented with basic income, see Samuel, S. 2020. “Everywhere basic income has been tried, in one map”, in *Future Perfect*, 19 February.

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