Chapter 8

Summary and conclusion

Financial scarcity, characterized by insufficient financial resources, poses challenges that individuals and households face in fulfilling their basic needs[1–4]. The consequences of financial scarcity extend beyond mere monetary constraints and may negatively affect emotions, thoughts, and behavior, as well as well-being and health[5–7]. Financial scarcity may result in financial stress, which comprises an appraisal of insufficient financial resources, a perceived lack of control over one's financial situation, financial worry and rumination, and a short-term focus[8].

Social welfare systems can play a pivotal role in decreasing financial scarcity by providing low-income households with the resources needed to acquire their basic needs. Social welfare can help households make ends meet and alleviate financial stress. However, non-take-up of social welfare is widespread and inhibits its effectiveness in mitigating financial scarcity and alleviating financial stress[9–11].

This dissertation aimed to enhance our understanding of the dynamic relationship between financial stress and mental well-being, unravel the economic predictors of financial stress, and extend existing research on the determinants of the non-take-up of social welfare as a policy tool for alleviating financial stress.

The first part of this dissertation focused on financial stress, particularly the dynamic relationship between financial stress and mental health, and the association between households' economic situation and financial stress. Previous studies have shown that financial stress relates to mental health problems such as anxiety and depression[12–14]. Most studies, so far, have been cross-sectional. The longitudinal study in Chapter 2 extended the existing literature by examining the dynamic association between financial stress and mental health during the COVID-19 pandemic.

I then delved deeper into the association between households' economic circumstances and financial stress. The literature on mental health and financial stress shows that different aspects of households' economic situation may contribute to financial stress[15–22]. Thus far, however, these factors have usually been studied in isolation. The study described in Chapter 3 took a more integrative perspective by examining how five aspects of one's economic situation - income, debts, savings, income volatility, and employment - related to financial stress. This allowed an examination of the relative contributions of these economic factors to predicting financial stress.

The second part of this dissertation focused on the non-take-up of social welfare. Social welfare can help households mitigate the negative consequences of financial scarcity and alleviate financial stress. Non-take-up may hinder the mitigating role of social welfare. Chapters 4 through 7 aimed to address several gaps in the non-take-up literature.

The research on non-take-up, spanning decades and diverse disciplines, such as economics, sociology, and public administration, has benefited from recent insights from psychology. These insights have revealed additional potential inhibitors of take-up, including administrative burden and fear of reclaims[23–26]. The lack of a systematic review of the last decade's literature presents a vital gap. Chapter 4 addressed this gap with a systematic review of non-take-up literature, resulting in a new theoretical framework that can guide future research, policy, and practical applications in social welfare.

A second gap in the literature on the non-take-up of social welfare is its reliance on quantitative studies, with limited attention to qualitative research. Understanding the more nuanced, subjective aspects of participating in social welfare requires qualitative insights. Chapter 5 presented the findings of a qualitative interview study among low-income households in two Dutch cities, enriching our understanding of welfare participation experiences.

Third, although insights from psychology have advanced our knowledge of non-take-up, empirical evidence is fragmented, with studies often including one or two factors inhibiting welfare participation. Existing research lacked an integrative framework to reveal the relative contributions of different psychological factors in explaining non-take-up. Chapter 6 addressed this gap by integrating theoretical and empirical findings into one model and examining the combined influence of psychological factors on the non-take-up of healthcare and child support benefits, thereby shedding light on their relative strengths in explaining non-take-up.

My final study focused on the psychological effects of reclaims resulting from overpayments as a potential cause of non-take-up. Reclaims result from governments attempting to develop welfare policies that ensure better and quicker alignment with households' dynamic financial situations[27]. Increased income volatility in recent years may have resulted in a greater prevalence of reclaims[27]. Empirical studies directly examining the effect of reclaims on non-take-up are scarce and have thus far employed a qualitative approach[26,28]. The last study, reported in Chapter 7, described the results of an experimental study of the effect of reclaims on the non-take-up of social welfare.

In this final chapter, I summarize the research findings and provide potential future directions for studying financial stress and the non-take-up of social welfare. I then outline the challenges that policymakers face when shaping the future of social welfare and draw on the lessons derived from the reported research to inform the design of social security systems that minimize non-take-up. I place my findings in the context of two global trends in social welfare: (1) the shift from fighting poverty to austerity and labor force activation and (2) the impact of digitalization on the welfare state. I conclude that building simpler, more accessible social welfare systems may help financially vulnerable households reduce financial stress, improving their mental and physical health and overall well-being.

SUMMARY

This section summarizes the results of this dissertation's studies and provides directions for future research.

Part I: Financial stress (Chapters 1 and 2)

Chapter 2 examined the connection between financial stress and mental health in the early stages of the COVID-19 pandemic in a probability sample of Dutch households (N = 1,114). The longitudinal study showed that, on average, mental health remained stable, but individual experiences varied considerably. Financial stress played a crucial role, as increased stress was linked to declining mental health, while reduced financial stress was related to improved mental health. Notably, income was not the primary factor explaining changes in financial stress; instead, having fewer savings and more debts was associated with increased financial stress, which was, in turn, related to decreased mental health.

Chapter 3 examined the association between economic conditions and financial stress, using the same sample as Chapter 2. I focused on income, savings, debts, income volatility, and employment. The cross-sectional study showed that income and savings were the strongest predictors of financial stress, both positively associated with financial stress. The number of debts played a smaller but significant role; having fewer debts was associated with more financial stress. Employment negatively predicted financial stress, but only for low-income households. I found no evidence for debt amounts and income volatility predicting financial stress.

For the association between financial stress and mental and physical health, I suggest several avenues for future research. It would be beneficial to extend the study of financial stress and mental health development over more prolonged periods, going beyond the COVID-19 pandemic. Also, I suggest examining the effects of financial stress on a broader spectrum of mental health symptoms and disorders, such as post-traumatic stress, insomnia, and loneliness[29–33]. Extensive research exists on the link between socioeconomic status and physical health, encompassing cardiovascular disease, arthritis, diabetes, chronic respiratory diseases, and cervical cancer[12,34]. Investigating the enduring impact of financial stress during and following COVID-19 on these conditions may offer valuable insights into unraveling the intricate connection between socioeconomic status, lifestyle, and health.

Shifting the focus to the predictors of financial stress, I suggest broadening the scope beyond the variables included in my model. The current study incorporated five economic variables - income, savings, debts, income volatility, and employment – and demographic variables - age, gender, education level, and household size. Other factors, like financial literacy, financial attitudes, and self-efficacy, could also be considered, especially in combination with economic factors. To enhance the robustness of findings and establish causal relationships, I suggest longitudinal studies and (quasi) experiments of the association between socioeconomic variables, financial stress, and health outcomes. Furthermore, I suggest examining the impact of various types of debts on financial stress and the temporal relationship between one's economic situation and future financial stress. Finally, future studies could make cross-cultural comparisons, examining the associations between economic factors and financial stress in different economic and cultural contexts.

PART II: Non-take-up of social welfare (Chapters 4 through 7)

Chapter 4 aimed to identify determinants of the non-take-up of social welfare by conducting a systematic scoping review of the literature of the last ten years in developed countries. I provided a new theoretical framework of non-take-up for policy and future research, comprising factors on four levels: societal, administration, social, and individual. Limited evidence was found for factors at the societal level. Administration-level factors like complex procedures and eligibility information strongly influence non-take-up, while other behavioral interventions have limited effect. Social networks affect non-take-up, whereby proposed mechanisms identified include information spillover[35,36], support[35,37], and social norms[38,39], but the evidence is mixed and mostly indirect.

Chapter 5 studied low-income households' experiences with social welfare in the Netherlands. In a qualitative study, 31 low-income individuals were interviewed in two major cities in the Netherlands, The Hague and Eindhoven. Financial stress was revealed to be common among participants. Fear of social welfare reclaims and distrust in government institutions were the main barriers to the take-up of social welfare. Shame and stigma affected the take-up of local but not national welfare programs. Formal and informal support systems encouraged participation, but many lacked access to such support.

Chapter 6 empirically tested an integrated model for take-up of healthcare and child support benefits in a sample of eligible Dutch households (N = 905) using a cross-sectional survey study. The findings indicated that participants' perceptions of eligibility were the main factor explaining healthcare and child support benefits take-up. Additionally, take-up was related to the perceived need for healthcare benefits. Exploratory analyses suggested that executive functions, self-efficacy, fear of benefit reclaims, financial stress, and welfare stigma explained perceived eligibility for healthcare benefits but not perceived eligibility for child support benefits. The data did not show an association between knowledge, social support, and administrative burden on the one hand and perceived eligibility on the other.

Chapter 7 reported two preregistered experiments to investigate the effect of reclaims on social welfare non-take-up. Participants were recruited from the U.K. (total $N = 472$). Results from both experiments demonstrated that reclaims increased subsequent social welfare non-take-up. I found preliminary evidence for an effect of indebtedness on reclaims' impact on non-take-up. The adverse effect on non-take-up was specific to reclaims, as a similar financial shock caused by an unrelated event did not affect non-take-up.

For research on non-take-up, I suggest several directions for further research. Many studies in the literature use one particular welfare program as a starting point. Adopting a more integrative approach by starting from the experiences and needs of individual households rather than specific welfare programs could provide a better understanding of non-take-up. Investigating the interplay between determinants at the policy and administration (e.g., rule complexity) and individual levels (e.g., administrative burden, information cost, and stigma) is another potential avenue for future research.

Factors such as societal determinants, economic circumstances, social and legal contexts, political ideology, and media coverage have had little research attention. Future studies could examine their effects on non-take-up in different cultural and regulatory contexts. I also suggest future studies to build upon the current finding that reclaims may contribute to non-take-up by examining potential underlying mechanisms, such as reclaim anxiety. Future studies could also use administrative data to examine whether this finding replicates using information from people's real life situations. Furthermore, I suggest developing a standardized vocabulary and measurement instrument for welfare take-up. This standardization would facilitate the comparability of findings and generalizability of results. Finally, I encourage developing and testing interventions to increase take-up, using the current studies' findings, a topic that I will further elaborate on in the subsequent section.

POTENTIAL IMPLICATIONS FOR SOCIAL WELFARE POLICY

Current challenges in social welfare

Social welfare can provide income security to vulnerable households and may thereby contribute to preventing financial stress and decreasing poverty. The effectiveness of social welfare in alleviating poverty and financial stress depends on its accessibility to those who need it[40]. Many households, however, do not take up the social welfare for which they are eligible. Accessibility of social welfare faces two key challenges.

First, welfare systems worldwide have transitioned from poverty alleviation to prioritizing labor force activation and economic efficiency, especially during economic downturns. Simultaneously, welfare systems have been utilized to facilitate people's entry into the workforce[41–44].

This shift has led to stricter eligibility criteria[43,45–50], focusing on work requirements[44,51,52]. This emphasis on activation policies and economic efficiency aligns with the broader trend of austerity and welfare state retrenchment observed since the 1980s[42]. The literature indicates that, apart from short-term fluctuations, there was a nearly widespread rise in Western European working-age benefit caseloads until the early 1980s, followed by consolidation[9,53]. Since then, retrenchment has predominated, leading to stricter eligibility rules[43]. Stricter eligibility rules, while increasing economic efficiency and labor force activation, inadvertently resulted in higher non-take-up rates[45]. This finding is particularly concerning given the identified deservingness gap, where immigrants and certain groups are perceived as less deserving[50]. The shift towards emphasizing individual responsibility and activation in welfare discourses may create challenges in ensuring those in need can access the support they require.

Second, digitalization is transforming the welfare state, automating and streamlining processes[54,55], and increasing the demand for internet access and digital skills[56]. The shift of responsibilities from the government to individuals through self-service mechanisms can overwhelm households already burdened with various administrative tasks, leading to non-take-up[57–59]. Also, automated welfare systems are often rigid and fail to take real-life situations into account[56]. Scholars have argued that welfare digitalization can amplify existing patterns of inequality because digital exclusion tends to correlate with socioeconomic status. Scholars have also argued that welfare digitalization can create new inequalities between social groups[55,58,60].

These two trends may increase non-take-up, endangering two aims of social welfare: alleviating poverty and decreasing financial stress. This may particularly impact groups facing other societal challenges, such as the unemployed and immigrants[51,52].

Future social welfare reforms

Social protection plays a key stabilizing role for individuals and societies. The comprehensive support packages implemented by governments following the unprecedented COVID-19 pandemic shocks have demonstrated this.

The structural transformations driven by digitalization and the evolving nature of work have profound implications for social welfare systems[40,61,62]. With less stable career patterns and the rise of new employment forms, traditional models of social protection tied to stable, long-term employment may become less effective. The gig economy, characterized by short-term, flexible jobs, often mediated by digital platforms, where individuals work as freelancers or independent contractors on a project or task basis, often lack the same social benefits, such as health insurance, retirement plans, and unemployment benefits, which are commonly associated with traditional full-time employment.

As a result, there is a growing need to reassess and adapt social welfare policies to accommodate the changing work landscape. Policymakers may need to explore innovative solutions to ensure that individuals engaged in non-traditional work benefit from adequate social safety nets. This could involve developing transferable benefits accompanying workers across different jobs, enhancing social insurance mechanisms, and exploring new ways to support workers during transition or unemployment.

In summary, the changing nature of work necessitates reevaluating and adapting social welfare systems to ensure they effectively support individuals in an environment characterized by digitalization, flexible work arrangements, and evolving career patterns.

To guarantee that social welfare can stabilize individuals and societies, governments should prioritize safeguarding the financial security of vulnerable households. The trends mentioned above go in the opposite direction: austerity and digitalization have priority on the policy agenda, potentially endangering the take-up of social welfare. These ultimately constitute political choices, but policymakers should recognize that these policies may have unintended side effects, putting financial resilience and, consequently, the mental and physical well-being of vulnerable citizens under pressure, which could give rise to high societal costs. The studies of this dissertation provide insights that can help design more effective social welfare systems. I highlight a few key insights, focusing on reducing the complexity of social welfare and improving outreach to eligible households and their social networks.

A first set of policy measures aimed at reducing non-take-up addresses issues at the administrative level. For means-tested welfare systems, complexity can be a significant barrier to take-up. Policymakers should balance effective targeting and minimizing non-take-up by simplifying eligibility rules and application procedures. It is well-established that complexity places a significant cognitive burden on individuals[24,25,63]. Simultaneously, financial stress can erode cognitive capacities[5-7]. Therefore, reducing complexity becomes paramount, especially for financially vulnerable individuals whom social welfare aims to assist. Reducing complexity can be achieved in many ways, such as simplifying information letters, streamlining the application process, combining the application procedures for different programs, and decreasing reporting requirements[64–73]. Given the significant adverse effects of reclaims on take-up, policymakers should prioritize preventing overpayments. One way to achieve this could be to simplify or automate the process of reporting changes, thereby reducing the number of reclaims. Digitalization can be essential in simplifying application procedures for eligible households by sharing eligibility findings between different agencies through prepopulated application forms and proactively enrolling eligible households in social welfare programs[56,66,67,74,75].

A second set of policy measures addresses the individual household's level and social networks. Non-take-up can be decreased by an integrated approach encompassing information provision, outreach, and assistance. I found perceived eligibility to be a crucial determinant in benefits take-up, making it imperative to focus on targeted interventions. Efforts could center around personally informing households about their eligibility. Given the importance of network effects, such interventions could encompass informing eligible household's social networks. Trust in government institutions is a pivotal factor influencing welfare participation[72,76,77], emphasizing the need for citizen-centered policies. Particularly for financially vulnerable households, a nuanced understanding of their unique challenges is indispensable in designing tailored interventions.

CONCLUSION

Developing social welfare systems tailored to address the challenges posed by financial scarcity is crucial for safeguarding the well-being of households in vulnerable circumstances. As social welfare adapts to global trends like digitalization and shifting work patterns, policymakers should prioritize simplicity and accessibility. Streamlining administrative processes, simplifying eligibility rules, and harnessing digital tools are vital strategies to enhance the efficacy of welfare systems. At both individual and social levels, targeted outreach and personalized information provision are essential for building trust and encouraging greater take-up.

Greater take-up of social welfare by vulnerable households not only assists them in meeting basic needs and providing for their families but may also enable them to save for unforeseen circumstances and better harness them against overindebtedness due to financial shocks. Improved take-up grants households greater control over their financial circumstances, leading to positive cognitive, emotional, and behavioral outcomes. This, in turn, may help vulnerable households escape financial stress traps, positively impacting their mental and physical health. The enhanced well-being of these individuals contributes to a more resilient and inclusive society.

REFERENCES

1. Diener, E. & Suh, E. M. *Culture and Subjective Well-Being*. (MIT Press, 2003).
2. Dunn, E. W., Gilbert, D. T. & Wilson, T. D. If money doesn't make you happy, then you probably aren't spending it right. *Journal of Consumer Psychology* **21**, 115–125 (2011).
3. Ingham, G. Further reflections on the ontology of money: responses to Lapavitsas and Dodd. *Economy and Society* **35**, 259–278 (2006).
4. Smith, A. *An inquiry into the nature and causes of the wealth of nations*. (Harriman House Limited, 1776).
5. Mullainathan, S. & Shafir, E. *Scarcity: Why Having Too Little Means So Much*. (Times Books, Macmillan and Henry Holt, 2013).
6. Mani, A., Mullainathan, S., Shafir, E. & Zhao, J. Poverty impedes cognitive function. *Science* **341**, 976–980 (2013).
7. Bertrand, M., Mullainathan, S. & Shafir, E. A behavioral economics view of poverty. *American Economic Review* **94**, 419–423 (2004).
8. Van Dijk, W. W., Van der Werf, M. M. B. & Van Dillen, L. F. The Psychological Inventory of Financial Scarcity (PIFS): a psychometric evaluation. *Journal of Behavioral and Experimental Economics* **101**, 101939 (2022).
9. Hernanz, V., Malherbet, F. & Pellizzari, M. Take-up of welfare benefits in OECD countries: a review of the evidence. *OECD Social, Employment and Migration Working Papers* **17** (2004).
10. Portela, M. Non-take-up of minimum social benefits: quantification in Europe. A salient phenomenon still not making public policy headlines. *DREES REPORTS* 94, (2022).
11. Department for Work & Pensions. Income-related benefits: estimates of take-up: financial year 2019 to 2020. *gov.uk* (2022). Available at: *https://www.gov.uk/government/statistics/income-related-benefits-estimates-of-take-up-financial-year-2019-to-2020/income-related-benefits-estimates-of-take-up-financial-year-2019-to-2020* (Accessed 30 October 2023).
12. Adler, N. E. & Snibbe, A. C. The role of psychosocial processes in explaining the gradient between socioeconomic status and health. *Current Directions in Psychological Science* **12**, 119–123 (2003).
13. Hamilton, R. W., Mittal, C., Shah, A., Thompson, D. V. & Griskevicius, V. How financial constraints influence consumer behavior: an integrative framework. *Journal of Consumer Psychology* **29**, 285–305 (2019).
14. Haushofer, J. & Fehr, E. On the psychology of poverty. *Science* **344**, 862–867 (2014).
15. Rothwell, D. W. & Han, C.-K. Exploring the relationship between assets and family stress among low-income families. *Family Relations* **59**, 396–407 (2010).
16. Ruberton, P. M., Gladstone, J. & Lyubomirsky, S. How your bank balance buys happiness: the importance of 'cash on hand' to life satisfaction. *Emotion* **16**, 575–580 (2016).
17. Gennetian, L. A. & Shafir, E. The persistence of poverty in the context of financial instability: a behavioral perspective. *Journal of Policy Analysis and Management* **34**, 904–936 (2015).
18. Hannagan, A. & Morduch, J. Income gains and month-to-month income volatility: household evidence from the us financial diaries. (2015). Available at SSRN: *https://ssrn.com/abstract=2659883* (Accessed 4 January 2024).

19. Burchell, B. A temporal comparison of the effects of unemployment and job insecurity on well-being. *Sociological Research Online* **16**, 66–78 (2011).
20. Wilson, S. H. & Walker, G. M. Unemployment and health: a review. *Public Health* **107**, 153–162 (1993).
21. Sweet, E., Nandi, A., Adam, E. K. & McDade, T. W. The high price of debt: household financial debt and its impact on mental and physical health. *Social Science & Medicine* **91**, 94–100 (2013).
22. Drentea, P. & Lavrakas, P. J. Over the limit: the association among health, race and debt. *Social Science & Medicine* **50**, 517–529 (2000).
23. Sunstein, C. R. Sludge and ordeals. *Duke Law Journal* **68**, 1843 (2019).
24. Christensen, J., Aarøe, L., Baekgaard, M., Herd, P. & Moynihan, D. P. Human capital and administrative burden: the role of cognitive resources in citizen-state interactions. *Public Administration Review* **80**, 127–136 (2020).
25. Herd, P., DeLeire, T., Harvey, H. & Moynihan, D. P. Shifting administrative burden to the state: the case of Medicaid take-up. *Public Administration Review* **73**, S69–S81 (2013).
26. Tempelman, C., Houkes-Hommes, A. & Prins, J. *Niet-Gebruik Inkomensondersteunende Maatregelen [Non-take-up Income Support Measures]* (SEO Economisch Onderzoek, 2014).
27. Millar, J. & Whiteford, P. Timing it right or timing it wrong: how should income-tested benefits deal with changes in circumstances? *Journal of Poverty and Social Justice* **28**, 3–20 (2020).
28. Simonse, O., Vanderveen, G., Van Dijk, W. W., Van Dijk, E. & Van Dillen, L. F. Social security or insecurity? The experience of financially vulnerable households with welfare participation. *Social Policy & Administration* **57**, 255–271 (2022).
29. Talevi, D. *et al*. Mental health outcomes of the COVID-19 pandemic. *Rivista di Psichiatria* **55**, 137–144 (2020).
30. Tsai, J., Elbogen, E. B., Huang, M., North, C. S. & Pietrzak, R. H. Psychological distress and alcohol use disorder during the COVID-19 era among middle- and low-income U.S. adults. *Journal of Affective Disorders* **288**, 41–49 (2021).
31. Rogers, J. P. *et al*. Psychiatric and neuropsychiatric presentations associated with severe coronavirus infections: a systematic review and meta-analysis with comparison to the COVID-19 pandemic. *The Lancet Psychiatry* **7**, 611–627 (2020).
32. Groarke, J. M. *et al*. Loneliness in the U.K. during the COVID-19 pandemic: cross-sectional results from the COVID-19 Psychological Well-being Study. *PLOS ONE* **15**, e0239698 (2020).
33. De Pue, S. *et al*. The impact of the COVID-19 pandemic on well-being and cognitive functioning of older adults. *Scientific Reports* **11**, 4636 (2021).
34. Cundiff, J. M., Wicherts, J. M. & Muscatell, K. A. The pathway from social status to physical health: taking a closer look at stress as a mediator. *Current Directions in Psychological Science* **29**, 147–153 (2020).
35. Ratzmann, N. & Heindlmaier, A. Welfare mediators as game changers? Deconstructing power asymmetries between E.U. migrants and welfare administrators. *Social Inclusion* **10**, 205–216 (2022).
36. Figlio, D. N., Hamersma, S. & Roth, J. Information shocks and the take-up of social programs. *Journal of Policy Analysis and Management* **34**, 781–804 (2015).

37. Janssens, J. & Van Mechelen, N. To take or not to take? An overview of the factors contributing to the non-take-up of public provisions. *European Journal of Social Security* **24**, 95–116 (2022).
38. Furtado, D. & Theodoropoulos, N. SSI for disabled immigrants: Why do ethnic networks matter? *American Economic Review* **103**, 462–466 (2013).
39. Furtado, D. & Theodoropoulos, N. Immigrant networks and the take-up of disability programs: Evidence from the United States. *Economic Inquiry* **54**, 247–267 (2016).
40. Immervoll, H., Fernandez, R., Hyee, R., Lee, J. & Pacifico, D. De-facto gaps in social protection for standard and non-standard workers. *OECD Social, Employment and Migration Working Papers*, **247** (2022).
41. Greer, I. Welfare reform, precarity and the re-commodification of labour. *Work, Employment and Society* **30**, 162–173 (2016).
42. Otto, A. & van Oorschot, W. Welfare reform by stealth? Cash benefit recipiency data and its additional value to the understanding of welfare state change in Europe. *Journal of European Social Policy* **29**, 307–324 (2019).
43. Taylor-Gooby, P. The divisive welfare state. *Social Policy & Administration* **50**, 712–733 (2016).
44. Wright, S., Fletcher, D. R. & McNeill, J. Punitive benefit sanctions, welfare conditionality, and the social abuse of unemployed people in Britain: transforming claimants into offenders? *Social Policy & Administration* **54**, 278–294 (2020).
45. Chang, Y.-L., Romich, J. & Ybarra, M. Major means-tested and income support programs for the working class, 2009–2019. *The ANNALS of the American Academy of Political and Social Science* **695**, 242–259 (2021).
46. Immervoll, H. & Knotz, C. How demanding are activation requirements for jobseekers. *OECD Social*, *Employment and Migration Working Papers*, **215** (2018).
47. Jørgensen, M. B. & Thomsen, T. L. Deservingness in the Danish context: welfare chauvinism in times of crisis. *Critical Social Policy* **36**, 330–351 (2016).
48. Kootstra, A. Us versus them: Examining the perceived deservingness of minority groups in the British welfare state using a survey experiment. in Van Oorschot, W. J. H., Roosma, F., Meuleman, B. & Reeskens, T. (eds.) *The Social Legitimacy of Targeted Welfare* 263–280 (Edward Elgar Publishing, 2017).
49. Van Oorschot, W. J. H., Roosma, F., Meuleman, B. & Reeskens, T. *The Social Legitimacy of Targeted Welfare: Attitudes to Welfare Deservingness* (Edward Elgar Publishing, 2017).
50. Reeskens, T. & Van der Meer, T. The inevitable deservingness gap: a study into the insurmountable immigrant penalty in perceived welfare deservingness. *Journal of European Social Policy* **29**, 166–181 (2019).
51. Cook, K. E. Social support in single parents' transition from welfare to work: analysis of qualitative findings. *International Journal of Social Welfare* **21**, 338–350 (2012).
52. Reeves, A. & Loopstra, R. 'Set up to fail'? How welfare conditionality undermines citizenship for vulnerable groups. *Social Policy and Society* **16**, 327–338 (2017).
53. De Deken, J. & Clasen, J. Tracking caseloads: the changing composition of working-age benefit receipt in Europe. In Clasen. J. & Gregg, D. (eds.) *Regulating the risk of unemployment: National adaptations to post-industrial labour markets in Europe* 297–317 (2011).
54. Collington, R. Disrupting the welfare state? Digitalisation and the retrenchment of public sector capacity. *New Political Economy* **27**, 312–328 (2022).

8

55. Ranchordás, S. The digitization of government and digital exclusion: setting the scene. In Blanco de Morais, C., Ferreira Mendes, G. & Vesting, T. (eds.) *The Rule of Law in Cyberspace* 125–148 (Springer International Publishing, 2022).
56. Alston, P. *Digital Welfare States and Human Rights*. *Report of the Special Rapporteur on Extreme Poverty and Human Rights*. (United Nations, 2019).
57. The Netherlands Scientific Council for Government Policy. *Weten is nog geen doen. Een realistisch perspectief op redzaamheid [Knowing is not yet doing. A realistic perspective on self-reliance]*. (The Netherlands Scientific Council for Government Policy, 2017).
58. Schou, J. & Pors, A. S. Digital by default? A qualitative study of exclusion in digitalised welfare. *Social Policy & Administration* **53**, 464–477 (2019).
59. Schou, J. & Hjelholt, M. Digitalizing the welfare state: citizenship discourses in Danish digitalization strategies from 2002 to 2015. *Critical Policy Studies* **13**, 3–22 (2019).
60. Park, S. & Humphry, J. Exclusion by design: intersections of social, digital and data exclusion. *Information, Communication & Society* **22**, 934–953 (2019).
61. European Commission. *Access to social protection for workers and the self-employed* (2020). Available at: *https://ec.europa.eu/social/BlobServlet?docId=23594&langId=en* (Accessed 4 January 2024).
62. OECD. *OECD employment outlook 2019 The future of work*. (2019). Available at: *https://www.oecd-ilibrary.org/sites/9ee00155-en/index.html?itemId=/content/publication/9ee00155-en* (Accessed 4 January 2024).
63. Moynihan, D. P., Herd, P. & Ribgy, E. Policymaking by other means: Do states use administrative barriers to limit access to Medicaid? *Administration & Society* **48**, 497–524 (2016).
64. Auray, S. & Fuller, D. L. Eligibility, experience rating, and unemployment insurance take-up. *Quantitative Economics* **11**, 1059–1107 (2020).
65. Bhargava, S. & Manoli, D. Psychological frictions and the incomplete take-up of social benefits: evidence from an IRS field experiment. *American Economic Review* **105**, 3489–3529 (2015).
66. Blavin, F., Kenney, G. M. & Huntress, M. The effects of Express Lane Eligibility on Medicaid and CHIP enrollment among children. *Health Services Research* **49**, 1268–1289 (2014).
67. Cha, P. & Escarce, J. J. The Affordable Care Act Medicaid expansion: a difference-in-differences study of spillover participation in SNAP. *PLOS ONE* **17**, (2022).
68. Fox, A. M., Stazyk, E. C. & Feng, W. Administrative easing: rule reduction and Medicaid enrollment. *Public Administration Review* **80**, 104–117 (2020).
69. Fuchs, M., Gasior, K., Premrov, T., Hollan, K. & Scoppetta, A. Falling through the social safety net? Analysing non-take-up of minimum income benefit and monetary social assistance in Austria. *Social Policy & Administration* **54**, 827–843 (2020).
70. Matikka, T. & Paukkeri, T. Does sending letters increase the take-up of social benefits? Evidence from a new benefit program. *Empirical Economics* **63**, 3253–3287 (2022).
71. Cook, W. K., John, I., Chung, C., Tseng, W. & Lee, J. P. Medicaid Expansion and Healthcare Access: Lessons from Asian American and Pacific Islander Experiences in California. *Journal of Immigrant and Minority Health* **19**, 995–999 (2017).
72. Heinrich, C. J., Camacho, S., Henderson, S. C., Hernández, M. & Joshi, E. Consequences of administrative burden for social safety nets that support the healthy development of children. *Journal of Policy Analysis and Management* 1–45 (2021).

73. Arbogast, I., Chorniy, A. & Currie, J. Administrative burdens and child Medicaid enrollments. *Institute for Policy Research Working Paper Series* **WP-22-49** (2022).
74. Van Dijk, W. W., Goslinga, S., Terwel, B. W. & van Dijk, E. How choice architecture can promote and undermine tax compliance: testing the effects of prepopulated tax returns and accuracy confirmation. *Journal of Behavioral and Experimental Economics* **87**, 101574 (2020).
75. Buysse, L. *et al*. De automatische toekenning van rechten in de Belgische sociale bescherming [Automatic enrollment of rights in Belgian social protection]. In Lahaye, W., Pannecoucke, I., Vranken, J. & Van Rossem, R. (eds.) *Armoede in België. Jaarboek 2017 [Poverty in Belgium. Year Book 2017].* (Skribis, 2017).
76. Schweyher, M., Odden, G. & Burrell, K. Abuse or underuse? Polish migrants' narratives of (not) claiming social benefits in the U.K. in times of Brexit. *Central and Eastern European Migration Review* **8**, 101–122 (2019).
77. Dagilyte, E. & Greenfields, M. United Kingdom welfare benefit reforms in 2013-2014: Roma between the pillory, the precipice and the slippery slope. *The Journal of Social Welfare & Family Law* **37**, 476–495 (2015).

8