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Empirical analysis of social insurance, work incentives and employment outcomes

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6 | General discussion

Aims

6.1

This thesis contributes to the existing literature on the impact of social insurance on labor market outcomes. Social insurance must target those in need while maintaining incentives that promote work and reduce the risk of unemployment originating from moral hazard. Therefore, designing social insurance is a complex matter as the goals of insurance and the reduction of unemployment risk are conflicting objectives. Specifically, a more generous program will provide more insurance, but reduces the work incentives and increases moral hazard. Additionally, the incentives driving these effects may differ among groups of individuals, and may be influenced by contextual factors or program design differences. Given these complexities, the continuous investigation of the interplay between social insurance programs and the labor market through empirical analysis is crucial to enhance the overall understanding of these topics. This knowledge can then assist in making evidence-based and welfare-improving policy decisions that strike a better balance between the goals of providing insurance and maintaining work incentives. Therefore, the aim of this thesis is to contribute empirical evidence on the relationship between social insurance and the labor market in the context of the Netherlands.

This final chapter of the thesis presents a synthesis of the findings from the four distinct studies concerning the aim of this thesis. This synthesis focuses on the questions of which selection of individuals is more responsive to (changes in) social insurance program parameters and how this relates to the targeting and welfare-maximizing objectives of

the programs. To do so, the synthesis follows two main steps. First, it aims to provide empirical evidence on the general importance of selection into (part-time) work in the Netherlands. The selection of individuals that engage in work and part-time work depends on various factors that influence both individual labor supply decisions and the demand for labor. While understanding this selection process is valuable in gaining insights into labor market participation and work intensity, it is challenging to disentangle the impact of all relevant contributing factors, including individual preferences and social insurance programs. Therefore, the second part of this synthesis zooms in to the role of specific social insurance program parameters in the selection of individuals into work and social insurance, as well as the targeting of social insurance and its welfare effects. This focused analysis of particular social insurance program parameters offers two major advantages. One is that it allows for causal interpretation of the results, the other that results can be directly related to the trade-off between insurance and work incentives.

The remainder of this final chapter is structured as follows. The subsequent section discusses the primary economic theories related to social insurance and employment. Sections 6.3 and 6.4 then link the findings discussed in the preceding chapters to the two primary aims of this thesis and the economic theories presented earlier. Considering the significance of these findings for the design of future social policies, the chapter concludes by offering policy implications. Furthermore, as the findings are not exhaustive, the final section provides recommendations for future research to further deepen our understanding of the interplay between social insurance programs and labor market outcomes.

6.2 Theory on social insurance and employment

6.2.1 Theoretical objectives of social insurance

Social insurance addresses several market failures – including imperfect information, non-rational behavior and incomplete markets – that prevent the private market to achieve the objectives of the welfare state due

to adverse selection, liquidity constraints, and other inefficiencies. The objectives of the welfare state are equity, efficiency and administrative feasibility (Barr 2020). The objectives have several aspects on their own, which play an important role throughout this thesis. Starting with the former, the aspects of equity are relieving poverty, reducing inequality and social inclusion. Achieving these goals, particularly the goal of eliminating poverty, requires an effective system capable of identifying those in need. Additionally, this system should be able to provide them with benefits, without barriers that may keep individuals from benefits take-up – e.g. administrative barriers, long processing times or liquidity constraints. The take-up of (welfare) benefits may allow for more social inclusion. Of course, the different social insurance programs play an important role in reducing income inequality (Caminada et al. 2021), but the selection in (part-time) work has also important implications for inequalities related to part-time contracts, gender and having a migration background.

Next, the aspects of efficiency include macro- and micro-efficiency, consumption smoothing, risk sharing and incentives to reduce adverse effects. Macro- and micro-efficiency imply that people should among other things be kept healthy, educated and socially included, that an efficient fraction of GDP should be devoted to social insurance, and that these resources are efficiently distributed between the different programs (Barr 2020). For example, the situation in the disability insurance in the Netherlands in the 1980s (also sometimes referred to as the “Dutch disease”), in which a substantial fraction of the insured individuals received disability benefits, was clearly in conflict with efficiency goals. Where the role of social insurance programs in consumption smoothing and the prevention of large drops in living standards (risk sharing) is apparent, the selection in (part-time) work is also important in that regard, for example through the accumulation of savings, pensions and wealth. Incentives to reduce adverse effects of social insurance on labor supply and saving – such as moral hazard – are important for among other things the sustainability of the welfare state and maximizing both overall and individual welfare.

Finally, administrative feasibility includes intelligibility and absence of abuse. Intelligibility implies that the system should be easy to understand and be provided at low cost. The former implies among other things that

uncertainty about income effects of changing working hours and red tape preventing (quick) benefit take-up should be minimized. Absence of abuse implies that those ineligible are successfully excluded from take-up, or stated differently, that moral hazard is minimized.

6.2.2 Employment effects of social insurance

The remainder of the present section discusses the behavioral implications of social insurance – such as unemployment insurance (UI), disability benefits (DI), or welfare – on the employment outcomes of individuals. For simplicity, the generosity of insurance can be interpreted in a broad sense, and may concern policy parameters including the replacement rate, the length of benefit entitlement, and the eligibility conditions. These parameters may all increase the value of social insurance. The theoretical implications highlight that the different goals of social insurance are competing objectives.

Social insurance exerts its influence on the labor market by impacting individuals' labor supply decisions. Given that both consumption and leisure are typically assumed to be normal goods (e.g. Cogan 1980, Heckman 1974a,b), more generous social insurance is expected to have income and substitution effects. Income effects follow from the fact that social insurance increases individuals' income while not working, enabling them to increase both consumption and leisure. In order to do so, they reduce their labor supply. Substitution effects follow from the fact that social insurance decreases individuals' marginal benefit from employment as compared to that of leisure or non-work time. Thus, individuals substitute paid work for more leisure time. Consequently, the overall participation effect of more generous social insurance is negative. However, as reservation wages increase, workers may accept better jobs.

The degree to which individuals respond to changes in the generosity of social insurance depends on their preferences. Policy makers face the challenge of leveraging this heterogeneity in preferences to enhance the targeting of social insurance. Hence, they aim to design social insurance in such a way that it provides income insurance to those in need while it encourages active job search among those able to work, thereby reducing

moral hazard. Policy makers often try to achieve this by reducing the generosity of social insurance, while not adversely affecting those in need. Typically, good risks have better labor market prospect or a comparative advantage and are thus expected to be more responsive to changes in social insurance and the first ones to select into employment. For instance, introducing barriers to entry diminishes the expected returns of social insurance, but those in need may be less responsive to these barriers and remain within the social insurance system due to limited labor market options, while able individuals are screened out. Successful implementation of such measures can reduce moral hazard without excluding those in need and lead to an improvement in targeting.

The importance of selection in (part-time) work

6.3

Given that the participation effect of social insurance on labor force participation largely depends on individual preferences, it becomes imperative to explore the patterns of selection into work or non-work. In this regard, Chapter 2 contributes to this exploration by investigating the role of unobserved heterogeneity, such as leisure-time preferences and health, stemming from intensive labor supply choices in the selection process for both part-time and full-time work in the Netherlands, focusing on men and women, respectively. This investigation builds upon an extensive body of literature on selection into (part-time) work (e.g. Heckman 1979, Hotchkiss 1991, Myck 2010, Nakamura and Nakamura 1983, Solon 1988, Zabalza et al. 1980).

The findings of Chapter 2 reveal intriguing gender-specific differences in the selection into employment. Specifically, selection into employment holds greater importance for women than for men. Women with more affluent characteristics – such as preferences for work, education or effort – tend to self-select into both part-time and full-time employment. This implies that the labor supply decisions of women are largely shaped by their preferences. On the other hand, men with more affluent characteristics exhibit selection primarily into part-time employment and not into full-time employment. This gender-based distinction underlines the substantial

variations in preferences between men and women in the Netherlands, suggesting that the factors shaping their labor supply decisions may significantly differ.

Even though the insights gained from Chapter 2 show substantial gender-specific differences in the selection into employment, they do not provide definitive conclusions on the gender-specific differences in the complex interplay between social insurance and labor supply decisions. Nonetheless, the higher responsiveness of women to factors influencing their labor supply decisions may also imply a greater sensitivity to social insurance compared to men. Consequently, social insurance policies could have a more pronounced impact on women's labor market behavior, potentially influencing their decision to participate in the workforce or their type of employment. This is consistent with previous research on labor supply in the Netherlands (see Evers et al. 2008, for a meta-analysis of empirical estimates of uncompensated labour supply elasticities for the Netherlands). Importantly, even though the literature documents that much of the variation stems from differences in household compositions (e.g. Jongen et al. 2015), we show that (when controlling for various individual characteristics, including the household composition) unobserved heterogeneity still plays an important role in labor supply decisions, especially among women.¹ Although the Chapters 3, 4 and 5 are not explicitly focused on gender-differences in employment reactions on social insurance parameters, they do confirm that there is substantial heterogeneity in labor market responses between men and women.

6.4 Selection, targeting and welfare effects of social insurance

The present section discusses the direct link between social insurance and the labor market behavior in the Netherlands. It discusses the causal evidence on the effects of social insurance reported in Chapters 3, 4 and 5

¹Consistent with previous findings, the estimation results for the selection equations in Chapter 2 show that having children, marital status, and having a partner past the early retirement age are indeed more important for the employment decision for women than for men.

in relation with the effects of social insurance parameters on selection, targeting and welfare. Several major conclusions follow from these findings.

First, the empirical findings confirm theoretical predictions, showing that reductions in the (expected) value of social insurance lead to lower take-up rates. This was the case for DI reforms that increased the work incentives upon benefit receipt and increased the costs of benefit applications by requiring more rehabilitation efforts, extending the waiting period, and increasing the threshold for benefit receipt (Chapter 3), caseworker meetings for UI recipients that increase the cost of receiving unemployment benefits (Chapter 4), as well as longer welfare application processing times that increase the benefit application costs (Chapter 5). The findings for the Netherlands are consistent with existing evidence that shows that higher costs for applying or staying in social insurance lower the use of social insurance (Deshpande and Li 2019, Kleven and Kopczuk 2011, Ko and Moffitt 2022, Nichols and Zeckhauser 1982), and that this decline is largely translated into higher employment rates (Blank 2002, Card et al. 2010).

Second, selection effects have likely improved the targeting of the social insurance programs. This is reassuring as there is also evidence from other studies pointing at increases in non-take-up of benefits among individuals in greatest need and, thus, worse targeting (Currie 2006, Deshpande and Li 2019, Finkelstein and Notowidigdo 2019, Ko and Moffitt 2022).² Specifically, the Dutch DI reforms have led to increased self-screening among workers, excluding those with residual earnings capacities who rely on benefits to supplement their labor income. Together with that the DI enrollment was internationally high before the reform and attributed to moral hazard (Burkhauser and Daly 2011, Koning and Lindeboom 2015), the reduced inflow by increased self-screening points at improved targeting.

Similarly, the welfare application processing times screened out workers with better labor market characteristics. This follows from an additional heterogeneity analysis (not reported in this thesis, results are available

²Only recently, the Dutch Committee Social Minimum stated in their report that recipients of social benefits and income supplements, for example rent supplements, are reluctant to changing their labor supply choices as they do not fully understand the consequences of those choices for their income and fear significant repayments (Commissie Social Minimum 2023).

upon request) that shows applicants with better labor market characteristics (e.g. males, individuals that did not receive welfare before, and natives) are more responsive to the length of processing times and thus more likely to self-select out of social insurance and into employment. That these screened-out applicants are in fact on average able to replace the lost benefits with increased wage earnings and that this group concerns only a small part of the total sample of applicants suggests that these effects improved the targeting of the welfare program.

Although the selection effects of the caseworker meetings are not directly being tested, there is reason to believe that these meetings are also improving the targeting of the UI program. There is a substantial literature that argues that moral hazard is present in large numbers in UI (Chetty 2008, Gruber 1997, Krueger and Meyer 2002) and that unemployed workers generally have biased beliefs giving them too high reservation wages (Belot et al. 2019, Krueger and Mueller 2016, Mueller et al. 2021). When the caseworker meetings reduce the reservation wage and increase the job search effort without the presence of liquidity effects at the side of the individual worker, this can be interpreted as a reduction of moral hazard (Chetty 2008). As caseworker meetings have no direct financial consequences, the findings indeed point at improved targeting.

Third, improved targeting does not necessarily translate into welfare improvement from societal perspective.³ This is demonstrated by the effects of caseworker meetings for unemployed workers and welfare application processing times.⁴ These interventions not only changed the targeting of social insurance, but also had adverse income effects on individuals. Caseworker meetings reduced reliance on unemployment benefits, but unemployed workers were unable to fully compensate for the reduction in benefits with increased earnings, leading to a net decrease in their income.⁵ Similarly, the processing times reduced the employment

³Note that welfare improvement does not require Pareto improvement and may mean deterioration of either individual or government outcomes.

⁴It is unlikely that the DI reforms are not welfare-improving given the large targeting improvements, even though there are also adverse effects as substitution towards UI (Borghans et al. 2014, Koning and Van Vuuren 2010) and probably higher mortality rates (García-Gómez and Gielen 2018).

⁵Another adverse effect could arise, namely a reduction of the job search effect. The job search effect implies that more generous social insurance results in higher reservation

outcomes of the applicants that are awarded welfare benefits after long application times. This effect fully offsets the positive earnings effect that the processing times have by screening out the individuals with stronger labor market positions and suggest that periods of inactivity resulting from longer processing times reduce human capital (see also Fasani et al. 2021, Marbach et al. 2018).

Fourth, the findings highlight the substantial impact caseworkers have on the outcomes of individuals in the Dutch social insurance system (Bolhaar et al. 2020, Garcia-Gomez et al. 2023, Verlaat et al. 2021). Caseworker discretion allows for more tailored treatment and improved targeting, but increases the element of luck or horizontal inequality (Kahneman et al. 2021). The findings in this thesis confirm that caseworkers are indeed able to some extent to identify the workers for whom the returns are the expected to be the highest (Chapter 4). However, the results in this thesis also indicate that the element of (bad) luck is present (Chapters 4 and 5).

Finally, the findings in this thesis often underscore the complexity and multidimensionality of designing social insurance programs. More specifically, policy makers must consider constraints that can work counterproductively. For instance, job search requirements can constrain job seekers in their job search behavior and therefore lead to inefficient job search, increased reliance on social insurance and decreases in employment (Chapter 4). Similarly, the positive employment effects of benefit prepayments among welfare applicants suggest that financial stress induced by liquidity constraints can hinder job search (Chapter 5).⁶

Policy implications and future research

6.5

The findings presented in this thesis have implications for the design of policies related to income inequalities, social insurance programs, and active labor market policies.

wages, which in turn increases the quality of the post-unemployment matches. Additional analyses (not reported in this thesis, but available upon request) show that the caseworker meetings have negligible effects on the job characteristics after unemployment.

⁶In a related paper, we show with a similar sample that debt relief can have positive employment effects among debtors who faced more severe debt situations (de Bruijn et al. 2023). This result is consistent with that liquidity constraints can hinder job search.

The large positive selection into part-time work compared to full-time work (Chapter 2), for both men and women, has important consequences for the estimation of various inequality measures. Failure to correct for such selection would lead to an overestimation of earnings, especially of those in part-time employment. Consequently, previous estimates of the part-time wage gap in the Netherlands may have underestimated the true gap (Fouarge and Muffels 2009, Russo and Hassink 2008).⁷ This finding also has implications for the gender wage gap (Blau et al. 2021, Weichselbaumer and Winter-Ebmer 2005) and the native/migrant wage gap (Anderson et al. 2006, Dustmann and Schmidt 2000, Neumark 2018, Pager 2007, Riach and Rich 2002), as women are more often employed in part-time jobs and individuals with different migration background may choose different working hours. Estimation biases in these gaps could result in unintended income inequality and affect policies related to savings, pensions, and wealth accumulation. Therefore, future research should focus on correctly estimating these wage gaps, while accounting for all relevant sources of heterogeneity.

Additionally, the findings in Chapter 2 confirm the presence of significant differences in work preferences both between and within genders in the Netherlands, which is consistent with previous research (e.g. Mastrogiacomo et al. 2013). Similarly, Chapters 3, 4 and 5 highlight substantial heterogeneity in labor market responses among different groups such as men and women, younger and older workers, and natives and migrants. These results emphasize the importance of conducting heterogeneous analyses on the Dutch labor market.

In accordance to Chapter 2, the findings in Chapter 3 highlight the importance of selection effects. Specifically, the findings show that the DI reforms in the Netherlands largely changed the composition of applicants, while reforms exhibited limited success in stimulating work among the benefit recipients. Therefore, it is imperative for policy makers to take these selection effects into account when designing future reforms to ensure that the intended impact is achieved among the appropriate individuals.

⁷Depending on the selection effects in other countries, the estimates of the part-time wage gap in the literature might also be prone to estimation bias (e.g. Aaronson and French 2004, Bardasi and Gornick 2008, Blank 1990a, Ermisch and Wright 1993, Hirsch 2005, Manning and Petrongolo 2008, O'Dorchai et al. 2007, Rodgers 2004).

Next, the adverse effects of imposing the broader search task (Chapter 4) seem to contradict results from earlier studies that show positive effects of stimulating a broader job search through ‘information treatments’ (Belot et al. 2019, Skandalis 2019). An important difference lies in the nature of the task, as the broader search task is part of a formal and mandatory program. Unemployed workers that comply with this mandatory task might be a distinct population from those responsive to information treatments, as information treatments might affect mainly the beliefs about the returns to the job search among unemployed workers who were too optimistic. This surmise is supported by the fact that unemployed workers who are most likely to receive the broader search requirements experience the largest adverse effects of the requirements. This is likely due to caseworkers assigning the task mainly to specialized workers who were optimising their job search before receiving the mandatory task and were therefore searching narrowly before the meeting. It is thus likely that the respondents of an information treatment are different from the group targeted by the caseworkers. Further investigation is needed to explore whether caseworker meetings focused on broader search without the mandatory task might have more beneficial effects, akin to information treatments. This can be accomplished relatively easily by investigating the recently changed broader search program in which the mandatory component has been eliminated.

Finally, the mixed effects of welfare application processing times on employment outcomes (Chapter 5) warrant careful consideration in the design of the review process for applications. Although processing times have positive employment effects by screening out those with more favorable labor market characteristics, they also decrease the employment of applicants awarded benefits after longer processing times. Similarly, the findings show that welfare benefit prepayments on average increase the employment of the applicants with longer processing times. The presence of this (local average treatment) effect implies that there are also (untreated) applicants without prepayments who might benefit from the prepayments as well. Furthermore, the findings also point at the existence of information and/or language barriers within the application process and when requesting prepayments. Taken together, these findings de-

scribed above call for reflection on the welfare application review process. Policy makers should strike a balance between increased targeting and better employment outcomes for awarded applicants who also face longer processing times. Additionally, considering more generous welfare benefit prepayments for those experiencing longer processing times could alleviate financial stress and facilitate successful job search.⁸ Addressing the information and/or language barriers could potentially serve as a means to decrease processing times or increase the use of prepayments.

⁸Additionally, policy makers should attempt to simultaneously prevent liquidity constraints and the emergence of new welfare debts. As shown in a complementary paper in which we employ a similar sample of individuals, many welfare debts originate from the application period, and that welfare debts may have adverse and long-lasting effects on subsequent employment outcomes (de Bruijn et al. 2023).