Economic Effects of Social Protection

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1 Introduction

In developed economies, between 20% and 30% of GDP is spent on pensions, health care and benefits targeted at the elderly, unemployed, disabled, sick, families and the poor. In order to spend these amounts well-targeted and cost efficient, we need to know the economic effects of social protection. On the one hand, we have to find out whether the intended goals of social protection are achieved, such as the extent to which social insurance protects individuals against income shocks. On the other hand, social protection may also come with adverse behavioral effects, such as reduced job search effort caused by welfare benefits.

This thesis contributes to the literature by both studying some of the intended effects and some of the potential adverse effects. We start this introduction with a brief overview of the aims of social insurance and social protection more broadly, after which we describe some of the adverse behavioral effects that social protection may have. We next relate these positive and negative effects of social protection to the outcome variables that are studied in this PhD thesis.

Social insurance aims at protecting individuals against negative income shocks caused by unemployment, disability, sickness and old age (Barr 2012). In principle, this is welfare enhancing because individuals are risk averse and there is uncertainty about individuals' future income. Risk aversion implies that an increase in income risk lowers expected utility, because of diminishing marginal utility of consumption.[1] Social insurance helps to smooth income over the life cycle and over 'good' and 'bad' states and thereby reduces risks and increases lifetime utility. This is especially

[1]Diminishing marginal utility of consumption means that the utility that individuals derive from products and services decreases when they consume more and more of it.

true for liquidity constrained individuals, who have less possibilities to smooth consumption (Chetty 2008), and for individuals with time-inconsistent present-biased preferences, who save too little (Thaler and Shefrin 1981). Furthermore, social insurance may increase welfare because people are loss averse (e.g. Kahneman et al. (1991)) and social insurance reduces income losses.[2]

When taking a broader perspective, social protection also aims at reducing poverty and inequality and in some cases at increasing employment (Barr 2012). Reducing poverty and inequality may increase welfare and productivity among poor people (Baldacci et al. 2008; Cingano 2014; OECD 2014). Moreover, reducing inequality is expected to decrease rent-seeking behavior (Stiglitz 2012).[3] Further, social protection spending increases macroeconomic stability and by reducing inequality it may also increase political and social stability (Rodrik 1999; Kumhof et al. 2015). Finally, social protection may induce positive behavioral effects. Income security may increase risk taking, investments and thereby productivity (Acemoglu and Shimer 2000; Estevez-Abe et al. 2001).

Social protection can also provoke adverse behavioral effects. Social protection systems shift part of the costs associated with certain behavior (e.g. risk taking) to others. This generates a discrepancy between the individual costs and benefits and the social costs and benefits. Individuals tend to choose too much leisure (or consumption) from a social perspective when part of the costs of leisure (or consumption) are borne by others (Chetty 2008; Chetty and Finkelstein 2013). This inefficient behavior is called moral hazard. Examples of moral hazard caused by social protection are: decreases in job search efforts because of unemployment benefits (e.g. Krueger and Meyer (2002)) and opting out of employment because of early retirement benefits (e.g. Staubli and Zweimüller (2013)). Another distortionary effect arises from taxes that are needed to finance the welfare

[2]Loss aversion refers to people's tendency to prefer avoiding losses to acquiring equivalent gains.

[3]Rent-seeking refers to resources spent (by the rich) on increasing one's share of existing wealth without creating new wealth. Rent-seeking results in reduced economic efficiency through poor allocation of resources, reduced actual wealth-creation, lost government revenue and increased income inequality (Stiglitz 2012).

state. These taxes can reduce labour supply and private investments, which might lead to lower output.

In this thesis, we study both the achievement of some of the intended goals of social protection as well as some potential negative behavioral effects provoked by social protection.[4] We consider the following variables for studying the effectiveness of social protection: the number of NEETs (not in employment, education or training), social assistance coverage, different sources of compensation for wage losses caused by unemployment shocks (including within-household insurance), and poverty and inequality at an aggregated level. For studying potential adverse effects induced by social protection, we consider the effects on employment outcomes and on economic growth. In addition, we study how a constitutional right to social security is related to different kinds of social expenditure.

All together, we consider the welfare state from different perspectives, with a focus on both the redistributing effect of social protection and the employment effects of social protection. In the second and third chapter, we employ quasi-experimental methods using micro panel data from the Netherlands. In the fourth and fifth chapter, we use aggregated OECD panel data to perform international comparative research. The chapters can be read independently and all contain an extensive introduction. This introductory chapter aims to summarize the motivations, research questions, and outcomes of the four chapters.

1.1 Chapter 2: Preventing NEETs

Young individuals not in employment, education or training (NEETs) are a major policy concern, in particular during periods of recession. In line with this, NEETs are a prime concern for the European Commission (Carcillo et al. 2015). This increased policy attention for reducing the number of NEETs is accompanied with a trend towards stricter conditions for re-

[4] The effectiveness and efficiency should of course not be the only criteria by which a social protection system should be judged. Justice and fairness, public support, consistency within the legal framework and the social contract are other considerations that must be discussed and weighted by policy makers, politicians and the electorate more broadly.

ceiving welfare benefits, via e.g. the imposition of job search requirements and/or by making welfare benefits receipt conditional on participation in so-called work-learn programs.

In chapter 2, we study the effects of a mandatory activation program for young individuals on the NEETs rate during a severe economic recession. Specifically, we study the WIJ (*Wet Investeren in Jongeren*, Work Investment Act for Young Individuals) reform, introduced in the Netherlands at the end of 2009, just after the start of the Great Recession. The reform targeted individuals up to and including 26 years of age. The goal of the WIJ reform was to reduce the number of young NEETS. To this end, welfare benefits were made conditional on participation in 'work-learn programs'.

This chapter aims to answer the question: "*What is the effect of a mandatory activation program for young individuals on the NEETs rate during a severe economic recession?*" We consider the effects of the WIJ reform on key outcome variables: NEETs claiming welfare benefits, NEETs not claiming welfare benefits, the overall NEETs rate, the employment rate and the enrollment rate in education.

We use differences-in-differences and regression discontinuity and the large administrative dataset Labour Market Panel (Arbeidsmarktpanel) of Statistics Netherlands (2015) to estimate the causal effects of the WIJ reform. The Labour Market Panel tracks 1.2 million individuals over the period 1999-2012 and contains a large set of labour market outcomes and a large number of individual and household characteristics. We consider the treatment effect for three different age groups, 20-22, 23-24 and 25-26 years of age, while our base control group consists of individuals 27-28 years of age. A key challenge in the empirical analysis is to control for potentially different time effects between the treatment and control groups, due to e.g. differential trends or different business cycle responses (Bell and Blanchflower 2011). In our preferred specification we therefore include demographic controls, a full set of unemployment-age dummies, age-specific trends and control-specific trends. We also present an extensive placebo analysis, including placebo treatment dummies for the years just before the reform and placebo treatment dummies for the earlier economic downturn in 2002-2004.

Our main findings are as follows. First, we find that the reform had a statistically significant large negative effect on the number of young NEETs claiming welfare benefits of –24% in the age group 25-26 years of age, the only treatment group that passes all the placebo tests. Second, the reform had only a small and statistically insignificant effect on the total number of NEETs. The reform pushed young individuals out of welfare, but did not increase the number of young individuals in employment or education. We argue that this is likely to be due to the state of the business cycle, as the reform clashed head on with the start of the Great Recession. During these years it was hard for people, in particular young individuals, to find a job. Third, our analysis shows that controlling for differential trends in a differences-in-differences analysis may be important for some outcome variables, like the enrollment rate in education, when studying a reform that targets young individuals and using somewhat older individuals as a control group. Finally, we show that standard pre-reform placebo treatment dummies may fail to reject the common time effects assumption.

Chapter 3: The Added Worker effect 1.2

Since the start of the Great Recession, policymakers and academics have shown increased interest in the effect of unemployment shocks on the labour supply of partners of the unemployed workers– also known as added worker effects (henceforth AWE). The empirical literature generally finds the AWE to be small, see e.g. Hardoy and Schøne (2014), Halla et al. (2018) and Bredtmann et al. (2018) for recent contributions. Two pertaining questions are whether the AWE has become more important in the years following the onset of the Great Recession and whether the AWE declined over time as the female participation rate increased (leaving less space for increases in labour supply).

Chapter 3 answers the question: "*How did the Added Worker Effect change over time and over the business cycle in the Netherlands during the period 2003-2015?*" To shed more light on the relation between the AWE and the business cycle, we study the AWE for women whose male partner became unemployed in the years before and during the Great Recession.

This chapter assesses the importance of the AWE for the updated 'Labour Market Panel' of Statistics Netherlands (2017). The updated Labour Market Panel tracks the labour market outcomes of 1.8 million individuals for the period 1999-2015, as well as their social security records.

Our research strategy compares households with male partners who became unemployed to households with male partners that remained employed in a given year. Using a differences-in-differences setup with individual fixed effects, we estimate the impact of male partner's unemployment shock in a particular year on the earnings of both partners, the employment of the female partner, income from Unemployment Insurance (UI) and other social benefits, and profits from self-employment – all measured over a time window from 2 years before entering UI to three years after entering UI. By taking different reference years for the unemployment shocks occurring to cohorts in our sample, we assess how the effects vary over the business cycle and over time more generally.

Our main findings are as follows. First, we find that the unemployment shock of a male partner, causing a loss in gross income of 20 to 30 thousand euro, has a positive and statistically significant but small positive AWE of 2-5% (500-1,000 euros). Second, the AWE for women that we estimate is small and insignificant during the first years of the Great Recession (2008-2009). Third, our findings point to the existence of both intensive and extensive margin effects for the AWE. The decrease in the AWE at the start of the Great Recession is mostly driven by decreases at the intensive margin. And the extensive margin effect decreased over time. Finally, we find an AWE of about 2% (500 euro) of profits from self-employment of the female partner and the treatment effect on male partner's profits more than doubled from about 2000 euro 3 years after entering UI in 2004 to about 4500 euro 3 years after entering UI in 2012.

1.3 Chapter 4: Constitutional commitment to social security

In recent decades, politicians and academics have emphasized the role of social rights for social and economic development (Townsend 2007;

ILO 2014). The main argument for a rights-based approach to social development is that it gives an entitlement that can be enforced in court. Without such a right, people are dependent on the 'good-will' of the incumbent government for proper education, health care and social security. In theory, the constitution can play an important role for social rights, as constitutions provide universal rights and protect minorities against the majority. However, the number of empirical studies on the effect of social rights in the constitution is still limited.

Chapter 3 of this thesis answers the question: "*What is the effect of constitutional commitment to social security on different social expenditure schemes?*" First, we are interested in the effect of constitutional commitment to social security (CCSS) on total social expenditure, which shows whether CCSS has an effect at all. Second, we study whether the effect of CCSS is most sizable on social expenditure schemes for beneficiaries who are seen as less deserving by the public opinion. We expect a larger effect of CCSS on these social expenditure schemes if the median voter cares less about these social expenditure schemes, leaving a larger role for the constitution.

We use a panel data set for 17 EU-countries from 1990 until 2012. The data on social expenditures as a percentage of GDP are taken from the Social Expenditure Database (SOCX) of the OECD. For CCSS, we use the indicator created by Ben Bassat and Dahan (2018), which we define as one or zero, depending on the presence of a legal provision on assistance to old age, survivors, disability, unemployment, sickness, work injury or the poor in the constitution. We run OLS models, 2SLS regression models and the Heckman two step model with the rigidity of the constitution as an instrument, to correct for possible endogeneity and to derive the effect of CCSS on different social expenditure schemes. In line with our expectations, the rigidity of the constitution has a positive effect on CCSS, indicating that our instrument is relevant.

Our main findings are as follows. First, we find a positive significant effect of CCSS on total social expenditure of 3.8 percentage points. This includes a positive effect on spending on old age and survivor, incapacity, unemployment and active labour market policies. Second, the most sizable effects, expressed as a percentage of average spending, are found for spending on unemployment and active labour market policies. These

are the expenditure schemes targeted at people who are perceived as less deserving by the public opinion (Blekesaune and Quadagno 2003; Van Oorschot 2006). Third, no positive effect is found on expenditure on health and family, which are expenditure types that are not covered in CCSS. This suggests that the positive effect on social expenditure is due to CCSS and not caused by a positive attitude towards redistribution.

1.4 Chapter 5: Social expenditure and poverty, inequality and GDP growth

Since Piketty (2014) has published his work on income inequality, there is a resurgence of the public and academic debate on income and wealth inequality. This debate is strengthened by the rise of populist movements. For a long time, policymakers and academics assumed a trade-off between reducing income inequality and increasing GDP growth (Kaldor 1957; Okun 1975; Lazear and Rosen 1981; Benabou 2000; Arjona et al. 2003). More recent studies challenge this view and find a negative association between income inequality and economic growth (Persson and Tabellini 1994; Alesina and Rodrik 1994; Perotti 1996; Easterly 2007; OECD 2014; Dabla-Norris et al. 2015). Moreover, the latest empirical evidence does not support that redistribution is negatively related to economic growth (Thewissen 2013; Ostry et al. 2014). Nevertheless, redistribution is a broad concept and different kinds of redistribution, translated into different social expenditure types, have different effects on poverty, inequality and economic growth.

Therefore, we focus in this chapter on the question: "*How are different social expenditure types related to poverty, inequality and GDP growth*" First, we investigate how social expenditure at the aggregated level is related to poverty, inequality and GDP growth. This analysis provides insights in the potential trade-off between poverty and inequality on the one hand and GDP growth on the other hand. Second, we study the relationships for social expenditure on 1) old age and survivor, 2) incapacity, 3) health, 4) family, 5) unemployment and active labour market policies (ALMPs) and 6) housing and others. This analysis shows the importance of the

different expenditure types for reducing poverty and inequality and for the potential detrimental effects on GDP growth.

We use a panel data set of 22 EU-countries for the years 1990-2015 for our base results and a panel data set of 32 OECD countries in our robustness analysis. The data are taken from several OECD databases. We employ OLS and 2SLS regression models in which the lagged values of the different expenditure variables are used as explanatory variables. We use social expenditure in period (t-1) because social expenditure itself also depends on growth and potentially also on poverty and inequality. In our 2SLS model, we use the social expenditure variables in period (t-2) as instrumental variable. Our preferred model is an OLS model with panel corrected standard errors in which we correct for first order serial correlation and control for country and year fixed effects.

Our main findings are as follows. First, we find total public social expenditure to be negatively related to poverty and inequality and not significantly related to GDP growth. Hence, there seems to be no trade-off between reducing poverty and inequality on the one hand and higher economic growth on the other hand. Second, the different social expenditure schemes are differently related to poverty, inequality and economic growth, which makes more accurate targeting possible. For poverty, we find negative relations with expenditure on family, unemployment and ALMPs and housing and other.[5] For inequality, we find a strong negative association with social expenditure on old age and survivor and family. Finally, a strong positive relation with GDP growth is found for expenditure on housing and others.

[5]Social expenditure on “others" consists for the largest part of expenditure on social assistance.