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Tine Hufkens, Linde Buysse, Natascha Van  
Mechelen, Gerlinde Verbist

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## Fit for the labour market?

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### ABSTRACT

In the context of 'social investment', European welfare states underline increasingly the importance for the long-term development of human capital and labour market integration. The emphasis is put on individual empowerment and making work pay. In Belgium this evolution has been translated into several measures that aim to increase labour market participation and to tackle inactivity traps. In this article we study the financial added value of the transition from a full sickness benefit to (part time) work. Besides, we look at the adequacy of this new situation compared to the poverty threshold. In an effort to strengthen the financial work incentive, we construct an alternative re-integration system for sickness and disability beneficiaries and look at its impact on inactivity traps and poverty risks. We use a simulation model for hypothetical families that allows to calculate the impact of socio-economic transitions on the net disposable household income. We find that the financial returns of working are substantial when people start working at the same average income level as before the period of sickness, but not if people start working at a lower wage. For single-earners or single parents that start working at a minimum-wage we find strong inactivity traps.

**Keywords:** Employment – in-work poverty – Long-term sickness – inactivity traps – re-integration – active labour market policy

Corresponding author:

*Tine Hufkens*

Herman Deleeck Centre for Social Policy (CSB)

Faculty of Political and Social Sciences

University of Antwerp

Email: [Tine.Hufkens@uantwerpen.be](mailto:Tine.Hufkens@uantwerpen.be)

## 1 Introduction

Spending on sickness and disability benefits became a significant burden for many OECD countries over the last decades (OECD, 2010). People with a disability or in long-term sickness face greater barriers to the labour market. The number of sickness and disability benefit claims because of mental health problems is rapidly raising. This might challenge existing sickness and disability schemes and the reintegration of this group in the labour market.

Stimulating long-term labour market (re-)integration is a key feature of the social investment theory (Cantillon & Vandenbroucke, 2014; Morel et al., 2012). The Europe 2020 target states that the employment rate of the active population must increase to at least 75%. This implies activating a potential labour force of women, older people, inactive adults and migrants (European Commission, 2014; Immervoll & Pearson, 2009). These groups tend to be less educated and more difficult to activate, compared to the labour force average. Active labour market policies, lifelong learning strategies and comprehensive integration policies are essential to achieve this employment goal. In this context, benefits should stimulate and support beneficiaries to re-enter the labour market (Van Oorschot, 2002), and tax and welfare reform strategies should reduce reliance on welfare by ‘making work pay’ (Carone et al., 2004). This might create a problem of in-work poverty and persistent labour market difficulties of low-skilled individuals which is related to active labour market policies (Immervoll & Pearson, 2009; Marx and Nolan, 2014).

In Belgium this evolution has been, among other things, translated into several measures that aim to increase social participation and integration and to tackle inactivity traps, like the ‘work bonus’<sup>1</sup>, or, more specifically, concerning people with long-term illness, the adjustment of the income brackets and percentages for the exemption from professional income within the context of allowed work (Bogaerts et al., 2009; Hufkens & Van Mechelen, 2014; Van Lancker et al., 2015). Other activation measures that were developed in the Belgian sickness and disability scheme, are the professional re-integration with the possibility to partly accumulate sickness benefits and wages, vocational rehabilitation, and, voluntary work in combination with benefits (Hufkens & Van Mechelen, 2014; OECD, 2013). More recently, the Federal Belgian government published two Royal Decrees in order to efficiently target and activate people with long-term illness.

Since 1997, we see an increase of sickness and disability beneficiaries (RIZIV, 2015; RIZIV, 2016). Also the number of sickness or disability beneficiaries that started a part time job increased in the past few years (RIZIV, 2016). This combination of a sickness or disability benefit and customised work often results in full employment.

Nevertheless, previous studies demonstrate that, if sick or disabled employees return to the labour market, inactivity traps can occur, i.e. the net income in work is not or barely higher than the net income in inactivity (Bogaerts et al., 2011; Van Mechelen & Hufkens, 2014). A big trap arises specifically if an employee with a sickness or disability benefit based on a well-paid job can only take a lower paid job.

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<sup>1</sup> A reduction in social security contributions of low-wage earners.

Moreover, for some family types the financial incentive of part time work in combination with a (partial) benefit is rather small. To contribute to the literature on active labour market programs, we expand the existing research by looking at the Belgian case of labour market reintegration for long-term sick or disabled employees. The tension between benefit dependence and financial incentives to return to work can be interesting for other welfare states.

In this paper we study the following research question: How can we improve the employment effects of active labour market programmes for beneficiaries of long-term sickness and disability schemes by changing the design of the activation policy? We build on the existing research on inactivity traps (Bogaerts et al., 2011; Van Mechelen & Hufkens, 2014, Immervoll & Pearson, 2009). This paper starts from the existing Belgian activation policy for sickness or disability and the government's proposal to reform this policy. This leads to the sub-questions: 1) Does the Belgian system for the combination of a partial labour income and a (partial) benefit, generate financial incentives to start working? 2) Does a reform of the activation policy with a focus on working hours increase financial incentives? And 3) Are (activated) long-term sick or disabled people protected against poverty?

In order to tackle these questions, we first describe the active labour market policies with a specific focus on the Belgian sickness and disability benefit scheme. We then proceed to formulate a number of hypotheses on (1) the financial added value of the transition from a full sickness benefit to (part-time) work; (2) the adequacy of this new situation compared to the poverty threshold; and (3) how to strengthen the financial work incentive, looking at alternative re-integration systems for people with (long-term) illness, in order to avoid inactivity traps and higher poverty risks. The following section sets out the methodology applied. Using MOTYFF, a simulation model for hypothetical families based on EUROMOD (Bogaerts et al., 2009; Hufkens & Van Mechelen, 2014; FLEMOSI, 2017), we simulate the net disposable household income of hypothetical families at the moment of a full sickness or disability benefit and after the transition to (part time) work. Finally, we conclude and discuss the relevance of our results.

## **2 Active labour market policies**

### ***2.1 Purpose and consequences of recent activation policies***

Social protection systems traditionally serve a dual purpose, namely to ensure and protect the maintenance of the acquired living standards, and, to reduce poverty by guaranteeing minimum incomes (Cantillon et al., 2014). The last decades, a third objective gained importance in many welfare states, namely to foster 'active inclusion' as a means of preventing or rectifying damage. In this context of 'social investment', European welfare states underline increasingly the significance of the long-term development of human capital and labour market integration (Cantillon & Vandenbroucke, 2014; Kenworthy, 2010; Morel et al., 2012). Through policies supporting women's employment, active labour market policies, labour market regulation, and other activating policy measures, welfare states introduce or change social policies to prepare and activate individuals and families to adapt to new social risks rather than to repair through social benefits (Hemerijck, 2014; Immervoll & Scarpetta, 2012). The emphasis is put more and more on individual empowerment and reciprocity. Moreover, employment is seen as an unmatched protective factor against poverty (Kenworthy, 2010).

At the same time 'making work pay', that is, to make work an economically attractive option and reduce reliance on welfare, became a policy concern in several countries (Matsaganis & Figari, 2016). A central part of many recent tax and welfare reform strategies has been in line with this strategy (Carone et al., 2004). These 'making work pay' policies are attractive because they often redistribute to, among others, low-income groups, while also creating additional work incentives (Immervoll & Pearson, 2009).

Despite the wide use of activating and 'making work pay' policies within traditional welfare states, there are inherent tensions between these three purposes of social security (Cantillon et al., 2014). More specifically, as a consequence of the emergence of new social risks (Bonoli, 2005 & 2006) and of the need to develop employment strategies in order to reduce benefit dependency, it may have become more difficult to pursue the goal of poverty reduction (Cantillon et al., 2014). Additionally, in-work poverty has become a major preoccupation at the same time that policy has become strongly focused on maximizing levels of labour market activation (Immervoll & Pearson, 2009; Marx and Nolan, 2014). In-work poverty is associated with single-earnership and low work intensity at the household level, rather than low hourly pay (Marx & Nolan, 2014). Trends, of course, differ across countries. Within the institutional settings there is a wide variety of potential policies that can help households to improve their work intensity and reduce poverty.

Furthermore, the tax and benefit scheme, and the interaction between taxes, benefits and other advantages influences the decision to (re)enter the labour market (Matsaganis & Figari, 2016). Not only in terms of whether to work or not, but also in terms of how many hours to work if at all.

## **2.2 Activation in the Belgian sickness and disability scheme**

In the past decade, several activation measures were put in place in the Belgian sickness and disability scheme. A first measure is the combination of income from labour and a (partial) sickness or disability benefit. Since 1996<sup>2</sup>, sickness and disability beneficiaries can start a professional re-integration under certain conditions and can accumulate sickness benefits and wages (Hufkens & Van Mechelen, 2014; OECD, 2013). After approval from an advising practitioner of the sickness fund they can start working part time, while maintaining a part of their sickness or disability benefit. This re-integration requires a disability of at least 50%. In 2006<sup>3</sup>, the 'follow-up' of the professional integration process of sick workers, became the legal responsibility of the advising practitioner. However, the approach remains very medically oriented with no attention to the employment side. In 2011, the income brackets and percentages for the exemption from professional income within the context of allowed work were adjusted. This change in design was part of the 'Back-to-work' plan on which the National Institute for Sickness and Invalidity Insurance (RIZIV/INAMI), the Belgian sickness funds and all the authorized federal and regional institutions agreed to improve the socio-professional re-integration and vocational rehabilitation of sick and disabled beneficiaries (Hufkens & Van Mechelen, 2014; RIZIV, 2012).

A second activation measure is vocational rehabilitation (OECD, 2013). Beneficiaries can enter national approved training or rehabilitation programmes. However, participation is not obliged and the RIZIV/INAMI has to approve the programme. Since July 2009, the RIZIV/INAMI covers the costs of the training. Participants continue to receive their benefits and are paid a reimbursement for each hour of training and a final lump sum at the end of the training. After the training programme, participants have six months to find a job before they lose their sickness benefit entitlements. As part of the 'Back-to-work' plan, the reimbursements for vocational rehabilitation were revalued (Hufkens & Van Mechelen, 2014; RIZIV, 2012). Nevertheless, participants hardly receive support in their job search (OECD, 2013). Many will therefore shy away from following rehabilitations.

Thirdly, sickness and disability beneficiaries are allowed to engage in voluntary work without losing their benefits entitlements, but the same conditions which apply for part time work have to be fulfilled (OECD, 2013).

The most recent measure wants to increase the activation of people with long-term illness. The Royal Decree of 28 October 2016, a joint work of the Minister of Work and the Minister of Social Affairs, adds the re-integration trajectory to the Royal Decree of 28 May 2003. The idea is to stimulate employees in taking up their previous work. The advising practitioner will be the main contact for both employer and employee to start a progressive re-integration trajectory.

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<sup>2</sup>Royal Decree of 3 July 1996

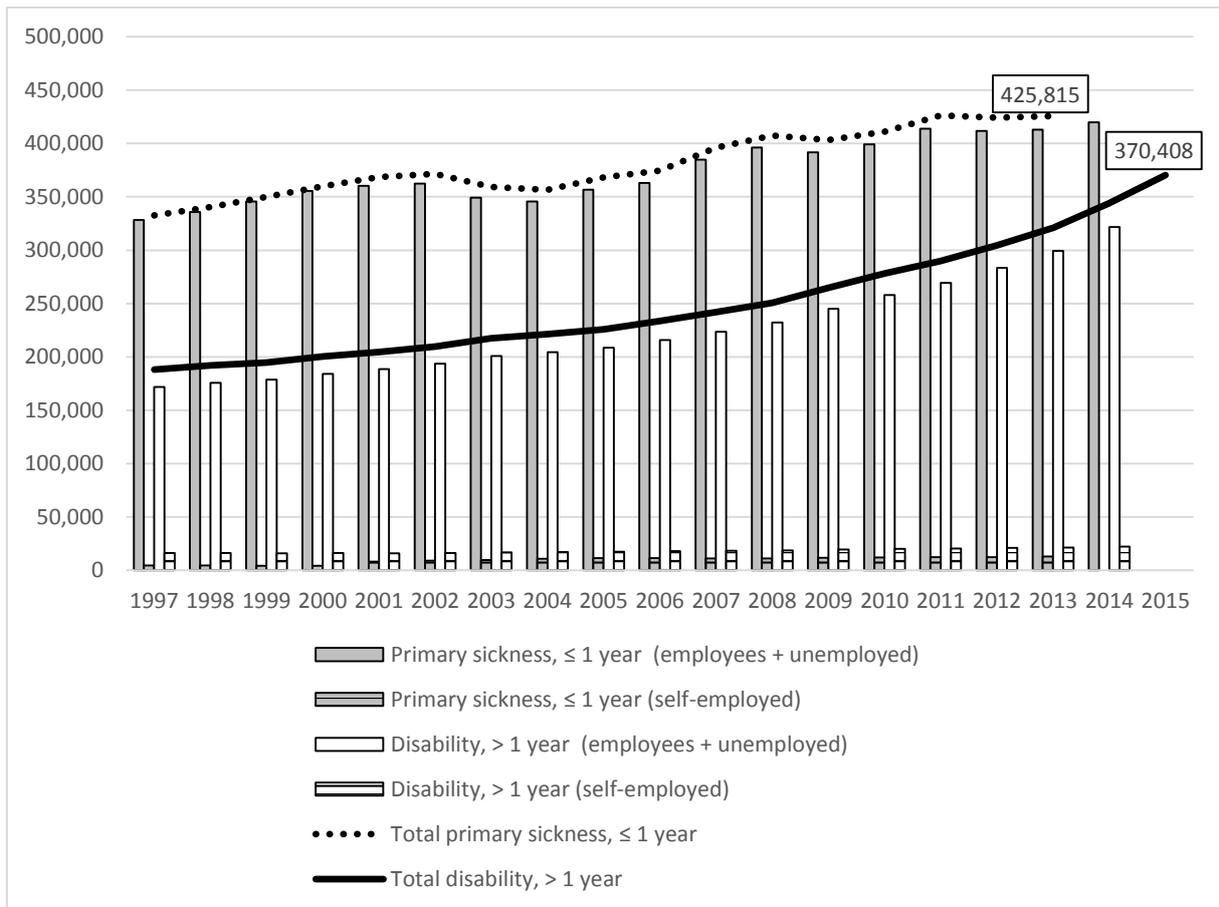
<sup>3</sup>Royal Decree of 28 May 2006

A second Royal Decree, of 8 November 2016, changes the Royal Decree of 3 July 1996 in the sense that sick or disabled persons without an employment contract can also participate in the re-integration trajectory, whether or not they follow a vocational training. Here too, the advising practitioner has a leading role.

### **3 Sickness and disability in Belgium**

Since 1997, we see an increase of primary sickness (i.e. sick or disabled for less than a year) and disability beneficiaries (i.e. sick or disabled for more than one year). At the end of 2013 425.815 beneficiaries were registered as primary sick and at the end of 2015 370.408 beneficiaries as disabled (see Figure 1). The primary sickness scheme was confronted with an increase of 28% in 16 years, while the disability scheme had an increase of 96.7% compared to 1997. Compared to the previous year, the primary sickness scheme increased by 0.4%, while the number of disabled beneficiaries rose by 7.7%. According to the RIZIV/INAMI, this augmentation is due to the raised pension age and the increasing labour market participation among women (RIZIV, 2015). Jousten et al.(2012) on the other hand show that there has been a decrease of older beneficiaries (60-64 compared to 40-44) over the past decades. They note that it is highly likely that the older beneficiaries are shifting to other programs (particularly the early retirement programme). Despite this trend the disability scheme might still serve as an early retirement route (Jousten et al., 2012).

At the beginning of 2015, 39.787 sickness or disability beneficiaries started a part time job (RIZIV, 2016). This is an increase in comparison with 2014, when it were only 34.253 persons. The advising practitioner of the sickness fund has to approve the medical situation of the beneficiary when he/she goes back to work (part time). In many cases, the reintegration process results in full employment. Over the past decade there have been some small changes in the combination of a sickness or disability benefit and a labour income and the general structure of the sickness and disability scheme. Below we give an overview of this scheme.



**Fig. 1** Evolution of beneficiaries in sickness or disability schemes (employees, unemployed and self-employed) in Belgium, 31<sup>st</sup> of December.

Note: Primary sickness: left axis; Disability: right axis.

Source: National Institute for Sickness and Invalidity Insurance (RIZIV/INAMI), Statistieken van de uitkeringen.

### 3.1 Design of the Belgian sickness and disability scheme

The Belgian sickness benefit scheme is structured as follows. The primary sickness (PS) period starts the first day of sickness and is limited to a maximum of 12 months. The PS contains a period of guaranteed wage (for an employee working in the private sector i.e. 30 days), and a subsequent period where the benefit is calculated as a percentage of the gross daily wage in work. This total wage is limited, which causes actual maximum benefits (see Table 1). It is important to note that only the last 6 months of the subsequent period covers a minimum benefit and, if applicable, increased child benefits.

**Table 1** Primary sickness benefit in € per month (= daily amount \* 26) for a regular employer in Belgium, amounts 1/06/2016.

	<b>With family</b>	<b>Singles</b>	<b>Cohabitants</b>
Percentage	60%	60%	60%
Wage threshold	€3,533.75	€3,533.75	€3,533.75
Minimum (as of the 7th month)	€1,460.42	€1,168.70	€1,002.04
Maximum	€2,120.30	€2,120.30	€2,120.30

Source: National Institute for Sickness and Invalidity Insurance (RIZIV/INAMI).

After one year of sickness, a beneficiary enters the disability scheme. These benefits are also calculated as a percentage of the gross daily wage in work and are bounded by a minimum and a maximum wage threshold, as show in Table 2.

**Table 2** Disability benefits in € per month (= daily amount \* 26) for a regular employer in Belgium, amounts 1/06/2016.

	<b>With family</b>	<b>Singles</b>	<b>Cohabitants</b>
Percentage	65%	55%	40%
Wage threshold	€3,533.75	€3,533.75	€3,533.75
Minimum	€1,460.42	€1,168.70	€1,002.04
Maximum	€2,296.84	€1,943.50	€1,413.62

Source: National Institute for Sickness and Invalidity Insurance (RIZIV/INAMI).

When returning to a part time job after approval from the advising practitioner of the sickness fund, the sickness or disability benefit will be reduced by the labour income<sup>4</sup> if the labour income exceeds a certain income limit. This labour income is reduced according to a certain percentage that is set per income bracket (see Table 3) (RIZIV, 2016). Hence the labour income is exempted in order to encourage activation. During the first year, this reduced benefit is subject to (an estimate of) an income tax of 11.11%. Thereafter, only 3.5% will be withheld on behalf of the pension fund if the benefit exceeds the minimum threshold. Therefore, beneficiaries with a benefit below the threshold are exempted from paying additional contributions.

**Table 3** Professional re-integration with sickness or disability: reduction of the daily sickness or disability benefit in Belgium, 2016.

<b>Gross labour income per hour</b>	<b>% taken into account</b>
1 <sup>st</sup> bracket €15.6068	0%
2 <sup>nd</sup> bracket €9.3641	20%
3 <sup>d</sup> bracket €9.3641	50%
From the 4 <sup>th</sup> bracket (> €34.3350)	75%

Source: National Institute for Sickness and Invalidity Insurance (RIZIV/INAMI).

<sup>4</sup> i.e. the gross wage reduced by the employee's social security contribution.

In the current system benefits of low wage workers are (almost) entirely exempted if they start working part time (until around 50%). For average or higher incomes, on the other hand, the additional benefits are reduced according to the income brackets. Based on this logic, we expect that an activity trap arises if an employee with a sickness or disability benefit based on a well-paid job can only enter a less paid job (Bogaerts et al., 2011; Van Mechelen & Hufkens, 2014). Moreover, we expect the financial incentive of part time work in combination with a (partial) benefit differs depending of the family type (Bogaerts et al., 2011; Van Mechelen & Hufkens, 2014). For example, for singles with a minimum benefit, we anticipate that there is a financial incentive to go back to work at a minimum wage.

**3.2 Reform scenario**

The current scenario for progressive reintegration in the labour market causes some difficulties. Both beneficiaries and sickness funds are confronted with a monthly administrative burden in order to check the monthly salary and the number of hours worked. The approved labour can fluctuate monthly, which causes changes in the labour income and the benefit. The current bracket system makes it hard to estimate the effect on the total net household income. We simulate an alternative scenario based on a percentage logic (see Table 6 **Error! Reference source not found.**) in order to strengthen the financial work incentive and/or maximize uniformity. In this formula the number of hours worked is included in the formula. The formula is based on a government proposition in the context of a reform of the professional reintegration in the sickness and disability system. The sickness or disability benefit depends on the ratio between the number of hours worked and a full-time employment of 38 hours a week. The benefit will not change as long as this ratio is smaller than or equal to 20%. When this ratio is higher than 20%, the benefit will be reduced by the percentage that exceeds the 20%.

**Table 4** Reform scenario 2: percentage reduction of the daily sickness or disability benefit.

Quotiënt	Condition
$\frac{Q}{S}$	With $Q$ = number of approved working hours(*) $S$ = 38 hours a week employment
	If $\frac{Q}{S} \leq 20\%$ , sickness or disability benefit remains the same $\frac{Q}{S} > 20\%$ , sickness or disability benefit reduced by $\frac{Q}{S} - 20\%$

Note: (\*) which in reality means 'number of actual hours worked'  
Source: Kabinet van Sociale Zaken en Volksgezondheid, 2016.

We expect a formula based on the number of hours worked, instead of labour income, to be more beneficial for higher incomes.

## 4 Methodology

To understand the labour market decisions of specific families, and explain the effects of activating policies on (in-work) poverty and employment, as well as, the potential for further reform, we measure the influence of the tax-benefit system on financial work incentives. In this section, we will briefly set out the method applied. We assess the impact of benefits on the disposable household income ( $y$ ) with one person of that household changing from a full sickness benefit to (part-time) work<sup>5</sup>, by using hypothetical household simulations. This is a standard procedure to calculate financial incentives or traps (Bogaerts et al., 2009; Marchal & Marx, 2015). Hypothetical household simulations are calculations of the net disposable income and its components for a typical family, according to the applicable tax benefit rules. Both the OECD (i.a. “Benefits and Wages” and “Employment Outlook”) and the European Commission (i.a. “Tax and benefits indicators”) apply this method.

Hypothetical household simulations make the interaction, coherence and accumulation of different benefits and advantages visible. Because they do not depend on survey data, hypothetical household simulations can include a wider set of policies and policy changes. This independency from data makes it possible to respond more quickly on policy changes. Nevertheless, a drawback of these simulations is that the results are solely based on hypothetical families (Bogaerts et al., 2009; Marchal & Marx, 2015). These hypothetical families and wage levels are not necessarily representative. Besides, the actual impact of the unemployment trap on the labour supply and more specifically the behavioural effects remains an empirical issue.

In this paper we use MOTYFF 2016 (see <http://www.flemosi.be/easycms/MOTYFF>). MOTYFF stands for Modelling Typical Families in Flanders. The model is available online and offline and is based on EUROMOD, a European tax-benefit microsimulation model (see <https://www.euromod.ac.uk/>). Unlike EUROMOD that is designed for simulations based on income data of a representative sample of the population (like EU-SILC), MOTYFF works with hypothetical family types. MOTYFF 2016 includes regulations of June 2016 and taxes of the fiscal year 2017, income 2016. The calculations are done on an annual basis whereby the amounts applying in June are extrapolated across all of 2016 and, thus, indexations or other changes that occurred later that year are not taken into account. Most policies are national, but the simulation of the cost of child care and the contribution for Flemish care insurance are regional. In case of regional policies the model assumes the hypothetical family lives in Flanders.

For a number of typical families we calculate, under certain assumptions, the net disposable income in and out work (i.e. sickness and disability). The net disposable income is based on the gross income of the different family members after subtraction of taxes and social contributions and including all benefits and advantages the typical family is entitled to. We simulate the net disposable income using the following formula:

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<sup>5</sup> while the work status and earnings of all other household members remain unchanged.

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## Formula net disposable income

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$$Y_{net} = Y_{gross} + Y_0 - SSC(Y_0 + Y_{gross}) + Tr(Y_0 + Y_{gross}) - T(Y_0 + Y_{gross}) - FC$$

With

$Y_{net}$  = net disposable household income.

$Y_{gross}$  = gross income from employment or benefit .

$Y_0$  = gross income of other family members (i.e. the partner) from employment or benefit. This remains constant

$SSC$  = social security contribution paid by employees and benefit recipients applied to the present incomes.

$Tr$  = sum of social transfers to which the household is entitled.

$T$  = total amount of income taxes (inclusive the special social insurance contribution and the Flemish discount on income tax)

$FC$  = fixed costs linked to employment. In this simulation, only the cost for child care is included if all parents in the household are working.

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Source: based on Bogaerts et al., 2009.

Our calculations are made on household level for a number of typical families, living in Flanders. For this study we take the net disposable income of six typical families into account: a single, a couple with an inactive partner, a couple with an active partner, a single parent with two dependent children, a couple with an inactive partner and two dependent children, a couple with an active partner and two dependent children. All adults are 35-years old and the children are two and six years old. Furthermore, we analyse the situation for these different typical families with a minimum wage (i.e. the official guaranteed average minimum wage for a 20 year old employee with one year seniority)<sup>6</sup> and an average wage (based on EU-SILC 2012 indexed up to 2016) working full and part time. Besides, the period of inactivity varies from less than seven months, from seven months until one year to more than one year. For the different family types and income situations, we simulate the following transitions to work: from a minimum benefit (or a benefit based on the minimum wage for an inactivity period of less than seven months) to a minimum wage; from a benefit based on an average wage to an average wage; and from a benefit based on an average wage to a minimum wage. We calculate this transitions for 20%, 50%, 80% and 100% employment. We do this for both the current policy and the different reform scenarios. In this paper we will only show the result for one family type: the single parent family.

### 4.1 Outcome indicators

When taking up a job or working more hours, a significant portion of these new earnings can be effectively ‘taxed away’, through higher income taxes or reduced benefit entitlements (OECD, 2017).

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<sup>6</sup> In Belgium minimum wages are agreed per sector. The guaranteed average minimum wage is seen as the absolute lower limit (Belgian Federal Public Service Employment, Labour and Social Dialogue, 2017)

Some families may gain little or nothing from working more or taking up a low-paid job. For example, high child care costs may hinder parents of young children a return to work.

To calculate the financial (dis)incentive for these family types related to the transition from sickness or disability to (partial) work, we use the out of work net replacement rate (NRR) (O'Donoghue, 2011; OECD, 2017). This indicator is defined as the net disposable income when in (partial) work, whether or not combined with a partial sickness or disability benefit, expressed as a share of the initial disposable income when out of work (i.e. our case sickness or disability benefit). Since it includes the income of other household members, the out of work NRR gives the *total* financial added value or loss in relative terms for the household. In other words, it measures the fraction of the disposable household net income out of work that is maintained when going back to work. The higher the rate, the higher the added value of going back to work. If the NRR exceeds one, the net disposable household income increases by this factor when going back to work. If the NRR is lower than one, the net disposable household income the household is worse off in work than not working. If the NRR is equal to one, there is no financial reward to work.

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### **Out of work net replacement rate (NRR)**

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$$NRR = \frac{Y_{netIW}}{Y_{netOW}}$$

With

$Y_{netIW}$  = net disposable household income when one person returns to work (partially) (in work).

$Y_{netOW}$  = net disposable household income when one person is on a sickness or disability benefit (out of work).

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Note: While the work status and earnings of all other household members remain unchanged.

Source: based on O'Donoghue, 2011 and OECD, 2017.

In order to check the adequacy of the combination of a sickness or disability benefit and a (partial) labour income, we compare total net disposable household income with the poverty threshold. The poverty threshold is 60% of the median equivalised net disposable household income in the Belgian Survey on Income and Living Conditions 2016 (EU-SILC), which is based on the income of 2015. We equivalise the net disposable income using the modified OECD equivalence scale, which assigns a weight of 1 to the first adult in the household, 0.5 to every other adult and 0.3 to each child (aged below 14 year).

## 5 The effectiveness of activation after a period of sickness or disability

We discuss the financial incentives using the out of work NRR and the adequacy of the benefit. First we describe the financial incentives to start working in the current policy system, i.e. a combination of labour income and a benefit that is phased out using income ranges. Then we describe the financial incentives of a system based on effectively worked hours. We evaluate the adequacy of the reintegration benefit by checking poverty risks when taking up a (part time) job after a period of sickness or disability. We do this for both the current policy and the alternative scenario. We focus on the incentives and poverty risks of the single parent with two children, one of the most vulnerable typical families included in the analysis.

### 5.1 Financial (dis)incentives

#### 5.1.1 Current policy

In Figure 2 we show the NRR for a single parent in three different transitions. The first transition is the shift from a minimum benefit (or a benefit based on the minimum wage for an inactivity period less than 7 months) to a minimum wage. The second transition is from a sickness or disability benefit based on an average wage to an average wage employment. The third transition is from a sickness or disability benefit based on an average wage to a minimum wage employment. The x-axis shows the three different periods of sickness or disability: the first period of primary sickness. This means the beneficiary is less than seven months in sickness leave. The second point refers to the second period of primary sickness, from the 7<sup>th</sup> month until the 12 month of sickness. The third point in each graph describes the disability benefit or the benefit for people that are longer than 12 months in sickness leave. The y-axis shows the value of the NRR. The different dots stand for the number of hours a person on sickness leave start working: 20% (1day a week); 50% (2.5 days a week); 80% (4 days a week) or full-time.

The first graph shows the minimum situation. During the first period there is no minimum benefit, so the benefit is calculated under the assumption that the beneficiary was working full-time for a minimum wage. The benefit based on a minimum wage is around €900, while the minimum benefit from the 7<sup>th</sup> month of is around €1450. In the first transition the benefit for a beneficiary that starts working at 20% is completely exempted. This is the case for all simulated hypothetical families. Under the existing activation policy partial employment is financially rewarding from the 7<sup>th</sup> month of sickness, but not in the first period of primary sickness (<7months), here the NRR is equal to one, which means there is no financial added value. The absence of a financial incentive can be explained by the loss of additional social assistance and the extra cost of child care. The single parent with a benefit based on a minimum income receives a social assistance top up. A couple with an inactive partner and two children experiences comparable inactivity traps.

The other simulated family types do have a (small) financial incentive to start working in the first sickness period and with an employment of 20%.

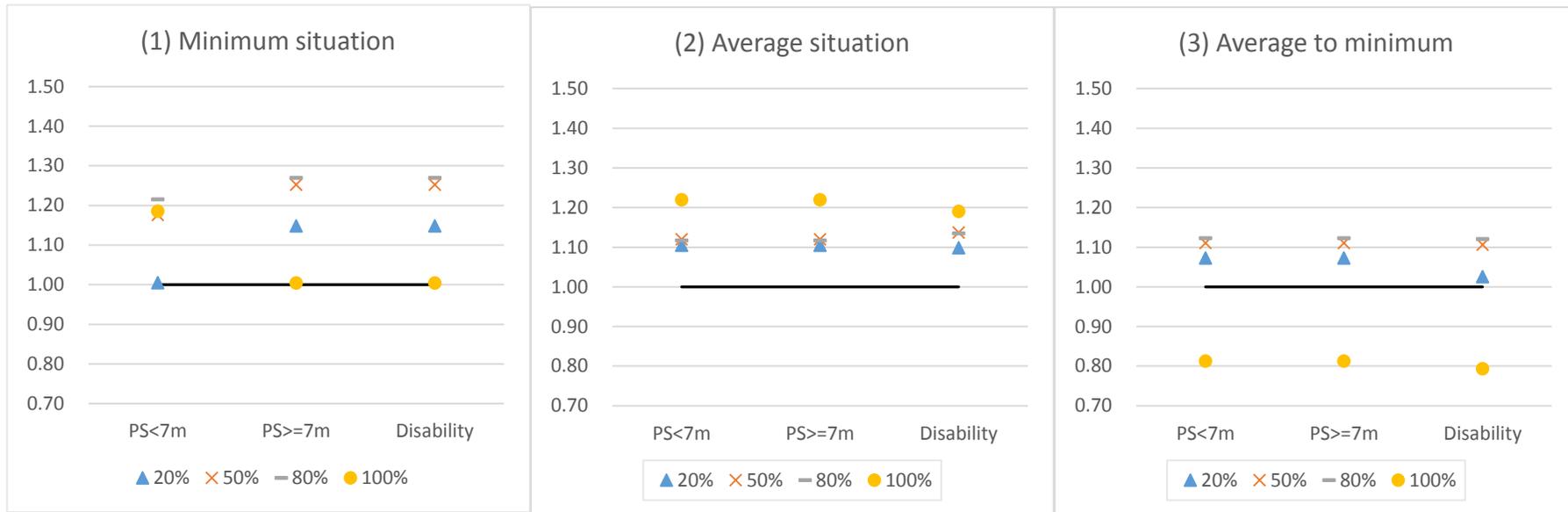
Single parents experience financial incentives to go back to work at 50% or 80% employment and after a sickness period of less than 7 months. NRRs are for these periods between 1.2 and 1.3, which means that the net disposable family income is increased by this factor when going back to work. An employment rate of 20%, 50% or 80% is financially rewarding from the 7<sup>th</sup> month of sickness leave. The single persons without children, and a couple with an inactive partner also experience higher incentives in the first six months of sickness leave, due to the missing minimum benefit during the first six months, and thus, a lower exempted amount of the benefit.

Going back to a full-time job is financially interesting during the first period of primary sickness (<7months). However, from the 7<sup>th</sup> month on the single parent is confronted with NRRs equal to one when working back full-time in the period. This is due to the small difference in net income in full-time sickness leave and the full-time minimum income for a single parent. For single parent the net family income also include the cost of childcare. The other hypothetical families have a (small) financial incentive to start working. For couples with an active partner (with or without children), the NRR is rather small when working 20%, 50%, 80% or full-time on a minimum wage. This is due to the small proportion of the benefit or the additional labour income in the total family income, since the partner works at 130% of the minimum wage.

In the second graph we show the average situation: a transition from a sickness benefit based on the average wage, to employment at the average (hourly) wage. In this transition working is financially rewarded for the single parent but the gains are not very high. For an employment rate of 20%, 50% and 80% in the first period the NRRs are around 1.1. The main reason for this limited incentive are, again, the additional costs of child care and the loss of increased child benefit. The increased child benefit is a means-tested benefit for families with children in long-term sickness or unemployment. If the family income is below the income limit, a family can receive the increased child benefit until 24 months after the period of sickness. In contrast to the minimum situation the NRRs change after the second period of sickness (first year of sickness), compared the disability benefit (after the first year). This is due to the change in the calculation of the sickness or disability benefit. In the first year of sickness the original benefit for single parents is 60% of the previous wage, from the second year (disability) the benefits is 65% of the previous wage. Since the additional benefit in the reintegration process is calculated based on the full-time sickness/disability benefit, this influences the total net income and the NRR (see table 1 and table 2). In general there is a small incentive to work for the single parent in the average income situation. The highest financial incentive is for full time employment. The financial incentives are higher for singles and couples with an inactive partner (with and without children). Couples with an active partner have limited financial incentives to start working.

The third transition, from a benefit based on the average wage to employment at a minimum wage, creates NRRs smaller than 1 or inactivity traps for full-time employment. A partial employment in combination with a (partial) disability benefit creates small financial incentives in the first period of sickness. After the first year, in the period of disability, there are almost no financial incentives to start working for a single parent. In the 20% scenario the additional income from one working day per week at the minimum wage is very small compared to the total net family income. The biggest part of the family income is the benefit based on the average wage. For a couple with an active partner the work incentives are negative or very limited. If the beneficiary is the head of the household, e.g. in a single person household, or a household with an inactive partner, the NRRs are higher, between 1.1 and 1.3. Working full time at a minimum wage after receiving a full-time sickness benefit based on an average wage, creates strong inactivity traps for all family types.

Beneficiaries with a benefit based on a higher wage (double of the average wage) receive a maximum benefit. We find comparable incentives as for the average wage if these beneficiaries start working at the same income level as before their sickness leave. If they start working at a lower income this creates smaller incentives or disincentives to work, which follow the same trend as described for the average wages (See Appendix).



**Figure 2.** NRR for a single parent when going back to work at a minimum wage after a minimum sickness or disability benefit(1), when going back to work at an average wage after a sickness or disability benefit based on an average wage(2), when going back to work at a minimum wage after a sickness or disability benefit based on an average wage(3), 2016.

Source: own calculations using MOTYFF 2016.

### 5.1.2 *Alternative scenario*

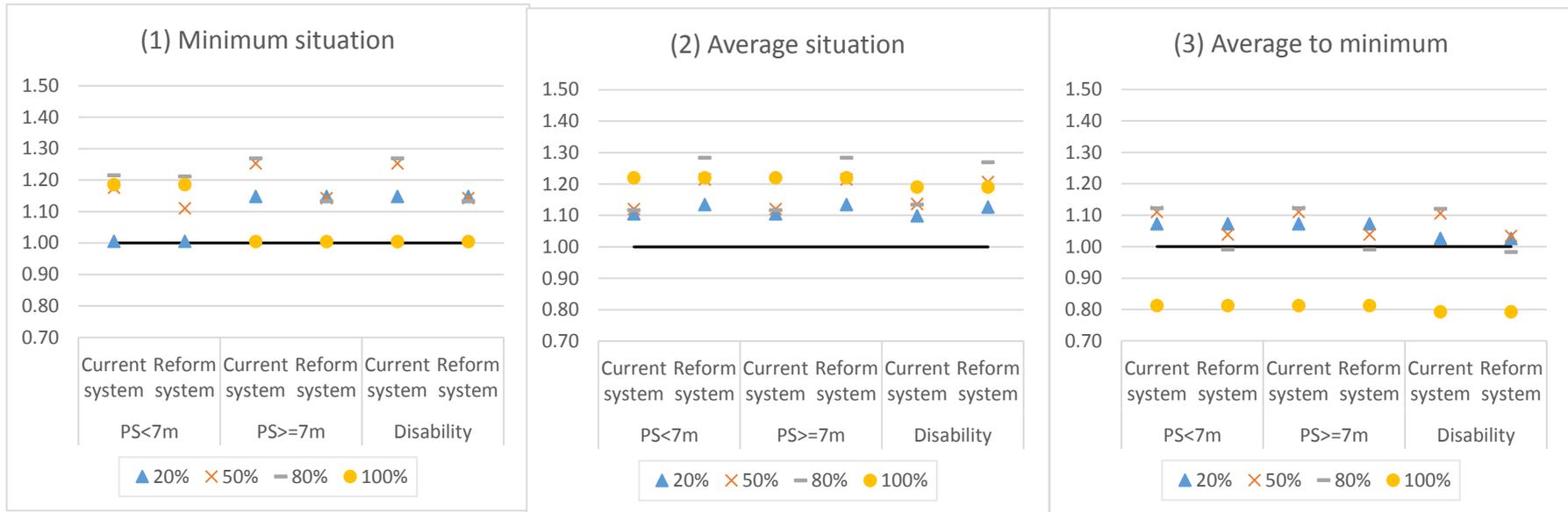
To increase financial incentives, and, thus, to make work more attractive for people in sickness leave with a previous average or higher wage, an alternative formula was proposed for the calculation of the benefit in the process of progressive employment. Figure 3 compares the NRRs the current system, based on income ranges, with an alternative system, based on number of hours worked.

The first graph compares the NRRs for the transition from a minimum benefit (or a benefit based on the minimum wage in the first six months) to an employment of 20%, 50% or 80% at the level of the minimum wage. In the 20%-transition, the benefit for the minimum situation is fully exempted in both scenarios. In the current system the income from 20% employment lies under the first income limit. In the reform scenario the benefit is only reduced from employment rates exceeding an employment of 20% of the full-time working hours. Compared to the current system, the single parent in an employment of 50% or 80% is worse off in the reform scenario, regardless of the duration of the sickness leave. Because for full-time employment a combination of a partial benefit and a labour income is not possible, the results are unchanged for the current and the reform system. And so, we will not discuss the 100% transition any further.

When we look to the second graph, we see a reverse trend. In the reform scenario the financial added value enlarges for working at average wages in comparison with the current system. Financial incentive increase for the 20% , 50% and 80% scenario. In contrast to the minimum situation, the benefit is not fully exempted in the 20% scenario using the current formula. Because 20% is fully exempted in the reform system, financial incentives are higher in the reform scenario than in the current system. The NRRs are higher in the reform system because the formula is not related to the level of labour income, as is the case in the current system.

The trends in the third graph are similar to the trends in the minimum situation. Notably is the 50% and 80% employment since it is substantially lower compared to the current system. There are no financial incentive for the single parent to work 80% on the level a minimum wage after a benefit based on an average wage. For the beneficiary in a couple with an active partner and two dependent children in a sickness leave of less than a year, it is financially disadvantageous to start working.

In general, the trends within both systems are the same for all hypothetical families and the interactions with other benefits and advantages are stable. Also the direction of the trend, increasing work incentive for average wages and decreasing for minimum wages, is the same for all hypothetical families.



**Figure 3.** NRR for a single parent when going back to work at a minimum wage after a minimum sickness or disability benefit(1), when going back to work at an average wage after a sickness or disability benefit based on an average wage(2), when going back to work at a minimum wage after a sickness or disability benefit based on an average wage(3) in current and alternative scenario, 2016.

Source: own calculations using MOTYFF 2016.

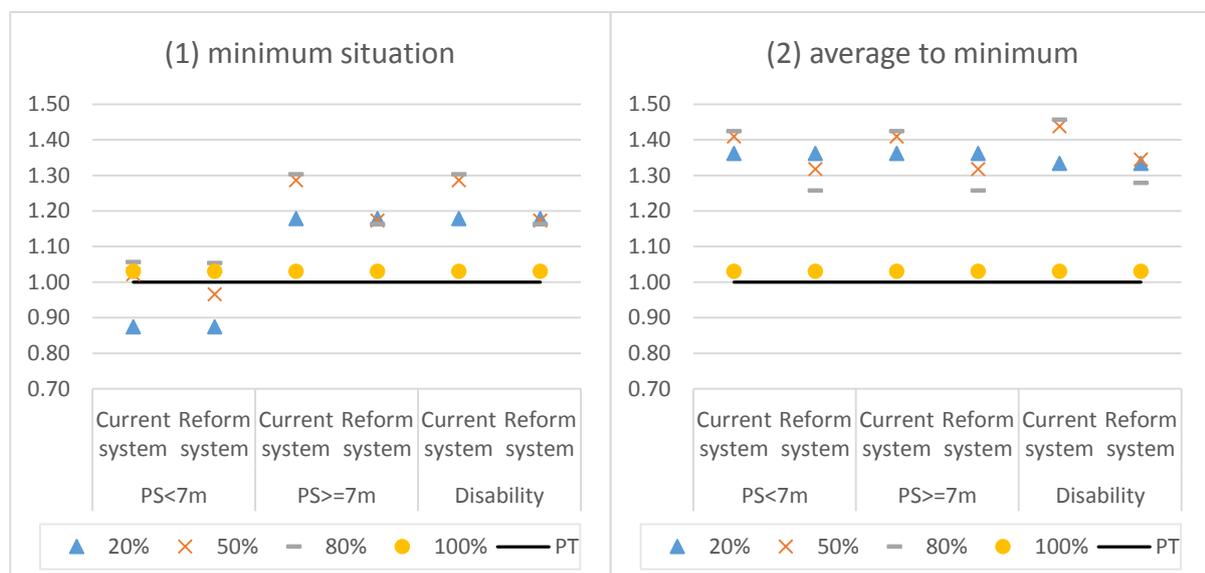
## 5.2 Adequacy

Because of the tension between reducing benefit dependence, increasing financial incentives to return to work and the social security goal of poverty reduction, we also explore the effects of both systems on the adequacy of the benefit. Figure 4 shows the adequacy of the transition to employment. The graphs show the net disposable family income as a percentage of the poverty line for a single parent with two children. Since net disposables incomes are adequate for beneficiaries going from a benefit based on an average wage to an employment at an average wage, we only show the transition from a minimum sickness or disability benefit to an employment at a minimum wage and the transition from a sickness or disability benefit based on an average wage to an employment at a minimum wage. The figure below shows results for both the current policy and the reform scenario.

In the minimum situation we notice inadequate net disposable household incomes for single parents working at 20% in the first period of sickness leave (< 7months). This is due to a missing minimum benefit in the first six months of sickness leave. Working 50% or 80% increases the income to a level just above the poverty threshold in the current system. Working 50% in the alternative scenario generates an income below the poverty line. A single parent working full-time at a minimum wage floats around the poverty threshold. This is due to inadequate minimum wages.

When we look at the transition from a benefit based on the average wage to a labour income at the minimum wage, net family income is above the poverty line for all employment scenarios. Full-time employment is very close to the poverty line. A single parent who goes back to work at a minimum wage at 50% or 80% is worse off in the reform scenario, compared to the current system.

The other simulated family types also show a higher financial incentives for progressive labour market reintegration in the current system, compared to reform system.



**Figure 4.** Adequacy when going back to work at a minimum wage after a minimum sickness or disability benefit(1) and Adequacy when going back to work at a minimum wage after a sickness or disability benefit based on an average wage (2)in current system and reform scenario, 2016.

Source: own calculations using MOTYFF 2016.

### **5.3 Conclusion and Discussion**

In this article we studied the effect of the design of the activation policy in the sickness and disability scheme. Our research question is *How can we improve the employment effects of active labor market programmes for beneficiaries of long-term sickness and disability schemes by changing the design of the activation policy?* We first analysed the current Belgian system on the presence of financial incentives to start working. The reintegration measures within the sickness and disability scheme consist of income limits creating a gradual reduction of the sickness benefit when re-entering the labour market. Our analysis confirms the results of previous research (Hufkens & Van Mechelen, 2014; Bogaerts et al., 2011). Single parents (and to a smaller extent also couples with children) have limited financial incentive to start working after a period of long-term sickness or disability due to a combination of advantages, benefits and costs. In some transitions the single parent is confronted with an inactivity trap. A second remarkable conclusion is the inactivity traps for beneficiaries that start working at a lower wage than before their sickness leave. These beneficiaries experience an income loss when working full time. In some family types (e.g. the cohabiting beneficiary) working part time does not improve the total family income significantly. In general the low financial incentive is due to low minimum wages and a small difference between the total income when out of work and the income when in work. People with a low wage are entitled to several advantages within the tax-benefit system. This reduces the impact of the reintegration policy.

Then we studied the effect of an alternative policy based on the number of hours worked, instead of the earned labour income. We compared this system with the current system in terms of work incentives. On the one hand, people on sickness leave with a minimum benefit that start working on a minimum wage experience lower work incentives in the reform system compared to the current system. On the other hand the reform scenario creates stronger work incentives for people with a benefit based on an average (or a higher wage), that start working on the same wage as before the sickness leave. For a transition from a sickness or disability benefit based on an average wage to a minimum wage, the financial incentives in the reform system are much less positive than the current system.

In a third step we looked at the adequacy of the two reintegration measures. Most beneficiaries in a process of professional reintegration are above the poverty line. People who start working at a minimum wage, either from a minimum benefit or from an average benefit, come closer to the poverty line in the reform scenario. In the first period of sickness the single parent and the couple with an inactive partner (with and without children) have a disposable income under the poverty line. The couple with an inactive partner and children have an income under the poverty line in almost all transition situations. These families are even worse off in the reform system. It is especially the financial incentive in the 50% and the 80% scenario that decreases.

Although the design of the current active labour market policies creates more financial incentive for low wages and protects families with a low wage earner better against poverty, the reform system generates better work incentives for the average or the higher wages.

The opposite trend for low and average or high income can be explained by the design of the measure. If the labour income is reduced following the same income brackets for all beneficiaries this turns out better for low incomes in relative terms. However, if the income is reduced using the number of hours worked, this leads to a higher added value for higher income families compared to the income-bracket system. On top of the formula, the relative added value for income groups differs because of different interactions in the tax-benefit system. The current system has a more progressive effect in comparison to the reform system.

Hence, to improve the activation measure within the sickness and disability scheme, a balance has to be found between maintaining acquired living standards, reducing poverty and fostering active inclusion. There are however, inherent tensions between these three purposes or social security (Cantillon et al., 2014). The maintenance of acquired living standards is integrated in the structure of the full-time sickness and disability, where beneficiaries are entitled to a percentage of their previous wage as a replacement benefit. The second goal, reducing poverty by guaranteeing minimum incomes, is reached for certain family types but not for all (Bogaerts et al., 2009; Hufkens et al., 2016). For the third goal, and the main focus of this paper, we show that financial incentives can be increased for people in long-term sickness or disability but, depending on the formula, we find trade-offs between poverty reduction, guaranteeing acquired living standards and financial incentives to start working.

For policy implications it is necessary to estimate the size of different income groups and family types in the population. We cannot extrapolate our results based on hypothetical household situations. To investigate the impact of a change in the policy on financial working incentives, we used hypothetical household simulations. The advantages of hypothetical household simulations is the timeliness, the independence of survey data and the straight forward interpretation. The drawback is that we cannot use hypothetical households simulations for distributional analysis. Detailed survey data on sickness and disability, including labour market transitions and information on labour market history would benefit this research. Using a microsimulation model the effect of the policy change could also be analysed for the population. Using information from the sickness funds in combination with administrative data, such a detailed analysis would be possible for Belgium. Including the sickness and disability benefits in a microsimulation model based on this data, would provide the opportunity to describe distributional effects. Also behavioural effects could be included in analysis based on survey data.

Besides, because of the lack of detailed survey data, the article does not discuss the composition of the disabled population. This composition is changing: there is an increasing number of beneficiaries that are unable to work due to mental problems (Jousten et al., 2012; OECD, 2010). More research is needed on the reintegration of this group in the labour market. The variety of beneficiaries might influence the future policy design and activation strategies.

As an indication for different family types and the interaction between policies, hypothetical households simulation prove to be a very useful instrument.

The adequacy of the benefits for the hypothetical families was calculated using the at-risk-of-poverty-threshold and the OECD equivalence scale, although this is a common indicator, adequacy should be further investigated taking into account the needs of sick or disabled people. Extending the at-risk-of-poverty threshold by including costs for disabled or people in long-term sickness or extending the reference budgets for sick or disabled people, could improve this indicator (Storms et al., 2015; Van Mechelen et al., 2013).

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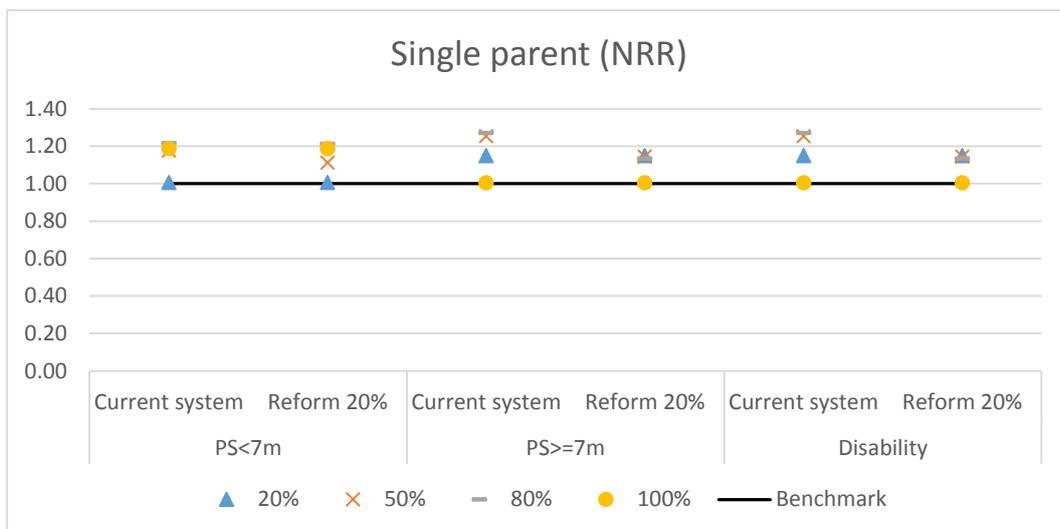
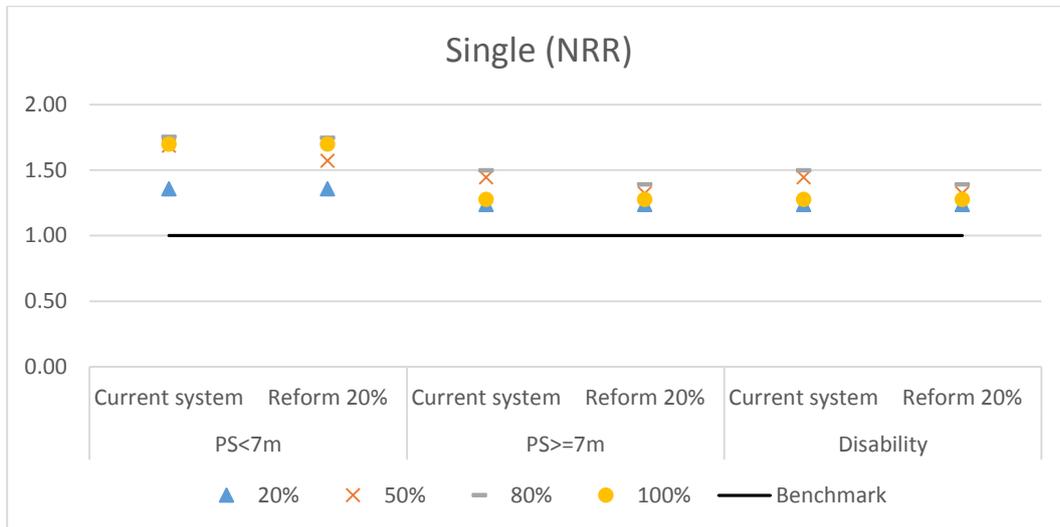
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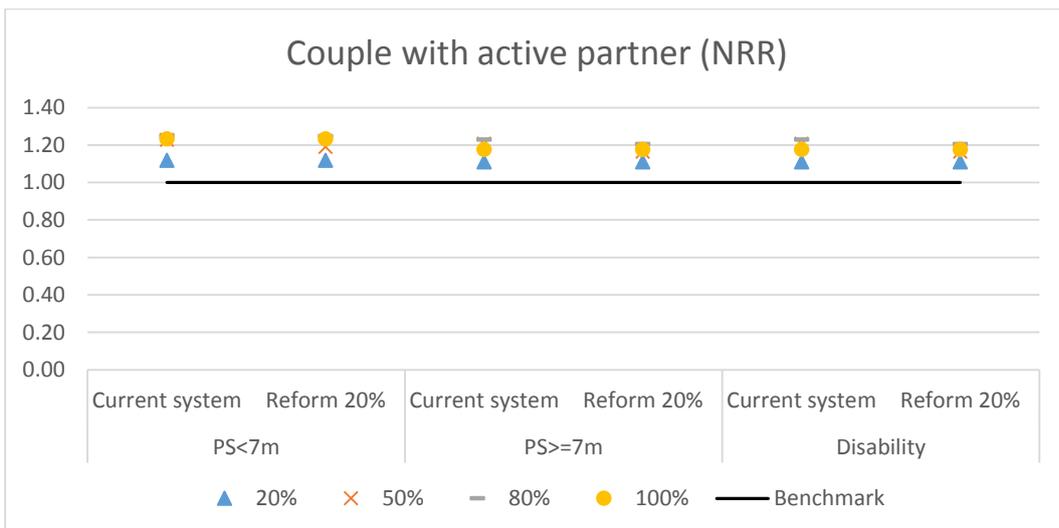
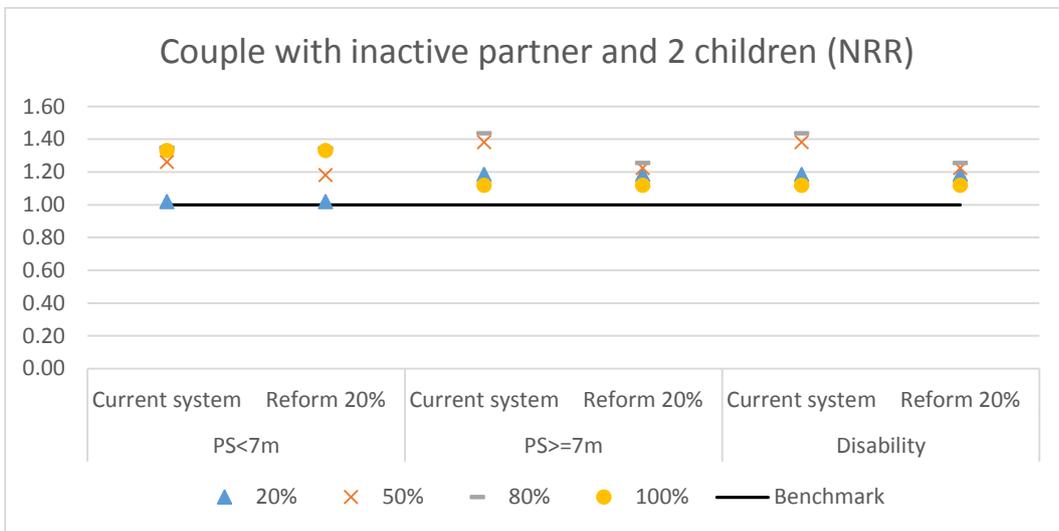
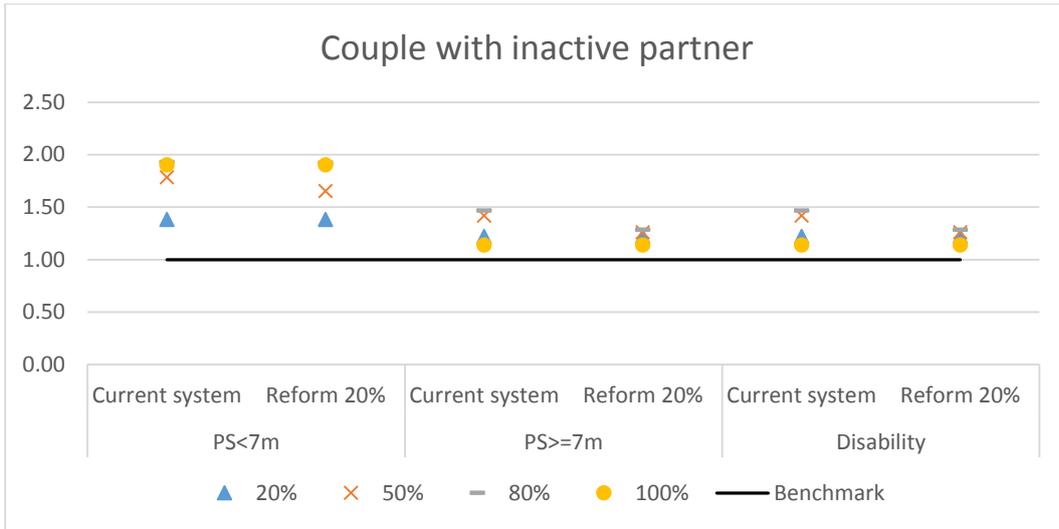
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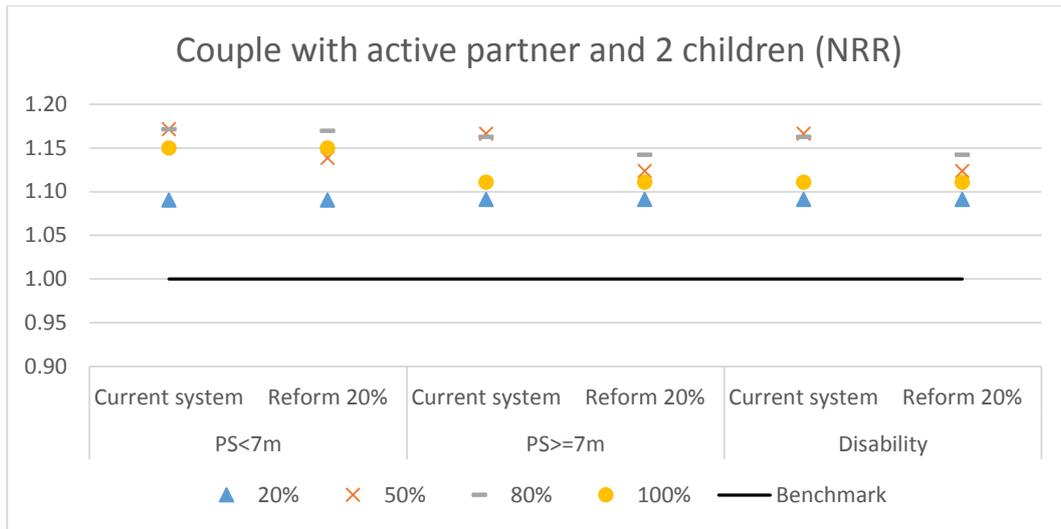
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## Appendix

### A.1 NRR when going back to work at a minimum wage after a minimum sickness or disability benefit

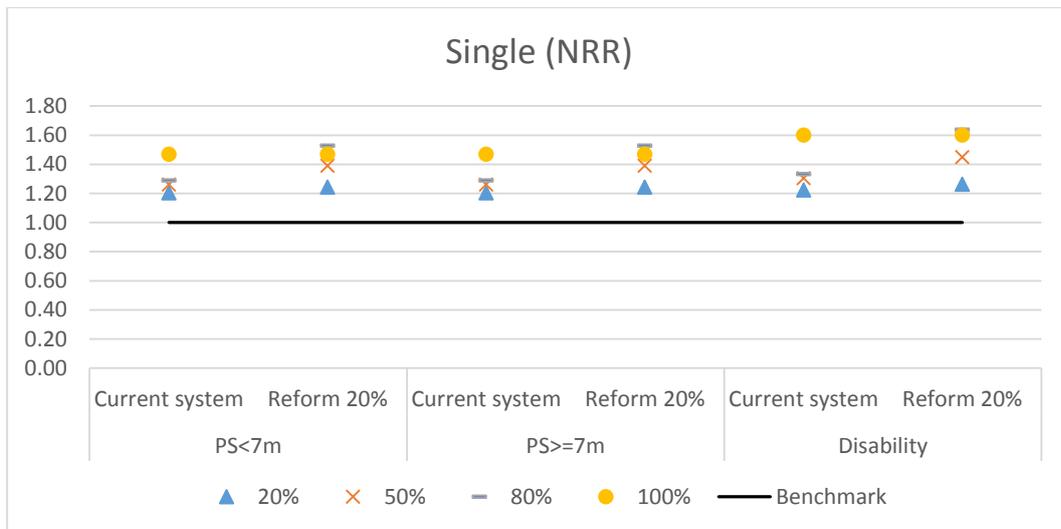


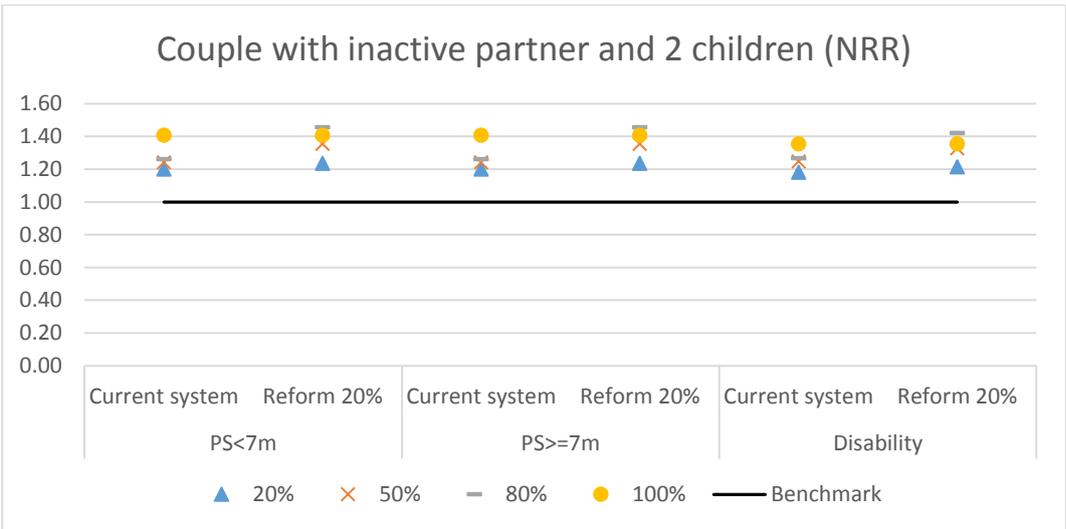
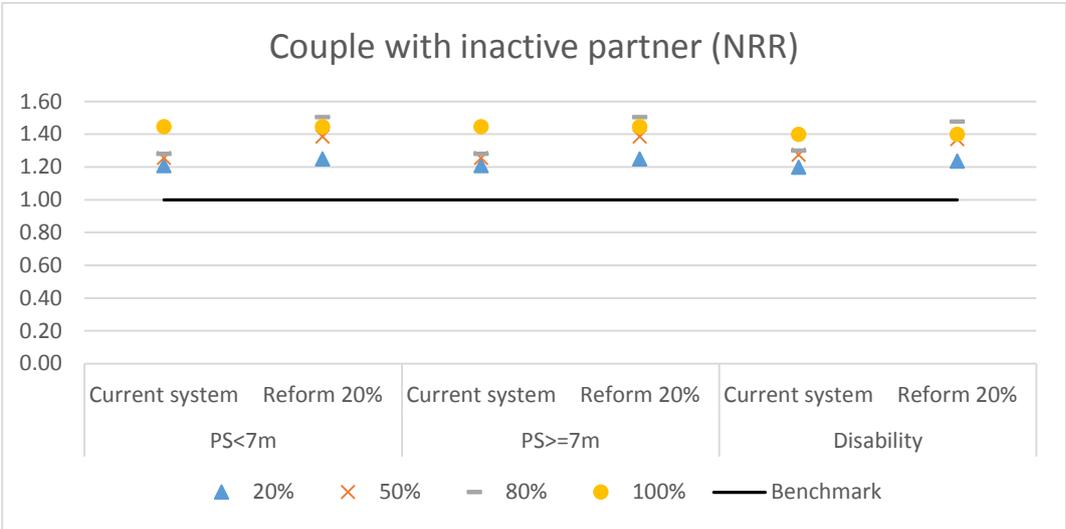
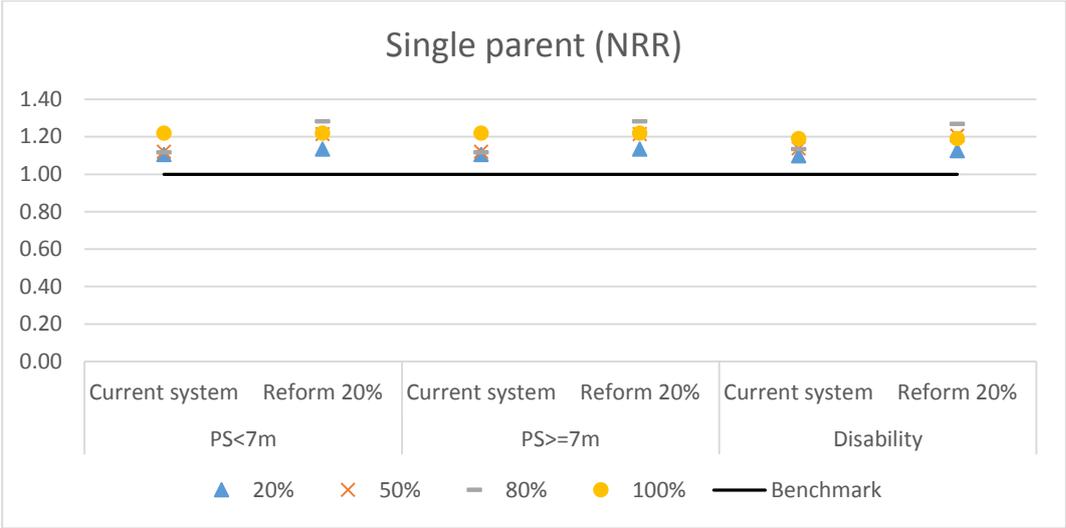


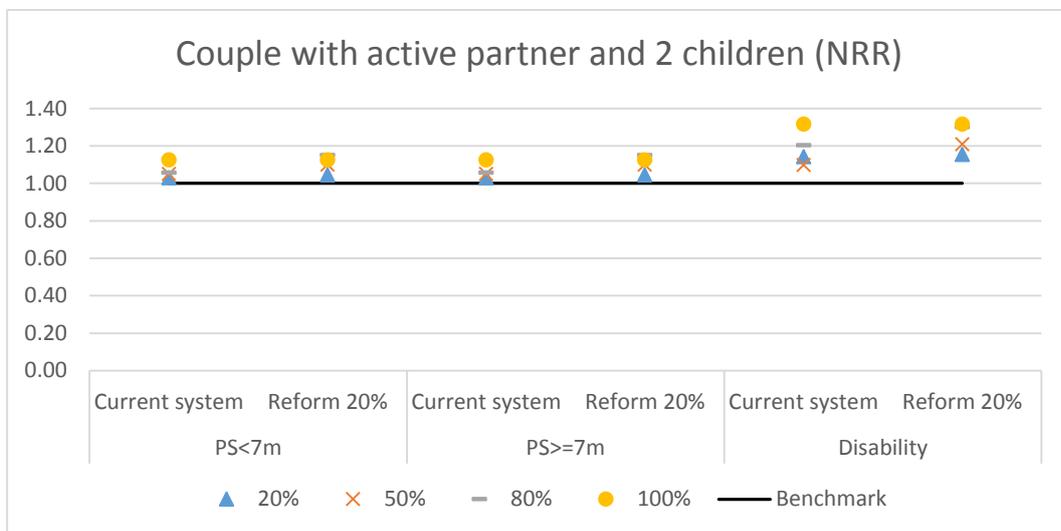
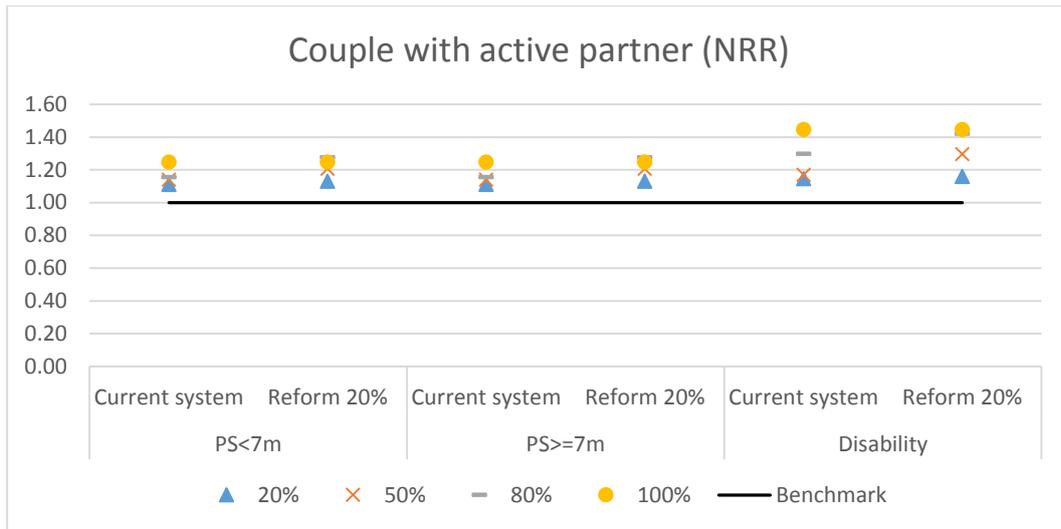


Source: own calculations using MOTYFF 2016.

### A.2 NRR when going back to work at an average wage after a sickness or disability benefit based on an average wage

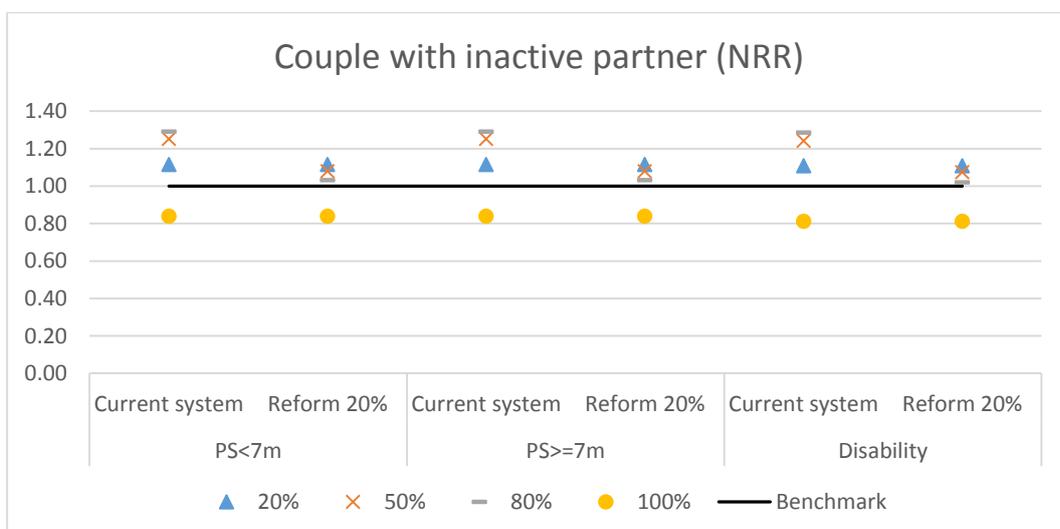
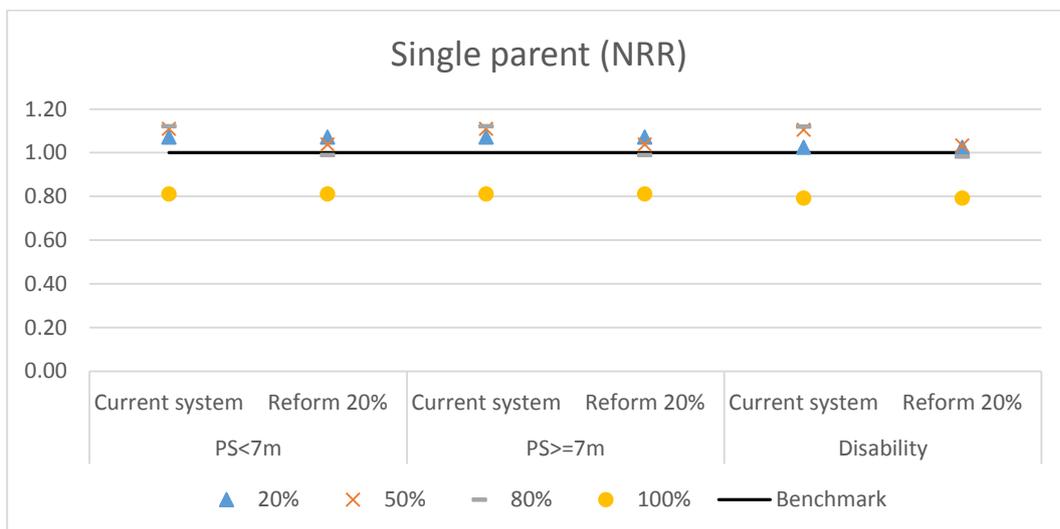
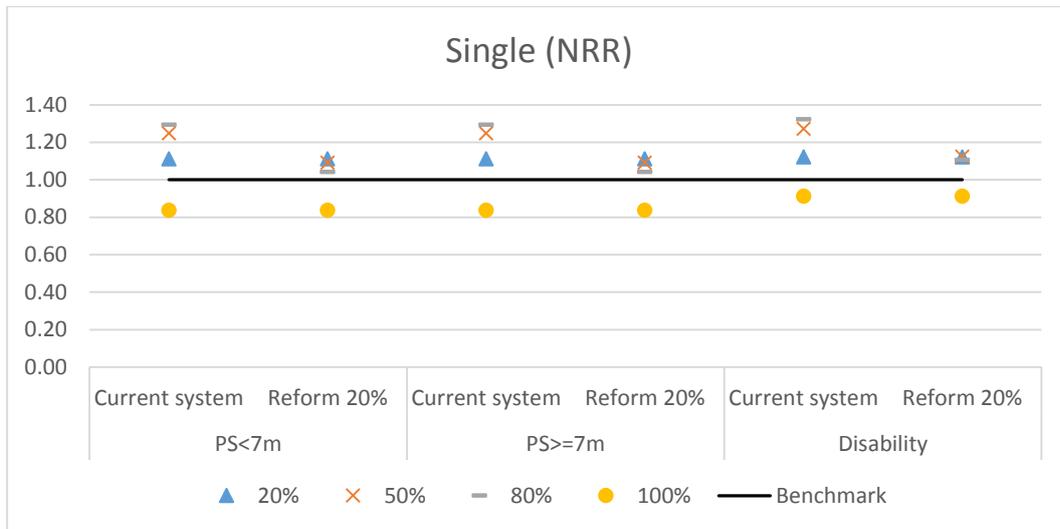


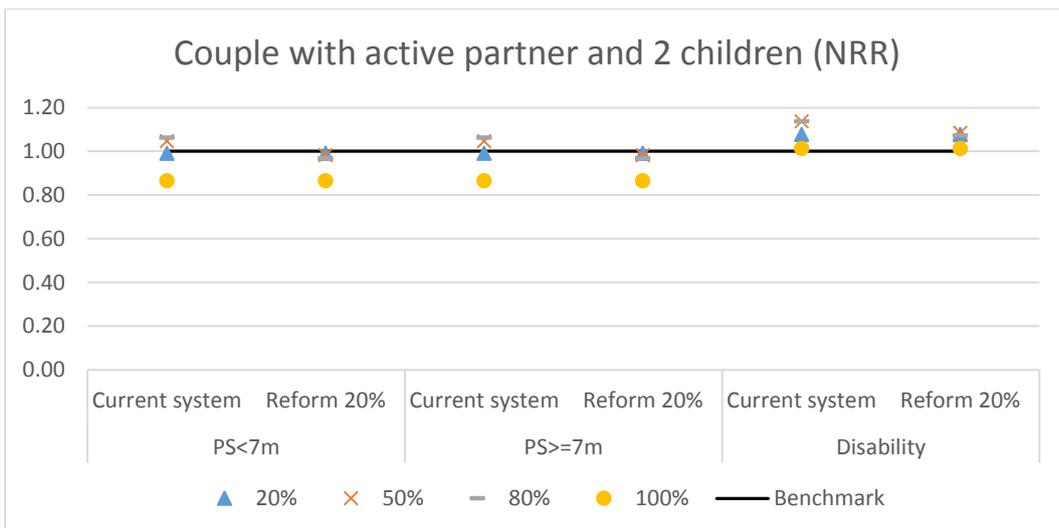
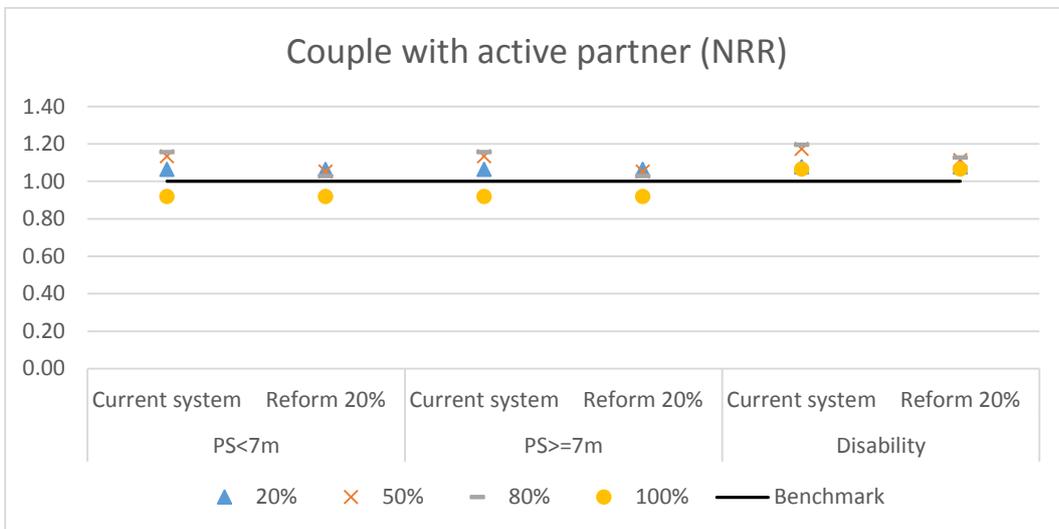
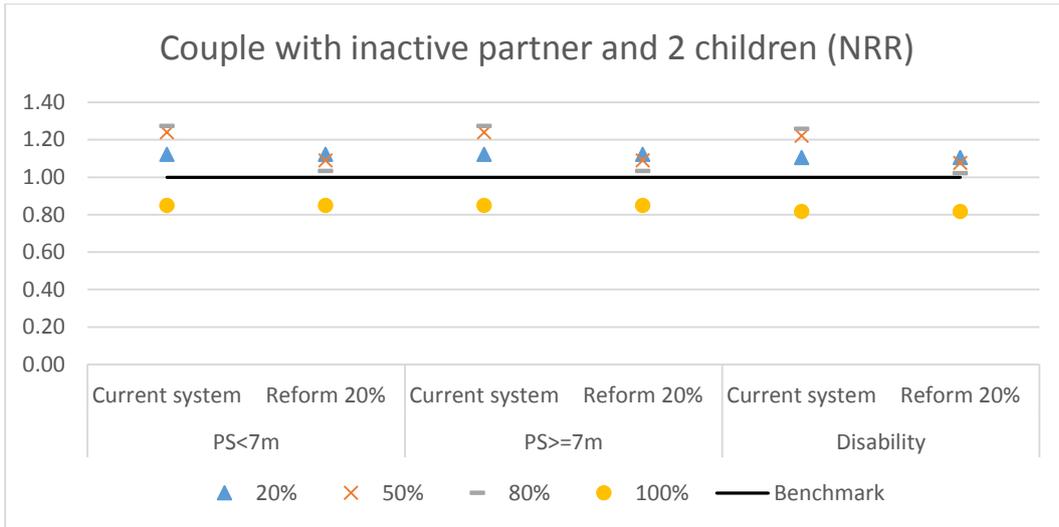




Source: own calculations using MOTYFF 2016.

**A.3 NRR when going back to work at a minimum wage after a sickness or disability benefit based on an average wage**





Source: own calculations using MOTYFF 2016.