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Towards efficient unemployment insurance in the Netherlands

This paper explores the future of unemployment insurance in the Netherlands against the background of various social and economic trends. It starts by discussing the literature on optimal unemployment insurance. This aims to demonstrate the key trade-offs that the government faces in designing unemployment insurance. The optimal unemployment insurance strikes a balance between the gains from reduced uncertainty and the costs associated with moral hazard effects. The government can adopt a variety of instruments to affect this trade-off, including the level and duration of benefits, saving accounts, firing costs and activation policies. What constitutes the most desirable future for Dutch unemployment insurance depends on circumstances and preferences. Today, the main problem seems the long unemployment spells among particular groups, such as the elderly, the low skilled and non-western immigrants. This calls for measures that improve the incentives to exit unemployment and measures that increase the job-finding probabilities for the unemployed, e.g. through more flexibility in terms of job flows. Activation, monitoring and sanctions may complement these policies. In the longer run, uncertainties are large. We therefore analyze different directions for reform of unemployment insurance in alternative scenarios.

This paper is part of a broader study on the future of the Dutch welfare state that is to appear at the end of 2005 (see <http://www.cpb.nl/eng/research/sector1/projecten.html#welvaartsstaat> for a brief description of that project). That study aims to develop comprehensive scenarios for the future Dutch welfare state. Unemployment insurance will be part of those scenarios.

1 Introduction

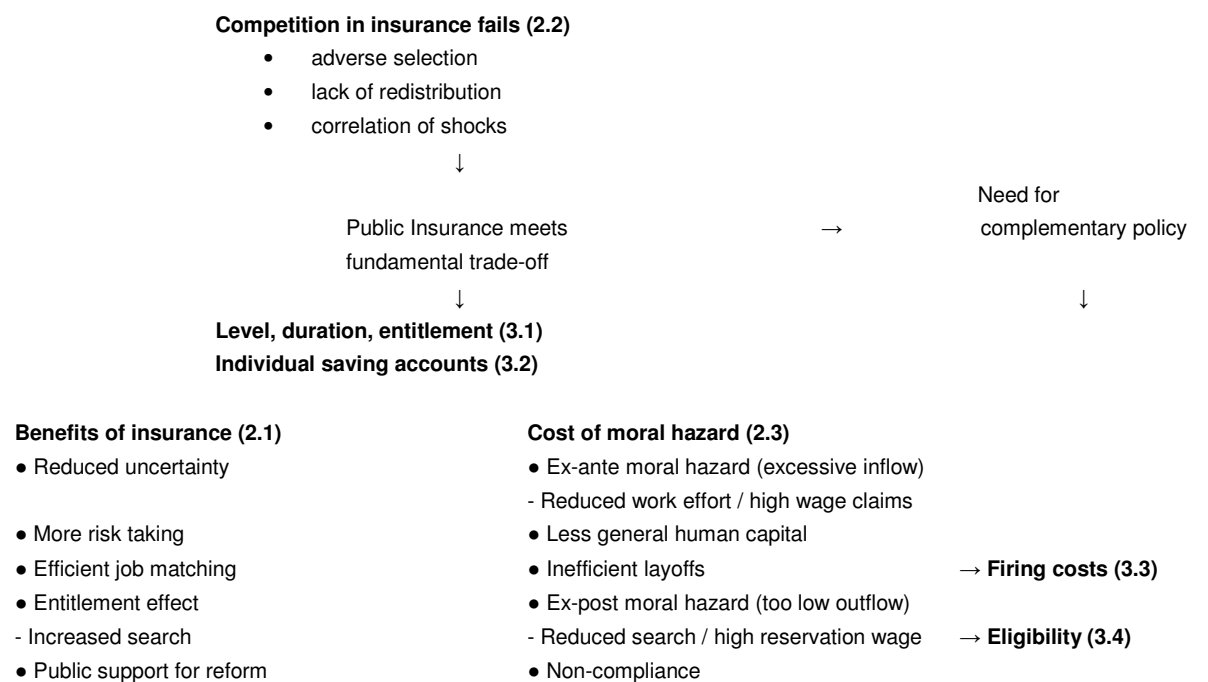
Welfare states in Europe are under pressure. Many countries are in a process of reforming or cutting generous welfare state provisions that were developed during the second half of the previous century. Today's reforms are triggered by trends like aging, internationalization and the growing heterogeneity in European societies. These developments put a strain on the large welfare states and their associated high tax burdens (De Mooij and Tang, 2003). Unemployment insurance does not escape this reform process. To illustrate, the German government recently decided on a considerable reduction in unemployment benefit duration from a maximum of 32 to 18 months. Also the Dutch government has reduced benefit extensions for the elderly in 2003. More recently, it proposed further reforms with respect to entitlement conditions and short-term benefits. These reforms call into question where countries will be heading during the coming decades.

This paper explores the future of unemployment insurance in the Netherlands against the background of various social and economic trends. To that end, we start by discussing the literature on optimal unemployment insurance. This aims to demonstrate the key trade-offs that the government faces in designing its unemployment insurance scheme. It is shown that optimal unemployment insurance strikes a balance between the social gains from reduced uncertainty and the social costs associated with moral hazard effects. The government can adopt a variety of instruments to affect this trade-off. Thereby, it should consider unemployment insurance in connection with other institutions, such as employment protection legislation, welfare benefits and disability insurance. What constitutes the most plausible and most desirable reform in unemployment insurance depends on future circumstances and preferences. As these are surrounded by considerable uncertainty, we analyze alternative directions for reform in different scenarios.

Optimal unemployment insurance contains many issues. To put these into a broad perspective, this introduction starts by briefly reviewing the various components of unemployment insurance (see figure 1.1). This provides a guide for reading this article and may help to better understand the various issues in sections 2 and 3 of this paper. To start on top of figure 1.1, we see that competition in unemployment insurance is unlikely to yield an efficient outcome due to various insurance market failures. This will be discussed in section 2.2. It provides a rationale for government intervention in unemployment insurance. Moving one step down in figure 1.1, we see that the government faces a fundamental trade-off in designing a public unemployment insurance scheme. Indeed, the government needs to trade off the gains from reduced uncertainty (discussed in section 2.1) and the cost associated with moral hazard (discussed in section 2.3). The trade-off materializes in particular with respect to the level and duration of benefits and the entitlement conditions (see section 3.1). Also individual saving accounts do not escape the trade-off, although this system maintains liquidity insurance as well

as (targeted) insurance against low lifetime income (see section 3.2). Moving to the right in figure 1.1, we find complementary policies that aim to combat various types of moral hazard, without reducing insurance. In particular, introducing firing costs through experience rating or employment protection legislation may help to alleviate inefficiencies in layoff decisions. These measures, however, exacerbate moral hazard associated with low outflows by reducing job-finding probabilities (see section 3.3). Eligibility requirements, monitoring and sanctions may combat ex-post moral hazard on the side of the unemployed. Yet, they involve high transaction costs (see section 3.4).

Figure 1.1 A readers guide to the optimal design of unemployment insurance



After having discussed the trade-off in designing the system of unemployment insurance in section 2 and the parameters to affect this trade-off in section 3, section 4 elaborates on the evolution of Dutch unemployment insurance. It first discusses the current system and its historical development. Then, we explore alternative future developments.

2 Costs and benefits of unemployment insurance

2.1 Benefits from insurance

The combination of risk aversion and idiosyncratic shocks in unemployment induces demand for risk pooling. Insurance against the financial consequences of unemployment may therefore yield welfare gains to society.

Reduced uncertainty

Risk aversion implies that people prefer a certain income over a (weighted average of) uncertain income(s), even if the expected value of the uncertain income is higher than that under certainty. Hence, individuals assign a positive value to certainty, a value that rises with the degree of risk aversion. This story holds in particular for the risk of becoming unemployed, which involves a potentially large financial loss.

In principle, individuals can save for unemployment. This, however, is typically less efficient than risk pooling through insurance. The reason is that people that do not lose their job will be inefficiently reducing their current consumption level. Moreover, there are potential capital market imperfections for workers trying to smooth their consumption across unemployment spells. Therefore, unemployment insurance (UI) may raise welfare by filling a missing market for consumption smoothing.

Individuals can also find implicit insurance against unemployment risk in small communities or through family ties. Gifts by relatives or a second income within the family reduce the economic consequences of unemployment risk for a household. Implicit insurance becomes more relevant to the extent that the share of two-earner families in society grows. An alternative way to reduce the risk of (long-term) unemployment is by investing in general skills. Indeed, with more general human capital, someone who is dismissed in a declining sector will feature a higher job-finding probability in booming sectors. Although these forms of self-insurance may help to reduce uncertainty, they may not provide sufficient insurance for all households against unemployment risk. Individualisation, for instance, may call for more explicit insurance as single households cannot benefit from intra-family insurance. Explicit unemployment insurance will therefore directly raise utility for risk-averse households.

Indirect welfare gains

Apart from these direct welfare gains, UI can also yield indirect social benefits by reducing pre-existing distortions in the economy. First, job matching can be inefficient for a number of reasons. For instance, workers may fail to take into account the impact of their individual search behaviour on labour market tightness; or they may not internalize the impact of their job acceptance rate on the quality of jobs created. UI can alleviate such distortions (Diamond, 1981;

Marimon and Zilibrotti, 1999). For instance, Acemoglu and Shimer (1999) show that heterogeneous unemployed individuals searching for work may accept an unsuitable (low productive) job if unemployment is accompanied by a large private cost. This will induce the unemployed to accept an early job offer that comes available, even if it involves a poor match. Unemployment benefits will reduce the private cost of unemployment and, therefore, give the unemployed more time to search for a better job-worker match. This improves the quality of job matching. In turn, it encourages firms to create more productive jobs as the search costs for finding an appropriate employee decline. As a result, UI raises production. More generally, reduced uncertainty may raise productivity by stimulating risk taking, e.g. by encouraging entrepreneurship, innovation and the flexibility of workers (Sinn, 1996).

Secondly, UI can reduce pre-existing labour-supply distortions, e.g. because of distortionary taxation, due to the so-called entitlement effect (Mortenson, 1977). In particular, not all workers or unemployed job seekers are entitled to unemployment benefits. Entitlement is usually restricted to people with a sufficient record of contributions from work, while benefits are provided only for a limited duration. The unemployed who are not entitled to UI choose between voluntary non-participation and searching for work. Unemployment benefits will encourage search because employment would make them entitled to benefits in case of a future job layoff. In a sense, entitlement to (high) unemployment benefits increases the value of being employed compared to be voluntarily outside the labour market. Increased search will raise effective labour supply and increase welfare in the presence of labour supply distortions.

Finally, UI may remove obstacles for efficiency-enhancing policies. Various policies aim at raising economic growth by stimulating innovation, competition and the flexibility of the labour market. Without unemployment benefits, there may be little public support for such policies. The reason is that a more dynamic economy is accompanied by higher job flows. Hence, workers bear a higher risk of becoming unemployed. This hurts the interest of insiders. Therefore, they can block reforms that aim at promoting flexibility. By protecting individuals against the adverse financial implications of a job layoff, UI improves the legitimacy of a dynamic market economy and thus supports efficiency-enhancing policies.

2.2 Market failures and the need for government intervention

That insurance is welfare improving does not immediately justify social insurance organized by the state. Competition among insurers can be attractive to improve the efficiency of the insurance market. In particular, compared to a public monopoly, competition among insurers provides better incentives to avoid X-inefficiencies in administrations, thereby leading to more stringent claim assessments and better monitoring. Competing insurers also face stronger

incentives to combat moral hazard.¹ Moreover, competition enables firms to engage in international risk sharing. The increasing integration of European capital markets allows for more international risk sharing, which helps stabilizing European economies in case of asymmetric shocks (Teulings, 1999). However, the insurance market tends to fail due to adverse selection and the correlation of risks. Moreover, the market is unable to yield redistribution. Therefore, we usually find that UI is organized by the state.² This section elaborates on the various market failures in more detail.

Adverse selection

Without regulation, the free market is unlikely to provide sufficient insurance against the risk of unemployment. One reason is adverse selection: some individuals face a higher probability of becoming unemployed than others. If unemployment risk depends on non-verifiable characteristics of individuals and information about these characteristics is asymmetric, workers will self-select themselves. In particular, workers who know that they face a low risk will exit the insurance as the private gains do not outweigh the private costs. Hence, only high-risk workers will demand insurance. This calls for higher premiums compared to a system with complete risk pooling. The increased premium will further drive out the relatively low risk workers in the remaining insurance pool. Through this process of self-selection, the private market will ultimately break down and no insurance is supplied.

The government can prevent adverse selection by requiring mandatory insurance of all employees. In that case, however, competing insurance companies can still try to exploit the selection mechanism, e.g. by offering different packages of premiums and own risk. The low risk types will choose a low premium with a high own risk, while the high risk types will choose a high premium with a small own risk. As long as such scheme is incentive compatible, it may yield a stable separating equilibrium. However, the low-risk types will only receive partial insurance as they have to bear a substantial own risk. Adverse selection thus results in underinsurance.

Redistribution

To the extent that risk profiles depend on verifiable characteristics, private insurance companies would be able to solve the asymmetric information problem. In particular, insurers can differentiate premiums according to observable characteristics that are correlated with the unemployment risk, e.g. educational attainment, the sector where someone is employed,

¹ Compared to a public monopoly, competing insurers have better incentives to avoid so-called type II errors, which occur if people not eligible for benefits nevertheless receive them. Competition increases, however, the probability of type I errors, which occur if people eligible for benefits do not receive them.

² In some countries, private insurance against unemployment risk arises from mortgage protection insurance. The interest payments on mortgage loans are then insured during a period of unemployment. This type of insurance, however, only applies to owner-occupiers. This tends to be a group of good risks, receiving relatively high incomes. Hence, a selection process has already occurred. For a discussion, see Beenstock and Brasse (1986).

ethnicity, disability, unemployment history, etc. Yet, this separating equilibrium would cause low-skilled workers paying higher premiums than high-skilled workers, as the former typically face a higher unemployment risk. This runs counter to distributional concerns. Indeed, an important reason for public UI is that it redistributes resources across households, with agents with little human capital obtaining resources from agents with abundant human capital. Hence, UI is not only used for efficiency reasons (i.e. obtaining the benefits from risk pooling), but also for equity reasons (ex-ante redistribution). This role of public insurance is not undisputed. Indeed, the government could obtain these distributional goals through other instruments as well, such as the tax-benefit system. However, if the government lacks more direct verifiable information about who has the highest human capital risk, it may find it efficient to use uniform UI premiums for redistribution.

The government can alternatively obtain redistribution by making insurance compulsory, requiring insurance companies to set uniform premiums, and to impose mandatory acceptance rules.³ In a sense, the government then prohibits the use of information about individual characteristics to differentiate premiums. Yet, insurance companies may still find alternative ways to select good risks. Some companies would then end up with many bad risks and some with many good risks. To avoid this, there should be explicit transfers between insurance companies with many good risks towards insurance companies with many bad risks. However, this requires verifiable information on the characteristics of the good and bad risks. If this verifiable information is not available, preventing selection is difficult in a market with competing insurance companies.

Correlated risks

Unemployment risks are correlated as they depend on the business cycle. This renders execution by private companies problematic. As the premiums paid by the employed will not always cover the benefits received by laid off workers, private insurance companies may not be able to meet their commitments at all times. This holds, for instance, during a recession when the number of job layoffs increases dramatically. Private insurance companies can then go bankrupt. If the public sector provides a bail-out to avoid unacceptable implications for the unemployed, this introduces a moral hazard problem on the side of the insurance companies.

The public sector can always meet its obligations because it can use force. In particular, it can force people to finance public deficits, e.g. by raising taxes. Moreover, the government can engage in intertemporal risk sharing. Thus, it can run into a deficit during a recession, while during a boom it creates a surplus in the unemployment account. The unemployment premium can then remain fixed and the unemployment account acts as an automatic stabilizer for the

³ Moral hazard with means tested social assistance could occur if UI were not mandatory. Indeed, the role of the public sector as insurer of last resort may induce individuals to buy too little insurance. Moreover, myopic agents may make wrong decisions by not realizing the benefits from unemployment insurance. The risk of underinsurance gives a rationale for mandatory insurance.

economy.⁴ This provides an advantage compared to private insurance. Private firms would need to accumulate substantial buffers in order to be prepared for the benefit payments during a negative macroeconomic shock.⁵

Another argument for social insurance is that the government can affect aggregate unemployment through its macroeconomic and microeconomic policies. In contrast, with international risk sharing under private insurance, governments face less incentives to keep unemployment low since adverse shocks will be absorbed by foreigners via the capital market. This involves a form of moral hazard on the part of the government. Public insurance organized by national states does not suffer from this type of moral hazard.

Exclusivity

While adverse selection results in underinsurance, moral hazard – to be discussed in the next section – typically results in overinsurance as long as exclusivity is not enforced. In particular, the government insures human capital risk through other schemes as well, such as social assistance programmes and redistributive taxation. If private companies provide insurance against related human capital risks, they can shift some of the costs of moral hazard unto the public insurance. For instance, the private insurance companies may shift the incidence of the unemployment risk unto the collective pool if their clients are protected by social welfare programmes. To prevent shifting risks from one insurance to another, it is efficient to put all insurances in one hand (Pauly, 1974). Indeed, if only one insurer is responsible for containing moral hazard, this insurer faces appropriate incentives to prevent excessive moral hazard. The insurance contract will thus strike an optimal balance between insurance and incentives to combat moral hazard.

The problem of overinsurance also potentially applies to disability insurance, which is often related to unemployment. In particular, if disability insurance would become private, competing insurance companies have incentives to shift people to welfare schemes or social UI. Exclusivity would mitigate these problems as the incentive for risk shifting disappears.

2.3 Cost of insurance: moral hazard

The flip side of the coin of any type of insurance is moral hazard. Although this applies to public and private insurance alike, moral hazard is typically more important under public insurance. This section discusses various forms of moral hazard associated with public unemployment insurance. These forms of moral hazard can be characterized as externalities: individual economic agents fail to take into account the welfare implications of their behaviour

⁴ If the systematic component of the unemployment risk can be separated, the idiosyncratic risk component could potentially be insured on the private market.

⁵ The creation of such buffers would also affect the intergenerational distribution as future generations would gain at the expense of current working generations who have to create these buffers.

on others. Moral hazard in UI typically causes a too high level of unemployment, too many benefit recipients and too little production.

Inefficient layoff decisions

With zero firing costs, firms do not take into account the cost of UI in deciding about a job separation. Indeed, unemployment benefits are paid from general premiums. Therefore, a layoff imposes an external cost on others that firms do not incorporate in their layoff decision. As a result, firms too easily use UI as an exit route for redundant workers (Blanchard and Tirole, 2004). Feldstein (1976) shows that inefficient layoff decisions are particularly important in the US where temporary job layoffs constitute a major share in UI schemes (see further below). If firms would internalize the external cost of a job layoff, they would put more efforts to prevent this so that inflows into unemployment would fall. For instance, firms could invest in their employees by means of training or (re-)schooling in order to raise their productivity. Moreover, they could undertake economic activities during low-peak seasons so as to prevent temporary layoffs.

Underinvestment in general human capital

Ex-ante, unemployment benefits may induce workers to shirk on the job since it makes a dismissal less costly. For the same reason, people may reduce investments in general skills as an alternative insurance device against the risk of long spells of unemployment. Thus, UI reduces the job finding probabilities of workers in other sectors, thereby increasing unemployment spells. If general human capital becomes more important, e.g. in a more dynamic economy with higher job mobility, this form of moral hazard makes UI more costly.

Tax distortions

Social unemployment benefits are usually financed by insurance premiums that take the form of payroll taxes paid by employers and employees. As these premiums are uniform, the schemes contain an important component of risk solidarity. Indeed, high-risk agents pay the same premium as low-risk agents. As a consequence, the value of the insurance rights exceeds the actuarial premium for the high-risk agents, which especially involves the low skilled. This induces an entitlement effect: it makes labour supply more attractive for the low skilled since entitlement to unemployment benefits raises the value of a job. For low-risk agents, however, cross subsidies from high skilled to low skilled workers give the insurance premium the character of a tax. Indeed, the value of insurance rights for low-risk agents is smaller than the premium paid. Like other taxes on income, the UI premiums therefore distort labour supply of high-skilled workers. Empirical evidence reveals that especially labour supply of women is responsive to financial incentives, while men respond only mildly in their hours worked (see e.g. Jongen and Van Vuuren, 2004, for an overview).

Unemployment benefits in general equilibrium

Using the MIMIC model, we explore the labour-market impact of a 10%-point reduction in unemployment benefits in a general equilibrium context for the Netherlands. We consider a simulation in which we also reduce welfare benefits to the unemployed that are obliged to search for work.

MIMIC contains various mechanisms through which the replacement rate affects the labour market (Graafland et al., 2001). For instance, the benefit level affects the outcome of wage negotiations, whereby the elasticity is drawn from Graafland and Huizinga (1999). Moreover, the model contains search behaviour of the unemployed and models the reservation wage in a job matching framework. Through these channels, unemployment benefits exert additional effects on the labour market (see more about search distortions below). Also labour supply distortions induced by unemployment premiums are captured by the model. MIMIC, however, does not contain endogenous layoff decisions, the incentives on human capital accumulation and risk taking, the entitlement effect, and compliance issues.

The table below shows the simulation results. We assume that lower benefits save on public expenditures and thus improve the government budget. We see that employment expands by 0.5% and unemployment falls by 0.38% of the labour force. The average replacement rate drops by 4.14%. This suggests a semi-elasticity of unemployment with respect to the replacement rate of 0.09. This elasticity is slightly smaller than the aggregate reduced-form elasticity found by Layard et al. (1991). Using a panel of countries between 1983 and 1989, they report that a 1%-point higher replacement rate raises the unemployment rate by 0.17%-point. Using a slightly longer time frame, Scarpetta et al. (1996) find a smaller elasticity of 0.13.

Note that lower benefits create a social cost in terms of less solidarity. In a dynamic sense, however, lower benefit levels may also increase welfare for a number of unemployed individuals since it increases job opportunities (Bovenberg et al., 2000). Yet, these welfare gains will not apply to those suffering from long spells of unemployment.

Effects of a 10%-point reduction in unemployment benefits in the Netherlands according to MIMIC

	Relative changes
Wages	- 0.39
Employment	0.50
Labour supply	0.03
	Absolute changes
Unemployment rate	- 0.38
Net average replacement rate	- 4.14
Government budget in % NNI	0.34

Source: own calculations with MIMIC

Excessive wage claims

Labour market imperfections arise if employees have market power in determining wages.

Unemployment benefits can exacerbate these imperfections by strengthening the bargaining position of workers (or trade unions) in wage negotiations. Indeed, high benefits improve the reservation wage of workers in wage negotiations. As a result, they increase wages and the rate of unemployment.

Empirical evidence on the impact of replacement rates on wages confirm this mechanism. For instance, Van der Horst (2003) finds significant effects of replacement rates on wages and unemployment for France, the Netherlands and the UK. In an earlier study for the Netherlands, Graafland and Huizinga (1999) show that the impact of the replacement rate on wages is correlated with the level of unemployment. In particular, if the unemployment rate is high, the level of unemployment benefits is important for wages. The reason is that workers face a high chance of being laid off while the unemployed find it difficult to get a job. Hence, the outside option depends more on unemployment benefits and less on the market wage. If the unemployment rate is low, wages respond only little to changes in the replacement rate. On average over the sample period 1965-1993, the estimates by Graafland and Huizinga suggest a wage elasticity of the replacement rate of 0.2. The estimates form the basis for the calibration of CPB's applied CGE model for the Dutch labour market (see Box "Unemployment benefits in general equilibrium"). Kranendonk (2004) adopts a similar approach, using more recent data for the Netherlands. His elasticity of the replacement rate ranges between 0.1 in the early 1970s (when unemployment was low) and 0.5 in the late 1980s (when unemployment was high). On average over the sample 1970-2002, he reports an elasticity of 0.28.

Reduced search

Ex-post moral hazard occurs if the unemployed face little incentives to search for a new job or to accept job offers. Job search models in the tradition of Mortenson (1977) reveal that higher unemployment benefits indeed tend to raise the reservation wage of the unemployed, thereby reducing exit rates out of unemployment and causing longer unemployment duration. Long unemployment duration is especially bad if human capital depreciates more quickly over the unemployment spell.

Empirical evidence confirms the impact of UI on unemployment duration for a number of countries. Yet, there is little agreement about the magnitude of the effect. Layard et al. (1991), for instance, report that an increase in the benefit level by 1% raises unemployment duration by between 0.2 and 0.9%. Atkinson and Micklewright (1991) note, however, that the findings from the empirical literature are far from robust, while the size of the effect seems relatively modest. In a more recent survey, Krueger and Meyer (2002) conclude that an elasticity of unemployment duration with respect to the benefit level of 0.5 represents a reasonable summary estimate of the literature. Earlier studies for the Netherlands with data for the 1980s suggest no significant impact of changing benefit levels on unemployment duration (Van den Berg, 1990). In analyzing the impact of sanctions in unemployment benefits, however, Abbring et al. (2000) argue that it is unlikely that there has been no such impact in the 1990s.

Overall, our reading of the literature is that benefit levels do affect unemployment duration, but that the magnitude of the effect is surrounded by considerable uncertainty.

Non-compliance

A form of moral hazard that is closely related to job search is abuse or fraud. UI is designed to cover the income loss of individuals who experience the bad luck of a job separation. To be eligible for benefits, people should “not only be out of work, but also be able to enter work at short notice and undertake active steps to find work” (ILO/OECD definition). Hence, UI is not meant for individuals who voluntarily quit their job. However, governments are often unable to distinguish between voluntary and involuntary unemployment. This opens opportunities for individuals who voluntarily quit their job to collect unemployment benefits, despite that they do not meet the eligibility criteria (type II error). Especially in modern labour markets, characterized by heterogeneous jobs and flexible work patterns and life cycles, it is increasingly difficult to distinguish between voluntarily job quits and involuntary layoffs. For instance, flexible workers may occupy different jobs with fixed term contracts. After finishing such a job, they may be discouraged to accept another if they receive generous unemployment benefits instead. Also dismissed older workers may collect unemployment benefits without being available for work on the labour market. These forms of moral hazard raise the costs and hurt the legitimacy of UI.

Surveys on non-compliance in the Netherlands suggest that it is important. Indeed, 25% of the unemployed in the Netherlands undertake too few job applications while 15% fails to accept suitable job offers (Verkoren et al., 2002). Empirical studies for the US suggest that a high benefit level attracts more people to the unemployment scheme. In particular, on the basis of a literature review Krueger and Meyer (2002) show that, conditional on unemployment or a job separation, the level of unemployment benefits raises the frequency of UI claims. They conclude that an elasticity of 0.5 is a reasonable summary of the available evidence. This is consistent with more voluntarily job quitters claiming unemployment benefits if benefit levels increase.⁶

3 Designing an optimal unemployment insurance scheme

A proper welfare analysis of UI requires a unified treatment of all the insurance benefits and all the adverse incentive effects induced by the various moral hazard problems. Moreover, it should ideally consider all the institutional features in optimizing the scheme, and include all possible general equilibrium effects induced by these institutions. There is no model capturing all possible mechanisms and instruments, however. Yet, a number of studies have focused on the most important trade-offs in case of separate features of the UI scheme and particular incentive effects. This section discusses this literature by analyzing four parameters in the

⁶ Alternatively, high benefits may induce individuals to search for work in order to meet the eligibility requirements for receiving benefits

system of UI.⁷ These include (i) the benefit level and duration; (ii) compulsory saving accounts; (iii) firing costs; and (iv) monitoring and sanctions.

3.1 Level and duration of benefits

The trade-off between insurance and incentives applies in particular to the key parameters in UI schemes, namely the level and duration of benefits. Moreover, the entitlement conditions also meet this trade-off, especially for particular groups of workers.

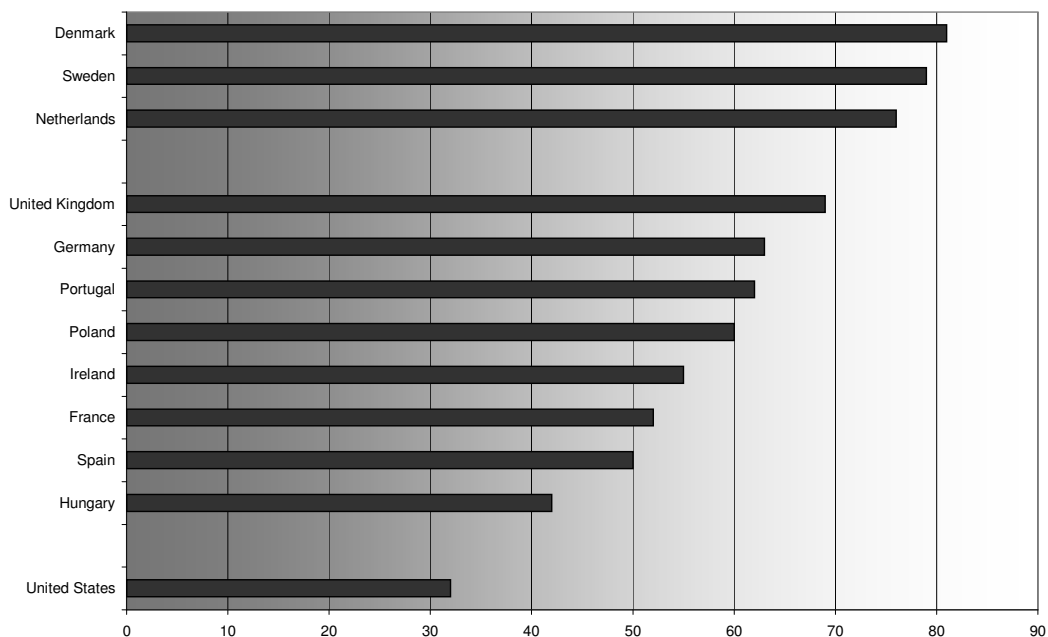
Optimal level

If there were no moral hazard or transaction costs, full insurance against unemployment risk would be optimal. In that case, the optimal replacement rate is 100% (thereby taking into account the value of leisure, other costs of work, and other benefits of work). In practice, however, various forms of moral hazard cannot be avoided. This renders it optimal to provide less than full insurance. A replacement rate below 100% implies, for instance, that workers face better incentives to avoid unemployment by increasing work effort and bidding for lower wages. Moreover, it raises the exit rates out of unemployment by stimulating the search effort of the unemployed and making them less reluctant to accept job offers. Indeed, the empirical evidence discussed above reveals that the level of unemployment benefits raises the unemployment rate.

The optimal level of unemployment benefits thus strikes a balance between the gains from insurance and the incentives to reduce moral hazard. The optimal balance depends, among others, on the degree of risk aversion, the leisure value of unemployment, and the magnitude of the incentive effects induced by unemployment benefits. Using a stylized search-matching model, Holmlund (1998) suggests that the optimal replacement rate would be around 60% for high values of risk aversion and around 50% for lower values. Using a similar approach, Gruber (1997) argues that current benefit levels are only optimal for implausibly high values of relative risk aversion. Note that these calculations focus on the efficiency aspects of UI alone. If value of (ex-ante) redistribution from people with abundant human capital (low risk) to those with little human capital (high risk) matters for the optimal balance, then higher benefit levels may be optimal. Hence, the optimal replacement rate in society will differ across individuals, across countries and across time, depending on circumstances and preferences. In most OECD countries, the unemployment benefit level lies broadly between 50% and 90% of the last earned wage. Figure 3.1 reveals that benefit replacement rates are relatively high in Scandinavian countries and relatively low in the US. Other EU countries take an intermediate position. Across time, OECD (2002a) reports that between 1960 and 1995, the average gross replacement rate in the OECD has more or less doubled.

⁷ See also Holmlund (1998), Fredriksson and Holmlund (2003) and Van Ours (2003) for recent overviews.

Figure 3.1 Net replacement rates in a selection of OECD countries, 1999



Source: Benefits and Wages – OECD Indicators, 2002

Optimal sequencing

Shavell and Weiss (1979) were among the first to formalize the trade-off between the traditional benefits of insurance and the moral hazard effects associated with lower job search intensity by the unemployed. They show that it is optimal for unemployment benefits to decline over the spell of unemployment. In particular, declining benefits provide better incentives for the unemployed entitled to benefits to increase their search effort and to reduce their reservation wage. That reservation wages fall and exit rates rise when unemployment benefits approach their expiry date is supported by ample empirical studies using micro data (for a review of the international literature, see Holmlund, 1998). Recently, Lalive and Zweimuller (2004) find that the increase in unemployment benefit duration in Austria from 30 to 209 weeks has reduced the transition rate into work by 17%, and increased unemployment duration by 9 weeks. For the Netherlands, Lindeboom and Theeuwes (1993) report a strong impact of benefit duration on exit rates in the early 1980s: a reduction in benefit duration by 1 week reduces unemployment duration by 1.3 weeks. Also cross-country evidence suggests that benefit duration raises the rate of unemployment (Layard et al., 1991; Nickel and Layard, 1999; Nickel et al., 2002; De Groot et al., 2004).

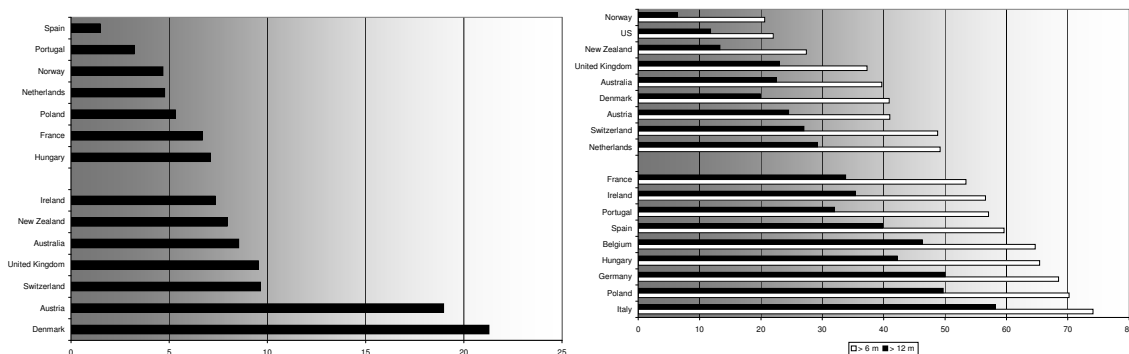
The optimality of monotonically declining unemployment benefits has been largely accepted among economists, although some studies have put qualifications on the result. In particular, the optimality result originates from models that emphasise ex-post moral hazard, i.e. adverse incentives on the unemployed to exit unemployment. Models concentrating on ex-ante

moral hazard, causing excessive inflows, arrive at different conclusions. For instance, Wang and Williamson (1996) include work effort in the Shavell-Weiss framework as an endogenous variable affecting the probability of workers to be laid off. In this setting, it is no longer optimal to have monotonically declining unemployment benefits. Instead, it is optimal to set low unemployment benefits in the period just after the job layoff since this encourages workers to increase their work effort so as to prevent unemployment. Cahuc and Lehmann (1997) add another argument for non-declining unemployment benefits by allowing for endogenous wage setting in a trade-union framework. In their model, the benefit level of the short term unemployed is relevant for the threat point of the trade union and, therefore, for wage pressure. A declining time sequence that favours the short-term unemployed is less attractive in this model because it raises wages compared to a flat unemployment benefit scheme. Fredriksson and Holmlund (2001), however, show that for plausible parameters, this latter effect is unlikely to dominate the impact via the search behaviour of the unemployed. Moreover, they add that high unemployment benefits during the early stage of unemployment increases the search effort among those unemployed who are currently not entitled to UI.

The qualifications may overturn the optimality of declining benefit levels over the unemployment spell if ex-ante moral hazard would be more important than ex-post moral hazard.⁸ This would be the case if the problem with unemployment benefits is primarily associated with excessive inflows, rather than with too small outflows. High inflows do not seem to be the major problem in most EU countries, including the Netherlands. In particular, European countries featuring the highest inflows generally face lower unemployment rates (the correlation coefficient between inflows and the unemployment rate equals -0.24 for 14 OECD countries). For instance, the right-hand side of figure 3.2 shows that the Anglo-Saxon countries typically have relatively high inflows into UI but low unemployment rates, while the Southern European countries have relatively low inflows but a high rate. As a result, inflows are negatively correlated with unemployment duration (the correlation coefficient between inflows and the share of long-term unemployment is -0.23). Hence, the high incidence of long-term unemployment in many European countries (see the left-hand side of figure 3.2) suggests that the main problem is due to small outflows rather than due to high inflows. Indeed, while inflows into unemployment in Southern Europe is the lowest, unemployment duration is among the highest. If moral hazard particularly refers to low outflows, the optimality of declining benefit levels seems to apply in particular to Europe.

⁸ The qualifications suggest that a penalty payment on entry into unemployment may be an attractive supplement to the benefit scheme to combat ex-ante moral hazard. It could take the form of a waiting period before unemployment benefits are paid out. Such a penalty discourages shirking and moderates wage claims by reducing the bargaining position of workers. Moreover, a waiting period could save on fixed administration costs of UI by reducing the inflow of temporary layoffs into the benefit scheme.

Figure 3.2 Share of long-term unemployment in % of total unemployment (right) in 2003, and inflow into UI in % of the labour force (left), average for the period 2000 - 2002



Source: OECD Employment Outlook 2004

Although the qualitative result regarding declining benefits over the unemployment spell is well established, it is more difficult to specify the optimal time profile. It depends on the incentive effects of the benefits during different phases of the unemployment spell: a steep reduction in benefits will impose stronger incentives to leave unemployment. However, it also implies less insurance for people who are unable to find work within a short period. A reform towards declining unemployment benefits in France reveals that the incentive effects may not improve if benefit reductions are imposed only gradually. Indeed, sharp reductions seem more effective in raising exit rates from unemployment than gradually declining benefit schemes (see Ministry of Social Affairs and Employment, 2004).

Most OECD countries adopt a declining sequencing of benefits. In particular, UI is usually of limited duration, after which the unemployed have to rely on welfare benefits. These are usually lower than unemployment benefits, are unrelated to the last earned wage, and means tested on household income. The duration of UI differs among countries. It ranges from 6 months in the US to an unlimited duration in Belgium.⁹

Entitlement conditions¹⁰

An issue closely related to the level and duration of unemployment benefits is entitlement conditions. In principle, it is desirable to insure all individuals against the risk of unemployment, even if they have a short unemployment history. Yet, if monitoring and verification of claims is costly, this would allow for substantial abuse of the insurance by workers who voluntarily quit their job after a short period of employment or by firms who lay off workers during low-peak seasons. To reduce such inflows, governments usually adopt

⁹ Note that there is an extended benefit program in the US, extending the potential duration of benefits up to 13 weeks when aggregate unemployment rises, i.e. during a recession.

¹⁰ *Entitlement* conditions restrict the inflow into unemployment schemes, usually by requiring a sufficient record of contributions from work. Hence, it focuses on regulating inflows. In contrast, *eligibility* conditions focus on encouraging outflows from unemployment by restricting benefits to unemployed who actively search for work and who meet several administrative requirements, see Grubb (2000) for a discussion.

conditions in which entitlement depends on employment history, e.g. the number of years in employment, or the number of working days during the year before the job separation. More stringent entitlement conditions combat this form of moral hazard and thus reduce the inflow into unemployment. However, it also implies less insurance for individuals with a short employment record, which especially concerns young people. Hence, entitlement conditions meet the same trade-off between insurance and incentives, albeit for more specific groups.

Summing up

Long unemployment duration and small inflows suggest that ex-post moral hazard (too small outflows) is a more important problem in many European countries than ex-ante moral hazard (too high inflows). Under these circumstances, unemployment benefits that decline over the spell of unemployment then tend to be optimal. Declining benefits provide incentives to exit unemployment so that unemployment duration falls. Empirical evidence finds a robust effect of benefit duration on the level and duration of unemployment. The benefit level tends to be positively correlated with unemployment as well.

3.2 Saving versus insurance

An alternative way to improve incentives is by giving households more responsibility for financing unemployment benefits. To that end, insurance can partially be replaced by individual savings. Although this does not escape the trade-off between insurance and incentives, it maintains some important benefits from insurance.

Individual saving accounts

With individual saving accounts – applied in for instance Singapore – part of the UI premium is replaced by a mandatory contribution that is credited to an individual public saving account on which a person receives interest. During a period of unemployment, individuals are allowed to collect funds from the account for consumption. If a person is short of funds, it can borrow from the government at the same interest rate. Thus, the saving account provides liquidity insurance, which is important in the presence of capital market imperfections. Indeed, people are usually unable to borrow against future earnings. Individuals who end up with a positive account at the end of their working life are allowed to increase their pensions or transfer it to relatives. Individuals will be bailed out if they end up with a negative account at their pension age or when they die. This latter involves insurance against the risk of low lifetime income. It implies that a tax-financed share of social insurance remains necessary when a system of

individual accounts is introduced. The mandatory character of savings is necessary to combat moral hazard with the public bail out.¹¹

Efficiency gains from saving accounts

If the unemployed have to finance their consumption during unemployment from their own saving account, they face better incentives to search for work, accept a job and move back into employment. Indeed, the unemployed completely internalize the cost of unemployment benefits and have no incentive to increase in an inefficient way the frequency or duration of unemployment spells. Moreover, by introducing an actuarial link between premiums and the exclusive individual rights to withdraw money from the account, the system does not necessarily cause disincentives to labour supply.¹² The bail out of those with a negative balance, however, maintains the moral hazard problem with the group that relies on public support. Indeed, these individuals face little incentive to find work as additional unemployment has no personal cost.

Compared to social insurance, individual saving accounts provide more efficient liquidity insurance. Indeed, it is typically more efficient to remove capital market imperfections (or undersavings due to hyperbolic discounting) through compulsory savings and loans than via redistribution that requires distortionary taxes.¹³ Moreover, individual saving accounts maintain a targeted form of insurance against low lifetime income due to unemployment. This improves efficiency compared to social insurance. The reason is that the government no longer redistributes among individuals with high lifetime incomes, which is largely a form of income smoothing via the public budget. Indeed, those who become temporarily unemployed have to rely on their individual accounts rather than on social insurance. Hence, public redistribution is reduced and tax distortions are lowered. Intuitively, exploiting information about lifetime income is efficiency improving since these incomes are more equally distributed than annual incomes are. Indeed, Nelissen (1998) finds that lifetime income in the Netherlands is 35% less unequally distributed than annual income (as measured by the Theil coefficient). This is similar to what has been found for other countries. This more equal distribution of lifetime income opens the opportunity for a reduction in public redistribution and a lower tax burden, without decreasing the protection for those with low lifetime incomes.

One problem with individual saving accounts is that agents who may be bailed out face worse incentives to exit unemployment than under social insurance. Indeed, targeting support to

¹¹ Benefit duration in the Netherlands increases with employment history. This reflects a kind of saving component in the unemployment scheme: the longer someone has paid premiums, the longer he/she can claim benefits in the event of unemployment. An important difference with saving accounts is that there is no opportunity for workers to claim funds without being unemployed.

¹² Because of the mandatory character of saving accounts, labour supply incentives may still be distorted if people are forced to save more than they would voluntarily do.

¹³ This argument is similar to the efficiency gains associated with a switch from transfers to loans to students, see e.g. Jacobs and Canton (2003).

this group involves a very high marginal tax rate on wage income for these people. This illustrates a fundamental trade-off: targeting support to specific groups reduces moral hazard with the majority of the population, but exacerbates moral hazard with the targeted group. To remove this latter form of hazard, strict monitoring and sanctions are necessary to complement targeted policies.

Distributional effects of saving accounts

Bovenberg and Sorensen (2003) find that the introduction of individual saving accounts can be a Pareto improving policy. Their model contains three types of agents, and sufficient instruments to compensate households that would possibly suffer from the introduction of saving accounts. If heterogeneity becomes larger and the number of instruments is limited, however, it is unlikely that the system of individual saving accounts can prevent losses in lifetime income for all individuals.

A key parameter for the distributional impact of individual saving accounts is the mandatory contribution rate (and the maximum required account balance when applicable). If the contribution rate is low, most people who suffer from unemployment will end up with a negative balance at the end of their career. Hence, they will be bailed out and their unemployment benefits have to be financed by a relatively high insurance tax. If the mandatory premium is high, people are more likely to end up with a positive balance. Accordingly, the number of people receiving a bailout becomes smaller and the insurance tax can fall. As long as we abstract from (i) the positive implications of behavioural responses on the insurance tax and (ii) benefit levels are not cut, the sum of the insurance tax and the mandatory contribution rate always exceeds the insurance premium under a social system.¹⁴ This has implications for the distribution of income. In particular, individuals with a negative balance suffer from a lower lifetime income, despite the bailout. The reason is that they have paid higher contributions to the saving account during work, but do not benefit from this in the form higher pensions. Indeed, these savings have been used to cover the unemployment benefits.¹⁵ Also some people with a positive balance will suffer from lower lifetime incomes. In particular, the net present value of premiums under the new system (tax plus contribution) will always exceed the contributions under the old system (where premiums are lower). As unemployment benefits are assumed to be equivalent, the balance in the unemployment account determines whether people

¹⁴ To see this, note that in the social insurance system, the net present value of aggregate future benefit payments equals the net present value of aggregate future premiums. If we abstract from behavioral responses, the net present value of aggregate future benefits would remain unchanged in a system with individual saving accounts. Hence, the sum of the insurance tax and the mandatory saving contribution (in net present value terms) can only be equal to the social insurance premium if all the individual accounts end up with a zero balance. In the presence of heterogeneous households with different unemployment spells, the sum of the insurance tax and the private saving contribution should therefore exceed the social insurance premium. In exploring saving accounts for the Netherlands, Rezwani and Hendrix (2002) consider the same premium as under the social system, but they allow for lower benefit levels instead.

¹⁵ A reduction in unemployment spells, however, can offset these negative implications and make the unemployed better off under a system of individual accounts.

have a higher or lower lifetime income under the system with saving accounts. Hence, people ending up with a small balance due to frequent unemployment spells will suffer from lower lifetime incomes. It benefits people who experience few unemployment spells over their life cycle. They no longer have to cover the benefits to those who now rely on self insurance.¹⁶

Feldstein and Altman (1998) have explored by how much redistribution can be reduced if individual saving accounts were introduced in the US. They compute the share of workers that will end up with a positive saving account at the end of their working life if the contribution rate is fixed at 4% of the wage rate. They find that 95% of all workers can rely on self insurance. The 5% that has to be bailed out collects about half of all unemployment benefits. Hence, the unemployment payroll tax can be halved. Feldstein and Altman do not include the implications of improved incentives to work in their analysis. This could potentially reduce unemployment (duration), thereby allowing for further reductions in the tax. According to the calculations of Feldstein and Altman, the three lowest income quintiles tend to be worse off under the new system, although the average income effects are small. The highest two quintiles experience a net gain.

In analyzing individual saving accounts for Dutch UI, Rezwani and Hendrix (2002) find that almost half of the people in the Netherlands that receive unemployment benefits will have to rely on self insurance. This share is larger than in Feldstein's calculations for the US, where he reports a share of 25% that needs a bailout. This difference can be explained by unemployment being more concentrated among a smaller group of people in the Netherlands. Indeed, De Koning et al. (1998) suggest that 60% of all unemployment benefits in the Netherlands is received by only 10% of the employees. This probably reflects the long unemployment duration, especially among elderly and unskilled workers.¹⁷

As a result, individual saving accounts in the Netherlands will probably allow for a smaller reduction in the insurance tax than in the US.

Excessive savings

Another implication of high mandatory contribution rates is that people are forced to save extra funds during their working life. These additional savings would be efficient if people underinvest initially. If this is not the case, however, savings will be inefficiently high. This

¹⁶ Solidarity can be maintained by imposing a tax on (the return to) positive saving accounts and providing a subsidy to (the cost of) negative saving accounts, see also Orszag and Snower (1997).

¹⁷ Another explanation is repeat unemployment spells, e.g. due to seasonal unemployment or temporary layoffs (i.e. people who are rehired by the same employer). This may apply in particular to some sectors, such as construction and agriculture. In light of the relatively small inflows in the Netherlands, repeat spells do not seem to be the main problem. According to OECD (2002b), it is of more importance in Canada and the US, where respectively 38% and 30% of total unemployment is estimated to be due to temporary lay offs. To compare, temporary layoffs in Denmark and Austria are estimated at 20%, while for Sweden it is only 10%.

makes individual precautionary savings less efficient than risk pooling.¹⁸ Indeed, under the latter regime there is no need to accumulate an inefficiently high stock of capital to cover the potential risk of unemployment. There are two ways to relax the problem of oversavings. First, saving accounts can be applied on top of a basic level of insurance. In that case, social UI is largely maintained at a certain level and duration of benefits. There is no need to allow for negative accounts as long as this minimum is sufficiently high. Individual accounts (mandatory or voluntary) may then provide supplementary benefits.

A second way to relax the problem of oversavings is by integrating unemployment accounts with other saving accounts. For instance, Stiglitz and Yun (2002) suggest an integration of saving accounts for UI and retirement insurance.¹⁹ Integration removes the need for creating a positive unemployment balance at the end of the working life as it can be compensated by the positive balance in the (early) retirement account. In fact, the (early) retirement account acts as collateral for a possibly negative unemployment account. In that case, smaller contribution rates can be used compared to separate accounts for unemployment and retirement. Stiglitz and Yun analyze the optimal share of the tax-funded insurance part of such an integrated system. Typically, a combination of contribution-funded individual savings and tax-funded social insurance is optimal. The tax-funded share is found to decline with the moral hazard effects and to increase with the magnitude of the risk and the degree of risk aversion. Stiglitz and Yun argue that integration with other schemes, such as disability and sickness schemes, is also desirable, unless these risks are perfectly correlated. Moreover, funds might be used for schooling or training, either to prevent unemployment or to increase the job-finding probabilities for the unemployed (see also Orszag and Snower, 1997).

Fölster et al. (2002) further explore the integration of schemes and perform an exercise for Sweden that is similar to what Feldstein and Altman did for the US. Thereby, they include other public schemes such as parental leave, sickness benefits, child benefits and housing subsidies. Moreover, the scheme is integrated with pensions. The system explored by Fölster et al. consists of mandatory individual saving accounts where withdrawals will only be allowed in case of pre-specified events. Fölster et al. assume that the current level of social premiums is maintained and partly transferred into mandatory saving contributions. In the analysis of Fölster et al., 12% of the individuals will have to be bailed out, while 88% is able to provide for self insurance. The system allows for a reduction in the tax rate by 13% points. Some groups that experience a high incidence of unemployment are worse off, however, and suffer from lower pensions.

¹⁸ With perfect capital markets, this inefficiency may be removed as households may borrow funds during their working life, thereby using their mandatory saving account as collateral. The inefficiency therefore depends on capital market imperfections.

¹⁹ The switch towards funding would also cause transitional problems. These can be relaxed if the government controls the accounts. Indeed, the accounts can be notional and funding is no longer necessary as the government can operate the funds on a pay-as-you-go basis.

The example by Fölster et al. illustrates that the major share of social transfers in Sweden involves redistribution among individuals with high lifetime incomes. Indeed, Fölster (2001) finds that only 25% of all social transfers is interpersonal redistribution. The remaining 75% is intrapersonal redistribution and involves income smoothing over an individual's life cycle via social transfer schemes. For the Netherlands, Nelissen (1998) arrives at a similar result. He finds that the system of social security in the Netherlands reduces income inequality (measured by the Theil coefficient) on an annual basis by 45%, but on a lifetime basis by only 15%.²⁰ This suggests that only one third of all redistribution on an annual basis also involves redistribution on a lifetime basis. Regarding UI, Nelissen reports a reduction in the Theil coefficient of 0.9% on an annual basis and 0.3% on a lifetime basis. Again, it suggests that the share of interpersonal redistribution through UI is only one third of the total amount of redistribution in unemployment schemes.

Summing up

Individual saving accounts provide better incentives to avoid moral hazard, but come at the cost of less insurance. The accounts maintain, however, liquidity insurance and protect the income of people with the lowest lifetime incomes. Less risk pooling among people with high lifetime incomes introduces new inefficiencies. For instance, mandatory contributions may cause excessive savings. This can be mitigated by only partially replacing insurance by savings and/or by linking saving accounts for unemployment to other accounts, such as early retirement.

3.3 Incentives for employers

Ex-ante moral hazard on the side of employers leads to excessive inflows into unemployment schemes. There exist two ways to reduce this form of moral hazard: employment protection and experience rating. Reducing inflows via these measures, however, tends to reduce the job-finding probabilities for the unemployed.

Employment protection

The tax character of the insurance premiums implies that there is no direct link between the premiums paid by individual employers and the number of job layoffs they create. This may lead to inefficient lay-off decisions as firms fail to internalize the cost of job layoffs associated with UI. In a stylized benchmark model, Blanchard and Tirole (2004) formalize this argument. They show that it is optimal to impose a layoff tax on firms that fully covers the unemployment benefit of the dismissed worker. Intuitively, by introducing a layoff tax (or requiring severance payments), efficiency in the layoff decision of the firm is improved as it now internalizes the

²⁰ This figure refers to the cohort of 1950 in the analysis of Nelissen. If we take the cohort of 1930, the difference is smaller: lifetime income inequality is then reduced by 30% through the social security system.

costs of UI.²¹ Although Blanchard and Tirole note that the real world deviates from their stylized benchmark model in several ways, it clearly illustrates the main argument in favour of financial incentives to employers to internalize the social costs of layoff decisions.

Severance payments as discussed by Blanchard and Tirole are part of a broader concept of employment protection legislation (EPL). A number of authors have stressed the relationship between EPL and UI. For instance, Pissarides (2001) considers EPL as an alternative form of insurance against the risk of job loss. This is because severance payments and notice periods guarantee a smoother income stream and reduce the risk of layoff. This reduces the need for UI (see the Box ‘Are EPL and UI substitutes?’).

Are EPL and UI substitutes?

Using an overall EPL indicator developed by the OECD, we have computed the correlation of EPL with a summary indicator for the net replacement rate in the 15 older EU countries at the end of the 1990s (see OECD, 2002a and 2004). We find a correlation coefficient of -0.49 . This suggests that EPL and the generosity of UI are substitutes: countries adopting stronger dismissal restrictions have less generous UI programs and vice versa. To illustrate, the Scandinavian countries feature relatively moderate EPL and combine this with generous unemployment benefits. In contrast, Southern European countries have the opposite combination. The combination between EPL and UI is fairly constant across time in most countries. Reforms in EPL that have been implemented were usually limited to new contract types for new hires, rather than for regular workers. Note that the negative relationship between EPL and replacement rates is less robust for the OECD as a whole. Indeed, the correlation coefficient drops to -0.08 if all OECD countries are included in the sample. This is because countries like Australia, Canada and the US combine liberal regimes of EPL with lower than average unemployment benefits. By including not only the benefit replacement rate but also the coverage of unemployment benefits, however, Boeri et al. (2004) report a stronger negative correlation of -0.55 between EPL and benefit generosity.

Many studies have explored whether EPL provides an efficient form of insurance against unemployment risk. On the one hand, by increasing firing costs EPL reduces inflows into unemployment and *ceteris paribus* raises aggregate employment.²² Moreover, by reducing the hold-up problem between workers and firms, it may encourage investments in firm-specific human capital, thereby boosting productivity. This may become more important in a knowledge-based society. On the other hand, by reducing job mobility EPL reduces the incentive for workers to invest in general skills. Hence, whereas EPL raises investment in specific knowledge, it reduces investment in general human capital. This renders the impact on productivity ambiguous. Moreover, increased firing costs makes firms more reluctant to hire new workers since it makes an eventual dismissal more costly. This reduces the job-finding probabilities for the unemployed. Indeed, EPL tends to reduce outflows from unemployment, thereby causing longer unemployment duration and lower aggregate employment. Hence,

²¹ The impact of a layoff tax may differ from severance payment since the former accrues to the government, while the latter accrues to the employee.

²² Calculating the correlation between the indicator for EPL and inflows into UI (see figure 3.2) yields a coefficient of -0.82 .

whereas high and long-lasting unemployment benefits reduce the *incentives* to exit unemployment, EPL reduces the *opportunities* to exit unemployment by protecting insiders against the risk of unemployment. This holds especially for specific vulnerable groups such as ethnic minorities, long-term unemployed, and partially disabled workers. It may also reduce labour supply through the discouraged worker effect, especially of young workers and women who want to (re-)enter the labour market.

Hence, while EPL lowers unemployment by reducing inflows, it raises unemployment by reducing outflows. Overall, the impact of EPL on unemployment is ambiguous. It unambiguously reduces job flows, however. The empirical literature confirms these theoretical notions. It reveals ambiguous results on the impact of EPL on the level of unemployment (Boeri and Jimeno-Serrano, 2003). This impact is not neutral with respect to different groups. Indeed, OECD (2004) finds that EPL increases employment among prime-age men and low-skilled workers, but reduces employment among prime-age women and youth employment. Strict EPL may therefore explain the relatively low participation of women and the high rate of youth unemployment in a number of EU countries. Empirical studies unambiguously reveal that EPL reduces flows on the labour market (Bertola, 1990). This latter causes increased unemployment duration, which exacerbates inequities in life-time incomes.²³ Hence, to the extent that there is a trade-off in protecting workers between EPL and UI, the latter fits better with the need for more mobility and more flexible labour reallocations.

Experience rating

In the US, the UI premiums are characterized by experience rating. It contains a striking similarity with the severance payments discussed above (although premiums do not directly accrue to the laid off workers). In particular, experience rating implies that UI premiums for firms are proportional to the historical number of job separations. Employers thus contribute to the payment of unemployment benefits that they create through their layoff decisions, albeit with a time lag. In a sense, firms thus bear the financial risk of unemployment.

A number of studies have explored the implications of experience rating for the labour market. Millard and Mortensen (1997) show that the replacement of social insurance by experience rating has the same consequences as a combination of increased firing costs and decreased payroll taxes. In principle, this exerts an ambiguous effect on the labour market. Indeed, while lower payroll taxes typically increase employment, an increase in firing costs reduces both job creation and job destruction. The impact of this on unemployment is not a priori clear.²⁴ Yet, it unambiguously raises unemployment duration as increased firing costs

²³ Another effect of EPL is that it strengthens the bargaining position of insiders compared to outsiders. In this way, it raises wage claims and increases unemployment. Moreover, it may affect the inflow in other insurance schemes such as disability that are potentially less costly for firms.

²⁴ As a complement to a fine on job layoffs, one may consider a bonus on job hiring as part of an optimal institutional structure (Mortensen, 1994). Indeed, a bonus can restore the adverse incentive effects on job hiring imposed by firing costs.

benefit insiders at the expense of outsiders. Based on simulations with an efficiency wage model, Albrecht and Vroman (1999) suggest that the combined effect of higher firing costs and lower payroll taxes is likely to be a reduction in unemployment and a rise in production. Recently, Cahuc and Malherbet (2004) support these findings in a model of a typical European labour market that includes firing costs and a minimum wage. Alessi and Bloemen (2003) also report positive effects of the introduction of experience rating on employment in the Netherlands, especially for older workers who face a relatively high probability of being laid off. Alessi and Bloemen also find that experience rating redistributes the cost of UI across sectors since inflows differ substantially.

Empirical studies for the US confirm the favourable impact of experience rating on unemployment. Feldstein (1978) was the first to show this. In particular, in the US not all unemployment benefits are financed by experience rated premiums. Indeed, constraints on firm possibilities to pay the premiums, e.g. due to bankruptcy, implies that additional payroll taxes are required. Moreover, US states adopt minimum and maximum premiums imposed on firms. As a result, there is only imperfect experience rating. The part of unemployment benefits that is financed by payroll taxes is referred to as a subsidy on job layoffs. By exploiting differences between US states, Feldstein finds that half of the temporary job layoffs in the US can be explained by this subsidy. Later, Topel (1983) did a similar exercise and arrives at a figure of 30%, while Anderson and Meyer (1994) find 20%. Although the studies thus differ in the effect sizes, they consistently reveal a negative impact of experience rating on inflows into unemployment in the US.

Despite its presumed favourable effects on employment, experience rating in UI is uncommon in the European Union. The reason is perhaps that a number of qualifications can be made to the above results. First, experience rating implies that firms bear the risk of unemployment. They thus act as the insurer of job separation risks, even if layoffs are beyond their control, e.g. due to a recession. The theoretical studies discussed above assume that firms are risk neutral so that they can indeed take over the role of the insurer. However, if firms would be risk averse – which seems to apply at least to small firms – it is costly to let firms bear the risk of unemployment. Holmlund (2001) adds that experience rating can be unattractive in the presence of sector-specific shocks. Indeed, it would place the entire burden of such a shock on firms operating in the shrinking sector. This may reinforce the magnitude of such shocks by speeding up bankruptcies, and perhaps even exacerbate swings in the business cycle. An optimal system is therefore likely to provide some degree of risk pooling, both among firms and among sectors.

Secondly, by making firms responsible for the financing of unemployment benefits they create, experience rating gives them an interest to track laid off workers during their unemployment spell and to monitor their search efforts. Although this may help to increase exit

rates, monitoring can be organized more efficiently in specialized agencies or by a state agency that can exploit economies of scale, e.g. due to informational advantages from other sources.

Thirdly, in an imperfect labour market, severance payments or employment protection strengthen the bargaining power of workers relative to employers. Through this general equilibrium effect, experience rating would induce higher wage claims, decrease job creation and raise unemployment.

Finally, European labour markets are characterized by higher firing costs than the US labour market. This is due to employment protection legislation and severance payments in case of job layoffs. As a result, temporary job layoffs are not a central feature of European unemployment. More generally, large inflows do not constitute the major problem in Europe. Rather, the problem is long-term unemployment due to small outflows out of unemployment. As experience rating tends to reduce job creation, it is likely to increase unemployment duration by worsening the labour market prospects of outsiders. As a result, this may also reduce effective labour supply through the discouraged worker effect. Rather than imposing it on top of EPL, Europe may therefore consider a replacement of EPL by experience rating.

Summing up

Layoff decisions by firms can be inefficient in the absence of firing costs. Therefore, it can be welfare improving to introduce employment protection or experience rating. In the US, experience rating makes firms responsible for financing the unemployment benefits of their laid off workers. It is found that this reduces temporary job layoffs. In Europe, however, experience rating is likely to yield more ambiguous results, especially since it would come on top of pre-existing employment protection. By reducing job creation and job turnover, excessive firing costs exacerbate distortions in exit from UI. As this tends to be the main problem in European labour markets, experience rating is likely to play a more limited role in optimal European UI scheme than in the US.

3.4 Contract enforcement

The government may improve the trade-off between insurance and incentives by a better use of information, i.e. better registration of the unemployed and effectively imposing and enforcing eligibility conditions. Indeed, recipients of unemployment benefits can be forced to take sufficient action in applying for vacancies and to accept suitable job offers. To that end, the unemployment agency may collect information on search behaviour, engage in counselling and monitoring activities, and apply sanctions if an unemployed individual violates the rules. In this way, it can combine high benefit levels with less moral hazard. It also prevents the voluntary unemployed from collecting unemployment benefits.

Monitoring and job search requirements

The theoretical literature reveals that more stringent job search requirements can have two types of implications for the labour market (Boone and Van Ours, 2000). First, there is a deterrence effect on the employed: people with a job will increase their work effort so as to reduce the probability of being laid off. Indeed, the employed realize that they cannot just enjoy leisure when being laid off, but have to comply with the job search requirements. This makes unemployment a less attractive option. Second, job search requirements increase the search intensity of those already unemployed.

A number of empirical studies for the US and the UK have explored this latter impact of job search requirements, i.e. the effects on the search intensity of the unemployed and on exit rates out of unemployment. These studies usually explore the combined impact of job search assistance (or counselling) and the monitoring associated with it. Most studies find a significant positive impact of more stringent job search requirements on search activities and exit rates (see the review by Fredriksson and Holmlund, 2003). For the Netherlands, estimates by Gorter and Kalb (1996) reveal that job search assistance indeed significantly raises the number of job applications. Van den Berg and Van der Klaauw (2004) find, however, that counselling and monitoring have been ineffective to raise exit rates in the Netherlands during the late 1990s. They argue that this is because people who face more stringent formal job search requirements will substitute away from informal search channels. The overall search efforts will thus remain unchanged. This substitution is, however, especially important when labour-market prospects are good, i.e. during an upswing and for individuals with favourable job-market characteristics. In the presence of poor labour-market prospects, it is likely that substitution between search channels is less important and that monitoring is more effective. Moreover, Van den Berg and Van der Klaauw (2004) argue that highly intensive job search assistance programs are more effective to increase the exit rate out of unemployment, although a large share of this increase might be due to the threat of the program rather than because of the counselling effect.

Sanctions

A sanction usually takes the form of a punitive reduction in benefits for some period of time. Sanctions have become an increasingly important tool in many OECD countries (Grubb, 2000). For instance, between 1987 and 1994 the number of sanctions in the Netherlands almost quadrupled from 27 000 to 104 000. After 1996, the ratio of sanctions to benefits rose from 17% in 1996 to an average of 25% in 2000. Sanctions in the form of lower benefits turn out to be effective to increase the transition from unemployment into employment. Indeed, Abbring et al. (2000) find that a reduction in unemployment benefits due to sanctions substantially raises the exit rate out of unemployment in the Netherlands. In particular, benefit reductions in the order of 5 to 35% increase re-employment rates by 58% for males and 67% for females on average. The implied elasticity of the benefit level is estimated at 3, i.e. a 1% reduction in the

benefit due to a punitive sanction raises the re-employment rate by 3%. A related article by Van den Berg et al. (2002) explores the impact of sanctions in Dutch social assistance schemes. Sanctions are usually below 20% of the benefit level and are applied for only one or two months. Nevertheless, the transition rate from social assistance into work almost doubles when a sanction is imposed.

Workfare

An alternative way to reduce moral hazard in the presence of high benefit levels is workfare. It means that the government offers a job to all unemployed individuals in exchange for an unemployment benefit. In case of a job refusal, the unemployed person will no longer receive a benefit. Even if the jobs in workfare programs are not productive, workfare may be effective to avoid moral hazard associated with the collection of unemployment benefits by voluntary unemployed. Indeed, workfare introduces self selection as the unemployed who feature a high preference for leisure will drop out of the UI scheme. Especially when the government finds it difficult to distinguish between voluntary and involuntary unemployment, this self selection device may help to avoid abuse of unemployment schemes.

Empirical studies show that mandatory participation in workfare programs indeed significantly reduces the duration of unemployment, either by raising the exit into employment or through exclusion. Black et al. (2003) find, however, that the largest share of the effect occurs even before the workfare begins. This suggests that the threat of participating in such a program is particularly effective in reducing unemployment duration. In addition, deterrence of people in work may further reduce the inflow of people into unemployment. Whether workfare is the most efficient way to encourage employment, however, is questionable as people may get locked in these programs. Thus, they can reduce effective labour supply, thereby crowding out private sector employment.

Transaction costs

Although job search requirements, monitoring, sanctions and workfare seem effective in reducing unemployment duration, it does not come free. Indeed, monitoring and workfare impinge upon privacy and involves high transaction costs. To illustrate, the administrative costs associated with UI in the Netherlands run up to € 600 billion in 2001, which equals almost 30% of the total UI bill in that year. These administrative costs, as well as decreasing returns to counselling and monitoring, restrict the use of these instruments for improving the trade-off between insurance and incentives. In a sense, it suggests that there is a trade-off in avoiding moral hazard between, on the one hand, improving incentives at the cost of less insurance and, on the other hand, enforcing efficient behaviour at substantial administrative costs.

In the Netherlands, sanctions are of limited size and duration. Indeed, fines in UI usually vary between 5 and 20% of the benefit level and last for only one or two months. From the

theory of optimal law enforcement (Becker, 1968) follows that more costly monitoring increases the optimal size of a sanction in order to enforce the law. Van Ours (2003) therefore argues that there may be room for improving the enforcement of UI in the Netherlands by increasing the magnitude of sanctions or extending their duration. Although this reduces type II errors, it increases the size of type I errors though.

Summing up

To improve the trade-off between insurance and incentives, the government can increase job search requirements, intensify monitoring, raise sanctions and introduce workfare. Empirical evidence suggests that these measures are indeed effective in raising exit rates out of unemployment. It introduces, however, a new trade-off in reducing moral hazard, namely between administrative costs and reduced insurance.

4 Rethinking Dutch unemployment insurance

4.1 The current system

In the Netherlands, a termination of a job contract can be obtained via two channels. First, it can occur via an administrative process of the Labour Office. This requires an advance notice period, which makes this procedure rather lengthy. Moreover, the firm must offer sufficiently important reasons for terminating the contract and it has to follow a number of criteria that aim to protect certain employees, such as older workers. The second route to terminate a job contract is much quicker, less cumbersome and runs via a local court. Usually, the court adopts a severance pay formula that provides for one month of salary per year of service. This makes the court-route usually more expensive for employers, although severance payments can also be granted under the procedure of the Labour Office. About half of the dismissals in the Netherlands are settled by the court route. The high severance payments contribute to overall strictness of employment protection legislation (EPL) in the Netherlands, especially for older workers. Compared to other OECD countries, this makes EPL rather strict for permanent workers. For temporary forms of employment, however, EPL is less strict as no severance pay is provided.

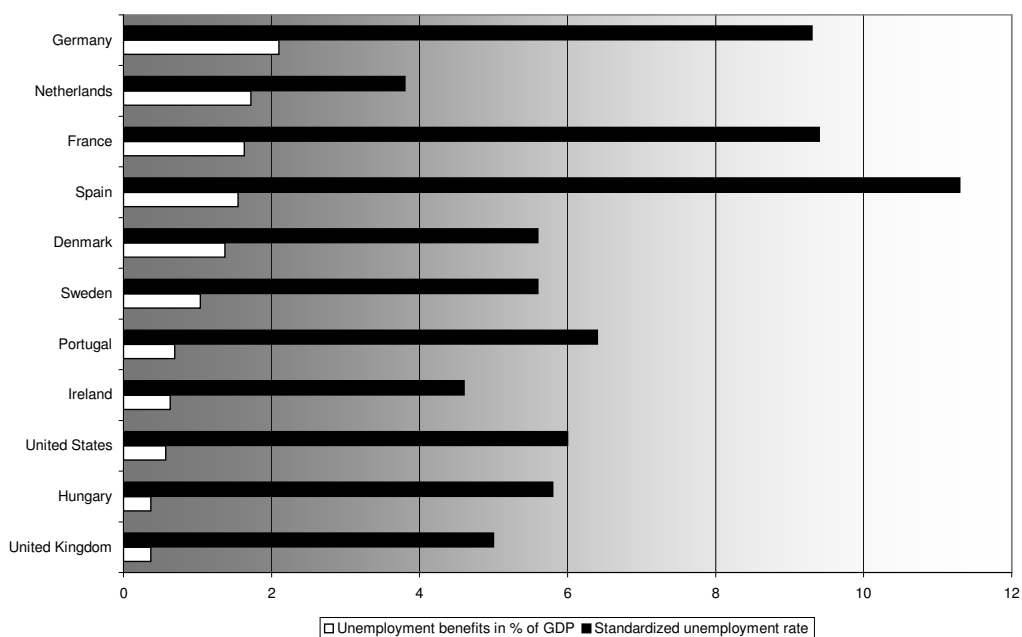
After a Dutch worker has been laid off, he or she is entitled to wage related benefit schemes if a number of entitlement conditions are fulfilled. First, the worker has to face a specific reduction in his original working hours. This implies that individuals receiving unemployment benefits may still have still have part-time work. A second condition is that the individual should have worked for at least 52 days during 4 out of the past 5 calendar years. Moreover, the unemployed worker must have had a job for at least 26 weeks in the past 39 weeks prior to the start of the unemployment period.

Unemployment benefits in the Netherlands equal 70% of the wage in the job prior to unemployment, with a certain maximum benefit level per day. In practice, net replacement rates in the Netherlands can be higher due to severance payments from previous employers that provide for supplementary payments. Thus, as benefits come from different sources, UI does not meet the exclusivity condition mentioned in section 2. Moreover, various income-related transfer schemes imply especially high net replacement rates for low-skilled workers. The duration of the benefit period lies between 6 months and 5 years, depending on the employment history of the unemployed worker. For an entitlement period of 5 years, the unemployed worker must have had jobs for 40 years. After the expiration of unemployment benefits, the unemployed may receive welfare benefits that are means tested on household income and household wealth (if a person is younger than 50). Welfare benefits are related to the social minimum income, rather than final pay.

To be eligible to unemployment benefits, an unemployed person has to meet a number of obligations. First, a dismissed worker is obliged to prevent unnecessary job loss. Second, he or she should take actions to prevent staying unemployed by searching for a job and accepting appropriate job offers. Third, the unemployed have to register as a job searcher at the public employment office and participate in education and training. To monitor all this, benefit recipients have to keep the local UI agency informed about everything that is relevant to the payment of the unemployment benefits. If an unemployed worker does not comply to these rules, the local UI agency is authorized to apply a sanction.

Dutch UI benefits are financed from two sources. The first six months of unemployment benefits are financed from a sector specific fund. Premiums differ between sectors and are paid by the employer. Hence, to a certain degree premiums are experience rated at the sectoral level. Benefits for unemployment after six months are financed by a general fund which collects general unemployment premiums from both employers and employees. In 2004, this premium equals 5.8% for the employee and 1.55% for the employer. The insurance premium is applied to wages that lie between a daily level of € 58 and € 167. Outside this range, no insurance premiums are collected.

Figure 4.1 Unemployment compensation in % of GDP and standardized unemployment rate, figures 2002



Source: OECD Employment Outlook 2004

In 2002, the Netherlands spends 1.72% of its GDP on unemployment benefits. Compared to other EU countries, this is a relatively large amount. Of the countries presented in figure 4.1, only Germany spends more on unemployment compensation, namely 2.1% of GDP. The figure for the Netherlands is particularly striking in light of the low official unemployment rate. One reason for this is that the number of people receiving unemployment compensation is substantially larger than the number of people that are registered as unemployed. For instance, in 2002 551 000 people collected unemployment or social assistance benefits while only 302 000 were officially unemployed, i.e. actively searching for work. This discrepancy arises because people receiving unemployment benefits who are older than 55 were not obliged to search for work until recently.

4.2 A historical perspective

Trends affect the circumstances under which unemployment schemes are designed. In the past two decades, this has led to a number of reforms in Dutch UI. Below, we demonstrate these reforms and their background.

During the 1960s and 1970s, the Dutch welfare state expanded rapidly. In the early 1980s, Dutch unemployment benefit replacement rates were as high as 80%. In response to the disastrous development of public finances and the poor performance of the Dutch labour market, however, the government reduced this level to 70% in the 1980s.

In the late eighties, benefit duration for the young was reduced while for the elderly it was increased. At the same time, workers older than 57.5 who were laid off were no longer required to search for work. Their benefits were even extended to the age of 65. Accordingly, UI was largely used as a scheme for early retirement. As a result, unemployment duration of the elderly in the Netherlands is substantial compared to other workers, while outflows are small (see table 4.1).

Table 4.1 Inflows, outflows and duration of unemployment insurance, figures 2001

Age	Inflow in % all workers	Outflow in % benefit recipients	Average duration in months
15-24	2.9	43.0	2.7
25-34	5.1	38.9	4.4
35-44	4.5	37.0	5.9
45-54	4.6	31.2	7.4
55-58	4.8	19.4	
58-64	5.9	4.4	25.0
Total	4.4	30.6	7.5

Source: Rezwani and Hendrix (2002) and Van Ours (2003)

In the 1990s, there was increased attention for abuse in social insurance schemes, which threatened the legitimacy of the system. As a response, monitoring and sanctions in UI were intensified. Especially the new law of 1996 focused on reducing moral hazard by means of more effective law enforcement. At the same time, active job search assistance and reintegration efforts increased the obligations for the unemployed to find work. This improved the trade-off between incentives and insurance and helped to maintain public support for the system. It increased, however, administrative costs. Indeed, while administrative costs were about € 0.2 billion in 1991 (10% of the total amount of benefit payments in that year), this rose to € 0.6 billion in 2001 (30% of the benefits).

Until now, dismissed workers who are not entitled to wage related unemployment benefits are entitled to short-period benefits during six months at a level of 70% of the minimum wage. Budgetary needs made the current administration decide to abolish these short-term benefits from 2005 onwards. Moreover, entitlement conditions will become more stringent by requiring employment during 39 out of 52 weeks prior to the job layoff, instead of 26 out of 39 weeks. These two measures will primarily affect young people, who already receive little insurance against unemployment risk.

The current government has also reduced the generosity of UI for elderly workers. In particular, elderly workers are now obliged to search for work in order to maintain eligibility for unemployment benefits. Moreover, benefit extensions – that apply when wage related benefit

duration has expired – have been abolished. For some elderly, this implies that benefit duration has been cut by up to 3.5 years. In this way, the government aims to encourage labour-market participation of workers older than 55, which is now below 40% in the Netherlands. The problem of using UI as an early retirement route may become more pressing in the near future as the share of elderly in the workforce increases. At the same time eligibility criteria for disability insurance and early retirement schemes are tightened. Accordingly, there is a fear that private insurance companies will try to put disabled people in public unemployment schemes.

4.3 The need for reform

Today's problem with UI in the Netherlands is primarily the small outflows, either because of poor incentives or due to small job-finding probabilities. This holds in particular for the elderly, low-skilled workers and non-western immigrants. Indeed, these groups experience substantially longer unemployment duration than the average unemployed person in the Netherlands (Ministry of Social Affairs and Employment, 2004). Future trends in society may exacerbate these problems. For instance, an increasing share of elderly people in the labour force exerts pressure on UI as long as the elderly feature a high incidence of unemployment. This may reinforce the intergenerational conflict as young generations would face increasing costs to cover the public expenditures geared to the elderly. The conflict becomes particularly pronounced to the extent that UI is used as a publicly financed early retirement route. In light of the privatization of disability insurance and the abolishment of fiscal subsidies for early retirement savings, this problem may well intensify in the coming decades.

Skill-biased technological change may exacerbate the problem of low-skilled unemployment. Indeed, new technologies may raise the demand for high skilled workers more than the supply of skills can facilitate. Accordingly, wage inequality will grow. As long as minimum wages and welfare benefits are indexed to the average wage in the economy, an increasing number of low-skilled workers will be laid off and become unemployed. Thus, the high incidence of unemployment among the low skilled will increase further.

De Mooij and Tang (2003) argue that a number of trends put a strain on the Dutch welfare state in the coming decades. This may also call for further reform in UI. For instance, ageing raises public expenditures on old-age pensions and health care, which tends to increase the already high tax burden in the Netherlands. At the same time, various developments render it more difficult to raise these taxes by threatening the tax base. For instance, ageing reduces participation as measured over the entire population. Moreover, the distortionary consequences of taxation increase due to high capital mobility and a more flexible labour market. Accordingly, public funds will become scarcer. This increases the need for efficiency-enhancing reforms that reduce the size of public expenditures, including social UI.

The expansion of female labour-market participation may also reduce the need for social insurance. Indeed, couples can provide implicit insurance against the loss of one income in a two-earner household. This may reduce public support for social insurance. Yet, individualization implies that an increasing number of households will rely on explicit insurance. Yet, in a more heterogeneous labour market with diverse households, it becomes increasingly difficult to distinguish between voluntary job quits and involuntary layoffs. This can threaten the legitimacy of the system by increasing the risk of non-compliance.

Also human capital is important for UI in the future. To the extent that general skills become more important in an economy characterized by creative destruction and innovation, a flexible labour market in which job turnover is high is desirable. People then need general skills to quickly adapt to booming sectors. UI would be a way to facilitate the process of job creation and job destruction that is accompanied by short-term unemployment spells. If specific human capital becomes more important, however, in an economy is characterized by specialization, long-term and stable relationships and high internal flexibility of firms, then it would be optimal to rely more on employment protection.

4.4 Future unemployment insurance in the Netherlands

This section elaborates on three directions for reform of Dutch UI. These directions can be interpreted as scenarios, based on different priorities in society. The aim of the scenarios is to discuss how the various parameters of UI can be combined in a coherent future system that emphasizes particular values. Thus, we can also illustrate important trade-offs. The scenarios are described in qualitative terms and are dubbed: Protection, Exit, and Incentives.

Protection

In the first scenario, the Dutch government remains responsible for UI. The current level and duration of benefits are maintained. As disability insurance is partly shifted to the private sector and subsidies for early retirement are abolished, there is increasing pressure to use UI as an exit route for older workers. Indeed, private insurers have an incentive to reduce disability claims by moving the elderly to UI. This pressure is even more pronounced due to a rising share of elderly workers in the workforce, combined with the high incidence of (long-term) unemployment among the elderly. The government responds by introducing a system of experience rating in UI. This makes it more costly for employers to lay off (older) workers, which reduces inflows into UI.

Although elderly unemployed are obliged to search for work, little job-finding probabilities and small incentives to search cause long spells of unemployment, usually until the retirement age. This is exacerbated by experience rating, which reduces the job-finding probabilities for the elderly. Tough employment protection keep wages for elderly workers relatively high and

rigid. This further reduces the job finding probabilities for the unemployed elderly. Only the mandatory retirement age provides some relief for firms to separate older workers at low cost.

Also young people in the Netherlands receive more protection against the risk of unemployment through experience rating. Moreover, the government relaxes entitlement conditions in UI, which provides better insurance for the young. It stimulates risk taking and improves the incentive to invest in specific human capital, thereby raising productivity. However, it makes it more difficult for the young to find a regular job. Hence, unemployment duration increases also for younger people. Moreover, labour supply is reduced through the discouraged worker effect.

To reduce ex-post moral hazard, the government engages in extensive workfare and other active labour market policies. These policies, however, run into decreasing returns to scale and are ineffective in bringing elderly people back to work. Only for women do these policies help to reduce unemployment. Yet, they crowd out private sector employment by reducing effective labour supply for other jobs and are accompanied by substantial transaction costs. Overall, the rate and duration of unemployment increase in this scenario.

Exit

In the second scenario, UI is moderately reformed in the Netherlands. Rather than discouraging inflows into unemployment, the government in this scenario focuses more on stimulating outflows. Social benefits levels are maintained at 70% of the previous wage for unemployment spells up to six months.

After the initial period of six months, the government guarantees a fixed minimum benefit that equals 70% of the minimum wage. These benefits are not means tested for household income or wealth. They last for an additional period that depends on employment history, but the maximum duration is one year. During this second phase (i.e. after the first six months), social partners in the Netherlands supplement the minimum benefits up to a maximum of 70% of the previous wage. To prevent additional supplements, the government does not provide welfare benefits if social partners agree upon supplementary insurance beyond this twelve month period. Note that the mutual responsibility for unemployment benefits by the government and social partners violates the exclusivity requirement. Hence, the efforts to combat moral hazard are suboptimal.

The reduction in benefit duration encourages exit from unemployment, especially among older workers. Indeed, they face stronger incentives to avoid unemployment and to actively search for work. This increases job-finding probabilities for the elderly. The labour market for elderly workers becomes somewhat more flexible by allowing for wage reductions (without implications for pension rights), partial early retirement and lower severance payments for the elderly. The lower unemployment rate among older workers allows for lower premiums, which stimulates labour supply among the young.

UI agencies intensively monitor benefit claims to avoid moral hazard. Moreover, sanctions are increased in case of non-compliance and active labour market policies are extended. These efforts help to reduce unemployment duration and increase exit rates further. They cause, however, high transaction costs. Hence, a high tax burden remains necessary to cover the cost of administration, job search assistance and other active labour market policies.

Employment protection remains important. This stimulates long-term relationships between employers and employees. Accordingly, firms and workers invest in specific human capital. It implies, however, that unemployment duration remains larger than in the US.

Incentives

Public support for social insurance declines under the influence of individualisation and the increasing number of two-earner couples. As a consequence, Dutch UI is reformed by partly replacing social insurance by individual saving accounts. In particular, during the first six months of unemployment, the government provides a fixed social unemployment benefit. The level is unrelated to previous earnings and equals 70% of the minimum wage.

The premiums to finance unemployment benefits are partly experience rated. This provides a new form of employment protection that replaces current EPL in the Netherlands. It has the advantage of reducing transaction costs in case of dismissal. On balance, firing costs fall. This creates a more flexible labour market with increasing job flows and more investments in general skills. In a dynamic economy, high job-finding probabilities provide the best insurance against the risk of unemployment.

Workers contribute mandatory premiums to individual saving accounts. They may draw from these accounts during the first six months of unemployment to supplement the public benefits. Moreover, they can rely on these accounts to cover the income loss during one additional year of unemployment. The saving account is linked to the early retirement account. Hence, the mandatory premiums can be modest as the early retirement account acts partly as collateral for a negative unemployment account. Thus, only few people will need a bailout as most end up with a positive balance at the end of their career. People suffering from a high incidence of unemployment, however, end up with few funds for early retirement. This increases the pressure on welfare and disability schemes.

With the introduction of individual saving accounts, the insurance tax falls substantially. This encourages labour supply. Moreover, exit rates out of unemployment increase and unemployment duration falls among both elderly and young generations. Instead of active labour market policies, the government relies on incentives in the form of experience rating and self insurance to reduce moral hazard in UI. On balance, inflows remain largely unchanged although there is a shift from older to younger workers. Exit rates from unemployment schemes increase considerably.

These gains come at the expense of less insurance and more income inequality. Indeed, people suffering from long-term unemployment end up with smaller early retirement accounts. Yet, solidarity with the most vulnerable groups is maintained as people ending up with a negative balance are bailed out. Moreover, the opportunities to borrow in the individual saving accounts maintain liquidity insurance.

5 Concluding remarks

The literature on optimal unemployment insurance emphasises the trade-off between the benefits from insurance and the costs of moral hazard. Private insurance contains better incentives to reduce moral hazard by enforcing the optimal insurance contract. It runs the risk, however, of underinsurance due to selection. Moreover, as unemployment risks are correlated, private insurance faces some additional difficulties. This gives a rationale for social insurance.

The public sector typically faces more difficulty than the private sector in containing moral hazard. To combat ex-ante moral hazard, it can focus on reducing inflows into unemployment by means of unemployment protection legislation or experience rating. This, however, tend to reduce job creation and increase unemployment duration. As long unemployment spells among particular groups, such as the elderly, the low-skilled and immigrants, is the main concern in the Netherlands, this does not seem the way forward in the coming decades.

Increasing outflows from unemployment would call for more flexibility on the labour market, which would raise the job finding probabilities for the unemployed. Moreover, to improve incentives one may consider a reduction in benefit levels and benefit duration. As these measures are rather blunt cuts in insurance, individual saving accounts may help to make it feasible. Indeed, partially replacing insurance by mandatory individual savings would maintain liquidity insurance as well as solidarity with people featuring low lifetime incomes.

One way to relax the trade-off between insurance and incentives is by intensive monitoring, sanction policies and workfare. These policies seem to have an impact on moral hazard and may be helpful to guide vulnerable groups back to the labour market. These policies, however, are expensive for the government and run the risk of quickly running into decreasing returns to scale.

The last two decades, Dutch unemployment insurance has gradually been reformed: levels were reduced, entitlement and eligibility criteria tightened, and more emphasis has been put on sanctions, monitoring and activation. Future trends like aging, skill-biased technological change, more scarcity of public funds, growing heterogeneity and the increasing importance of human capital may call for further change in unemployment insurance in the coming decades. The most desirable way of reform depends on uncertain preferences and circumstances. The scenarios may help to explore the future in such uncertain world.

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