

Job Security and Severance Pay Exemption in Recession

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Abstract: This paper presents a policy analysis to secure jobs in times of recession. We study a unique feature of Dutch labor market that focuses on the probability for firms to obtain severance pay exemption in times of distress. A basic theoretical equilibrium model is presented to analyze the policy's effects. The model predicts that as long as the wage elasticity of labor demand does not exceed the inverse of the replacement ratio a system of severance payment exemption is less costly than the alternative of additional unemployment benefits. The likelihood that this condition holds increases when a firm is hit by a negative shock. A novel data set identifies key differences in procedural durations and firing costs distributions with and without the exemption policy for individual dismissal cases during the period 2006-2009. We claim that these differences form the most important reasons to explain the outstanding performance of the Dutch labor market compared to other EU countries in the past decade.

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“The effect of laws on employment depend on the state of demand.”

Ed Lazear (1990, p.705)

1. Introduction

According to existing labor market theories and common belief countries with strong employment protection will have high unemployment rates and low employment participation levels. Especially in Europe this is considered to be the case.¹ However, a comparison of labor market performances of the EU15 countries during the past decade shows that the Dutch labor market is markedly different. Being a market with one of the strongest employment protection laws for workers with job tenure, the Dutch economy stands out having the lowest unemployment level, the highest level of labor market participation, and the highest growth rate in employment in the past decade. And productivity exceeds the European average.

This paper presents an explanation for this remarkable phenomenon. It is based on a long-lasting characteristic of duality in the Dutch labor market, a feature that has been overlooked by most of the existing scholarly research on labor market institutions, job protection and social insurance.² Firms in the Netherlands have a unique option to choose from two different ways to dissolve tenured worker contracts. One possibility is the -- universal -- procedure through court. The other possibility is to obtain permission for dismissal from the public employment service (PES).³ When granted permission by the PES the firm is relieved from the obligation of severance pay. The PES is a governmental institution that remains from a decree that has been enforced during the occupation of the Netherlands during World War II. After the war a provisional law was proclaimed to maintain the decree and the uniqueness is that -- although heavily debated for more than six decades -- it still exists.

¹ Cf. Emerson (1988), Bertola (1990), and Blanchard and Portugal (2001).

² Cf. Belot *et al.* (2007), and Freeman (2008).

³ Since January 1st, 2009 the Public Employment Service or Labor Inspectorate is officially called *Uitvoeringsinstituut Werknemers Verzekeringen, or UWV WERKbedrijf*. It has about 100 local establishments throughout the Netherlands.

We review in brief the history and some specific aspects of the public employment service in the Netherlands. The paper then presents a basic theoretical equilibrium model of employment determinations of firms that have the opportunity to receive severance pay exemption when facing economic distress. The model predicts that a system of severance payment exemption is less costly than the alternative of additional unemployment benefits as long as the wage elasticity of labor demand does not exceed the inverse of the replacement ratio. The model also predicts that the policy is more effective in periods of economic distress.

We then report the results from a novel data set on individual dismissal cases collected specifically for this paper from dismissal procedures for the period 2006-2009. The data show that the duration of court procedures -- three weeks on average -- are shorter, but that the expected length of the procedure is less predictable and the expected costs are higher and more uncertain. This is caused by two facts: (1) being granted dismissal approval from the PES relieves a firm from the obligation of severance payment, and (2) severance payments determined for each individual dismissal case by the civic court are based on a specific formula with a number of variables to be determined by the cantonal judges for each case individually.

If costs and uncertainty of the court procedure are higher, why then do not all employers always apply for dismissal permission from the PES? The answer to this question is threefold. First, PES decisions can be challenged in court by the employer as well as by the employee. Second, cases of “disturbed relationship” are inadmissible to the PES. Third, if a dismissal is found to be unreasonable, permission to terminate the employment contract is not given (but valuable time may be lost). Only one-fourth of all permanent employment contracts that were being dissolved for economic reasons eventually ended up in court. The possibility of the PES to reject a firm’s dismissal proposal is an important instrument to reduce the effect of moral hazard in the Dutch labor market especially during recessions. The PES rejection rate is

countercyclical; during recessions firms are more likely to propose dismissal cases that are not based on reasonable grounds.

This system of duality in the Dutch labor market is characterized by a policy of severance payment exemption for firms in economic distress. The government can decide to relieve firms from the obligation of severance payments when economic times are difficult. The Dutch labor market is a unique laboratory to observe this exemption system at work. We present a comparative analysis of the differences in firing costs distributions between the two options firms have to dissolve permanent worker contracts. We find that costs of firings through civil courts are four times larger than firing costs of PES dismissals; the variance of the costs is 94.2 times larger. These differences have a major impact on the functioning of the labor market in the Netherlands Together they form the most important reasons underlying the favorable outcomes of Dutch labor market performance in comparison with other European countries. The paper concludes with an outlook for future research.

2. Some stylized facts of European labor markets

We begin the analysis of job security in times of recession with a comparison of labor market statistics of the EU15 countries⁴. Figure 1 shows the OECD index of the strictness in protection against individual dismissal of workers with permanent employment contracts. Portugal, Germany, and the Netherlands form the top three of countries with the strictest protection of tenured jobs. According to existing labor market theory countries with strict employment protection laws will have high levels of temporary employment, high unemployment rates, low employment participation levels, and low worker productivity. Figure 2 and Figure 3 show, respectively, temporary employment and unemployment rates for the EU15 countries. The rate of temporary workers in the Netherlands is indeed one of the

⁴ The EU15 refers to the number of member countries of the European Union prior to May 1st, 2004. The countries are Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and the United Kingdom.

highest in Europe; the unemployment rate, however, is among the lowest in Europe. Moreover, Figure 4 shows that labor market participation is the highest in Europe. Labor productivity exceeds the European average (Figure 5). For decades the long-term growth in labor market participation in the Netherlands exceeds the European average (Figure 6), and the unemployment rate is structurally among the lowest in Europe (Figure 7). On the basis of these stylized facts we conclude that the Dutch labor market is an example that challenges modern theories of unemployment and job security.

3. Institutional aspects of the Dutch labor market

During the last decade there has been a shift of 140,000 workers or 2.6 percent from the permanent to the temporary workforce. Figure 8A shows the fluctuations of permanent and temporary work in the Netherlands for the period 2001 – 2011. From 2005 to 2008 employment in both categories has risen substantially. In the years 2002 - 2005 and 2009 - 2011 permanent employment declines. Despite strict laws to prevent permanent job losses the number of tenured workers shows substantial cyclical fluctuations. The average number of permanent workers is 5.25 million and fluctuates between 5.19 million and 5.33 million. In the same ten years' period the number of temporary workers grows from 0.8 million in 2001 to 1.13 million in 2008. In 2009 it goes down, but stays above 1.1 million until 2011.

The dual system of preventive dismissal testing

What is so distinct about the Dutch labor market in comparison to other labor market is the existence of a system of preventive dismissal testing for workers with permanent employment contracts. A legal provision requires checking the legality, validity, carefulness and reasonability of a dismissal request before a worker can actually be dismissed. Two different institutes perform the preventive testing: the civil court and the Public Employment Service (PES).

Civil court

The basis of Dutch labor law is Chapter 7 of the Civil Code. The civil court deals with controversies on employment provisions on the basis of these laws. The introduction of the Civil Code of Law in 1838 can be regarded as a milestone in the history of labor market legislation in the Netherlands. Inspired by the French Code Civil of 1804, the Dutch Civil Code introduced a new national civil law that contained three articles regarding the employment relationship between an employer and an employee. Originally, these articles were all written to protect the employer, rather than the employee. The introduction of the first legislative measures that aimed for the protection of the employee was not until 1909 when the Law on Employment Contracts was enacted.

Public Employment Service

An alternative measure to prevent job losses was introduced when the occupying force of Nazi Germany enacted the First Enforcement Resolution (*'Eerste Uitvaardigingsbesluit'*) on June 11th 1940. This resolution was meant to regulate labor market fluctuations and recorded a unilateral dismissal prohibition, imposing that an employer could not dismiss an employee without the approval of the Labor Inspectorate. For dismissal a reasonable cause was required, and the reasonability was checked by the inspectorate. If a proposition for dismissal was judged unreasonable, permission to terminate the employment contract was not given.

After the war the Dutch government upheld this resolution through the declaration of the Extraordinary Resolution Labor Relations of October 5th, 1945 (*Buitengewoon Besluit Arbeidsverhoudingen 1945*). The goal of the declaration was to support employment and encourage production in order to stimulate the economic recovery in the Netherlands. The Public Employment Service (PES) replaced the Labor Inspectorate and was made responsible

for the observing of the implementation and execution of the 1945 resolution by order of the government⁵. The resolution is still in force today and the PES implements its objectives.

The most important difference between the civil court and the PES is that when permission for dismissal is granted by the PES a firm is relieved from the obligation of severance payment. The severance pay exemption is a pure cost reduction for the firm in need paid for by the government.⁶

Figure 8B shows the requests for dismissals that have been approved by the PES and by the civil courts from 2001 through 2011. Employers choose the two routes in almost equal proportions until the start of the Great Recession in 2008 when the number of PES requests became double the size of court dismissal requests. Not only in recessions are firms granted permission from the PES to dismiss workers though; during expansions as well. This finding is consistent with the fact that job destruction -- as well as job creation -- occurs throughout the business cycle, though fewer firms decline in good times (Davis and Haltiwanger (1992)). Noticeably, the volume of requests and the number of dismissal cases presented to the courts are leading indicators for the unemployment rate.

4. Theoretical considerations

In competitive labor markets government mandated severance payments are offset by optimal contracts between the worker and the firm (Lazear (1990), Acemoglu and Shimer (1999), Pissarides (2001)). Concerns about everlasting job shortage in modern labor markets challenged the equilibrium market hypothesis and induced the development of theories of

⁵ See also Chapter 7 of S.S.M.Peeters (2006), *Verdund Sociaal Recht*. Monografieën Sociaal Recht 38, Wolters-Kluwer.

⁶ Alternatively, workers can be exempted from paying income tax. The 1997 Alabama Severance Pay Exemption Act exempts the first \$25,000 of severance pay (including unemployment compensation, termination pay, or income from a supplemental income plan) received by an employee, who, as a result of "administrative downsizing" loses his or her job (quoted from <http://ador.alabama.gov/incometax/esp.html>).

labor market rigidities (Akerlof and Yellen (1985), Bertola & Bentolila (1990), Nickell (1997), Garibaldi and Violante (2005)). In a recent theoretical paper Michailat (2012) argues that in periods of contraction matching frictions, as in Mortensen and Pissarides (1994), are relatively unimportant. Job shortage can occur in equilibrium nevertheless and results from a combination of wage rigidity and diminishing marginal returns to labor. In recessions labor supply is in excess; the level of employment is determined by the level of labor demand. This is the point of departure for this section to investigate theoretically the possibility that a government can intervene to overcome job shortage by securing jobs in recessions. For the economy as a whole Kaldor (1936) suggested a model of government intervention through wage subsidy to reduce unemployment. Our paper is the first to study this set up in the style of modern economics. We present a basic equilibrium model to investigate the possible effects of a specific government policy to secure jobs in firms that go through a period of economic downturn.

Consider a competitive labor market, where the costs of a firm to employ a worker are w that includes a severance pay contribution τ to the government. $R(\ell)$ is the firm's revenue function of a single input ℓ , with $R' > 0$ and $R'' < 0$. In order to determine the optimum input L^* given w the firm's objective is to maximize the expected profit $E\{\Pi(L^*)\}$ with respect to L^*

$$(1) \quad \underset{L^*}{\text{Max}} E\{\Pi(L^*)\} = \underset{L^*}{\text{Max}} \{R(L^*) - wL^*\}$$

The first order necessary condition yields

$$(2) \quad R' = w.$$

Solving (2) provides a solution for input L^* .

Severance pay exemption for a firm in need

If the firm is relieved of the obligatory severance pay, then the wage costs will be lower. The firm's objective function changes into

$$(3) \quad \underset{L_\tau}{\text{Max}} E\{\Pi(L_\tau)\} = \underset{L_\tau}{\text{Max}}\{R(L_\tau) - w_\tau L_\tau\},$$

with $w_\tau = w - \tau$. The first order necessary condition is

$$(4) \quad R' = w_\tau, \quad \text{or} \quad R' = w - \tau.$$

Since $\Delta w_\tau = w_\tau - w = -\tau$, it holds that $R'(L_\tau) < R'(L^*)$.

The probability of severance pay exemption

Now suppose that with probability $0 < p_\tau < 1$ a firm is granted exemption of severance pay.

This case describes closest the situation for firms in the Netherlands. The firm's objective function then becomes

$$(5) \quad \underset{L}{\text{Max}} E\{\Pi(L)\} = \underset{L}{\text{Max}}\{p_\tau[R(L) - w_\tau] + (1 - p_\tau)[R(L) - (w_\tau + \tau)L]\}$$

The first order necessary condition is

$$(6) \quad p_\tau[R' - w_\tau] + (1 - p_\tau)[R' - (w_\tau + \tau)] = 0.$$

Rewriting gives

$$(7) \quad R' = w - p_\tau \tau.$$

With $0 < p_\tau < 1$ it holds that $R'(L_\tau) < R'(L) < R'(L^*)$, so that the marginal revenue in the case of a probable exemption of severance pay is lower than without that possibility (when $p_\tau = 0$), but higher when no uncertainty exists and exemption is always granted (when $p_\tau = 1$). L is

being chosen in advance of the state of nature being revealed. In the real world, of course, actual firms have to make exactly such *ex ante* decisions.

The effect of severance pay exemption on revenues

In this section we investigate the effect of the severance pay exemption policy on the firm's total revenues. Let R be a linear-quadratic revenue function of the firm with employment as the only input, $R(\ell) = \frac{\alpha}{\beta}\ell - \frac{1}{2\beta}\ell^2$ with $\alpha, \beta > 0$. Then $R'(\ell) = (\alpha - \ell)/\beta$ for $\ell = L, L^*$. From equations (2) and (7) we get

$$(8a) \quad L^* = \alpha - \beta w$$

and

$$(8b) \quad L = \alpha - \beta w + \beta p_\tau \tau.$$

Since $p_\tau > 0$, we have $\Delta L \equiv L - L^* = \beta p_\tau \tau > 0$, and therefore the firm's employment level is higher with the severance pay exemption policy than without (see Figure 9A).

The change in employment that results from the severance pay exemption policy is -- positively -- related to three parameters. The first parameter is the severance pay rate, τ . The effect of the exemption policy will be larger when the severance pay rates are higher. The second parameter is the probability of exemption, p_τ . An increase of the exemption probability renders the exemption policy more effective to secure jobs. The third parameter is β , the slope of the demand curve. If labor demand is highly elastic (flat demand curve, β is small), then the effect of the policy will be small (ΔL will be small). If labor demand is inelastic the effect of the policy will be large. This is a surprising result. It holds true because in equation (9) β determines the slope as well as the intercept of the demand curve. Figure 9B provides an illustration.

The firm's expected revenues are always higher with the severance pay exemption policy than without. This can be shown as follows. Define $\Delta R \equiv R(L) - R(L^*)$. Substitution of equations (8b) and (8a) into $R(\cdot)$, respectively, and subtraction gives $\Delta R = \beta \left(w p_\tau \tau - \frac{1}{2} (p_\tau \tau)^2 \right)$. So $\Delta R > 0$ iff $w > \frac{1}{2} p_\tau \tau$. Since $w = w_\tau + \tau$, $w_\tau > 0$, and $0 < p_\tau < 1$, the inequality $w > \frac{1}{2} p_\tau \tau$ always holds and therefore $\Delta R > 0$.⁷

The responsiveness of the firm to the severance pay exemption policy

Define η as the wage elasticity of labor demand between the two regimes with and without the probability for a firm to receive severance pay exemption. Then

$$(9) \quad \eta = \frac{\Delta L}{L} \bigg/ \frac{\Delta w_\tau}{w_\tau},$$

with $\Delta w_\tau = -\tau$, so that $\eta < 0$. Let $v > 0$ be the unemployment benefit per worker paid by the government and let $\rho \equiv v/w_\tau$ be the replacement ratio. The equilibrium condition for the exemption policy to be effective is that the societal costs are equal in both regimes. Without the policy the government receives from the firm severance payments τL^* . In case of an exemption the government receives zero severance payments, but saves $v \Delta L$ on unemployment benefits. The equilibrium condition can be written as

$$(10) \quad \tau L^* = v \Delta L, \quad \text{or} \quad \tau(L - \Delta L) = v \Delta L.$$

Given that $\Delta L > 0$, we write

$$(11) \quad v = \tau \left(\frac{L}{\Delta L} - 1 \right).$$

Combining equations (9) and (11) yields

⁷ Similarly, the firm's expected profits are higher with the severance pay exemption probability than without.

$$(12) \quad \eta = -\left(\rho + \frac{\rho\tau}{w_\tau}\right)^{-1}$$

From this we conclude that a necessary condition is $-\rho^{-1} < \eta < 0$, or in absolute terms $|\eta| < |\rho^{-1}|$.

In this simple model of linear demand and linear-quadratic revenue functions with employment as the only input we find that a system of severance payment exemption is less costly than the alternative of additional unemployment benefits as long as the wage elasticity of labor demand does not exceed the inverse of the replacement ratio. Let's assume generously that the replacement ratio is .75, so that its inverse is 1.33. Generally, the full (substitution and scale elasticity) labor-demand elasticity in absolute terms is one or below (Hamermesh, 1996).

The effect of a negative shock

The wage elasticity of labor demand increases (less negative, closer to zero) with the size of the shock. This can be shown as follows. Let $\tilde{\eta}$ be the wage elasticity of labor demand after a negative shock that shifts the demand curve inwards. Given that $\Delta\tilde{w} = \Delta w = -\tau$, $\Delta\tilde{L} = \Delta L$, and

$\tilde{L}' = L'$, it holds that $\frac{w_\tau}{L} < \frac{\tilde{w}_\tau}{\tilde{L}}$, and therefore $\frac{\eta}{\tilde{\eta}} = \frac{w_\tau}{L} / \frac{\tilde{w}_\tau}{\tilde{L}} < 1$, so that $\eta < \tilde{\eta}$, or in absolute

terms $|\eta| > |\tilde{\eta}|$. This result states that the likelihood that the necessary condition -- that the wage elasticity of labor demand does not exceed the inverse of the replacement ratio -- holds increases during recessions, when more firms are hit by downward shocks.⁸ Consequently, the severance pay exemption policy is more effective during periods of recession.⁹

⁸ This theoretical result is also supported empirically. Drazen, Hamermesh and Obst (1984), for example, find that during recessions the demand elasticity is found to be closer to zero.

⁹ A negative shock can be so large, that $L < 0$ and the firm would go bankrupt unless the government is willing to make a contribution to the firm and jobs might be saved. In our model this implies that temporarily $\tau < 0$. This was in fact the situation in the Great Recession of 2008-2009 when the Dutch government helped saving private banks such as Fortis, Aegon, ABN-AMRO and ING with large financial injections.

5. A comparison of individual dismissal cases between the two different procedures

All civil court files on individual dismissal cases are stored in archives administered by the organization of the courts. An electronic database allows the civil court to keep track of the number of dismissal cases filed each year. Unfortunately, the database does not contain any detailed information on particular cases. Detailed information is stored in paper folders only, each containing a written appeal, a written defense, and the judge's verdict. Each folder has a concise description of the reason for dismissal and some employee related characteristics such as job tenure, position, date of birth and wage. Shortly after a case is closed the folder is moved to and stored in the local court's data archives where it is kept for a period longer than twenty-five years.

Each dismissal case filed at the Public Employment Service is recorded in an Automation of Reports and Consolidated Orders System (ARCOS) database. The information included in this electronic database keeps track of a small number of employer and employee related characteristics, such as the reason for dismissal and the duration of the dismissal procedure. Further specific information about each case -- including the wage of the employee, age, the number of years of tenure, and the number of working hours per week -- is kept in hard-copy files only that are stored in a national archive located in the city of Almere.

The data that we have collected for this study is a representative sample of 2,407 individual dismissal requests from the years 2006 to 2009 of which 1,140 are civil court cases and 1,267 are PES cases. Table 1 shows the numbers and percentages of requests divided by employment sector, firm size and gender.¹⁰ The distribution over the various sectors does not differ in great detail between the civil court and the PES. The data show no significant difference between the numbers of male and female lay-offs. We do find differences with respect to firm size. Larger firms tend to go to court more often. This finding is in line with

¹⁰ For further information about the data collection and its representativeness for the Netherlands see Myrthe Frenk (2012), "Employment Protection Legislation in a Dual System". Academic Thesis Publishers, Maastricht.

related research in other European countries (*cf.* Bender *et al.* (2002) for Germany and France; Boeri and Jimeno (2005) for Italy).

Table 2 presents information on the differences in duration of the dismissal procedures and some other summary statistics of job characteristics. The duration of the civil court procedure is almost three weeks (20.3 days) shorter than the PES procedure. However, the variance of court procedure duration is 2,644 days longer. That is 2.5 times larger than the variance of the duration for PES procedures. Interestingly, there are practically no significant differences in tenure, age and hourly wage profiles of the two separate procedures.

Table 3A gives an overview of the different reasons for which a dismissal has been requested. In the files distinctions are made between economic and non-economic reasons. Important economic reasons are demonstrable structural declines in sales or the reduction in orders. Our data include 1171 dismissal requests for economic reasons. The majority of dismissal requests being submitted to the PES exist of job destructions for economic reasons (71.3 percent). But still 22.8 percent of requests for economic reasons end up in court. Non-economic reasons are divided into dysfunction, disturbed relationship, reproachable behavior, prolonged illness, and a rest category. Almost all cases of prolonged illness are approved by the PES. Most other cases are disputes and are dealt with by the civil courts.

A majority of firms successfully applies for permission to dissolve permanent worker contracts for economic reasons. Firms are relieved from the obligation of severance payment when the PES approves a dismissal request. An estimate for the probability to receive approval of severance pay exemption p_τ can be obtained from Table 3B: $p_\tau = (904/1267)/[(267/1140)+(904/1267)] = 0.75$. Three out of four permanent contract jobs that are terminated for economic reasons receive approval from the PES. The fourth ends up in court. We can compare the unconditional probabilities of permanent job destruction by the PES for economic reasons and of the non-economic reasons through court. The respective probabilities are 0.376 and 0.363, and almost equal. The “off-diagonal” probabilities of non-

economic dismissals approved by the PES and economic dismissals through court are, 0.151 and 0.111, respectively, and also almost equal. These results corroborates with Figure 8B that the graphs for the PES and the civil court dismissals move along over the business cycle.

One of the formal tasks assigned to the PES is to assess whether or not a request for permission to dissolve a permanent worker contract is based on reasonable grounds. This provision of the PES is one the most important disciplinary instruments currently available for Dutch labor market policy. Preventive dismissal checks restrain firms to seek reduction of severance payments on unjustifiable grounds. Consequently, firms are discouraged to shift private costs to society on considerations of self-interest alone, thereby reducing the effect of moral hazard in the labor market.

Dismissal requests submitted to PES are rejected more often during recessions. The period 2006-2008 is characterized by a decline in the unemployment rate; in 2009 the unemployment rate increases (see also Figure 8B). Table 3C presents the rejection rate by PES estimated from our sample for the period 2006-2009. A positive relationship is found between the PES rejection rate and the growth in unemployment for all dismissal requests received by the PES for economic as well as non-economic reasons. If firms' moral hazard is an important and frequently occurring labor market phenomenon, then we expect that more requests be rejected by the PES during recessions. This is precisely what we find. The institutional system of preventive dismissal checks by the PES effectively reduces the costs imposed upon the Dutch society. This is because firms' moral hazard to seek cost reduction through laying-off workers at will is reduced by this system. It is the first reason to explain the finding that the functioning of the Dutch labor market is so different from that of other EU countries.

6. Differences in firing costs

In this section we compute the firing costs differences between dismissals with PES permission on the one hand and permanent job contract annulment by the civil court on the

other hand. To obtain further understanding of the costs differences between the two options to terminate permanent jobs we follow Pfann (2006) and computed heterogeneous firings costs for all individual case of our data set.

Civil Court Firing Costs

Before starting a civil court procedure the employer is obliged to pay a court fee. The size of this fee depends on the legal form of the employer. The employer will also incur the costs of ongoing wage payments for the duration of the dismissal. This duration period can be divided into two components. The first component is the duration of the civil court procedure; or the time the court needs for a verdict. This starts at the moment a request is registered and lasts until the moment the court reaches a decision. The second component is the time between the verdict and the duration of employment contract termination, which is determined court ruling. The civil court is not bound to observe the statutory notice period; and can decide when the employment contracted shall be dissolved. The final cost component is the severance payment. In the Netherlands courts have a guideline to determine severance payments; a “*formula for cantonal judges*” states that severance payments should be equal to the product of three factors. A is a weighting factor of the years of age of the employee $A=0.5$ for $\text{age}<35$; $A=1$ for $35\leq\text{age}<45$; $A=1.5$ for $45\leq\text{age}<55$, and $A=2$ for $\text{age}\geq55$. Factor B is the gross monthly wage. C is a correction factor that is determined by the civil court, with $0\leq C\leq 2$. If $C<1$, the employee is held liable for negligence, and if $C>1$ the employer is held liable. In all other cases $C=1$. The exact amounts of severance payments are obtained directly from the court records.

PES Firing Costs

An employer that submits a request for dismissal to the PES will incur ongoing wage costs during the time of the dismissal procedure. The period can be divided into three parts: the procedural time, the time to notice, and the period of notice. The procedural time is the time

between submission and the pronouncement. The time to notice is the period between the pronouncement and the start of the notice period. The notice period is defined by the employee's years of tenure. Currently, a notice period equals 1 month for tenure less than 5 years, 2 months for tenure less than 10 years, 3 months for tenure less than 15 years, and 4 months for tenure of 15 years or longer.

Table 4 shows the outcomes of the computations of idiosyncratic firing costs from our data set on individual dismissal cases. The *average* firing costs a firm faces if a dismissal request is approved by SEP is € 7,480. That is 533 times the *average* hourly wage rate of a worker whose request for job destruction is submitted to the SEP. The *average* firing costs a firm faces if a dismissal request is submitted to and approved by the civil court is € 30,982. That is 1,960 times the *average* hourly wage rate of a worker whose request for job destruction is submitted to the court. Thus the *average* firing costs for the civil court procedure are found to be 4.14 times the average SEP firing costs. The *median* costs are 1.83 times as large.

The most striking differences, however, are found in the *uncertainty* of the outcomes between the two procedures. The standard deviation of the firing costs through the civil court is € 54,808; the standard deviation of PES firing costs is € 5,648. Consequently, the uncertainty (variance) associated with firing costs determined by the court is 94.2 times larger than for PES firing costs. Not only the procedure's duration but also the expected costs are way more unpredictable when cases have to be submitted to the civil court.

The differences that we find in the first and second moments of the distributions of procedural durations as well as in the first and second moments of the firing costs distributions are the second reason to explain the finding that the functioning of the Dutch labor market is so different from that of other EU countries.

In Table 5 we separate the costs between economic and non-economic reasons. PES firing costs are almost equal, while firing costs determined by the civil court is almost double the size for permanent job endings for economic reasons. Observable differences are in the wage rate, age, and tenure, as well as in the determination of the factor C in the formula for cantonal judges that puts weight on who is to blame for the lay-off most. The difference in average age between SEP dismissals and civil court dismissals for economic reasons equals 4 months (0.3 years). The tenure difference is two months. Both differences are not significant. SEP dismissals for non-economic reasons include primarily those workers whose permanent contracts are being dissolved due to long-term illnesses. Their average age is 4.5 years lower than that of workers that are laid off on non-economic grounds (disputes) by civil courts, but their tenure is 22.3 months longer.

7. Conclusions

Severance pay exemption is one the most important disciplinary instruments currently available for Dutch labor market policy. Preventive dismissal checks restrain firms to seek reduction of severance payments on unjustifiable grounds. Consequently, firms are discouraged to shift private costs to society on considerations of self-interest alone. The possibility to grant permission for dismissal of tenured workers by the Public Employment Service reduces moral hazard in the labor market when firms go through bad times.

The analysis of a basic equilibrium model shows that a labor market policy with severance payment exemption is less costly than the alternative of additional unemployment benefits when the wage elasticity of labor demand must not exceed the inverse of the replacement ratio. Moreover, this policy is shown to be more effective during periods of recession.

A comparison of duration and costs between the two distinctive procedures to dismiss tenured workers through the civil court or by approval from the Public Employment Service learns that:

- i. the average duration of civil court procedures is shorter (three weeks);
- ii. the variance of the duration of civil court procedures is larger (2.5 times);
- iii. the average firing costs from civil court procedures are higher (4.14 times); the median firing costs are also higher (1.83 times);
- iv. the variance of firing costs that result from civil court procedures is higher (94.2 times).

These differences in the distributions of duration and costs together with the reduction of moral hazard explain the distinctive features of the Dutch labor market in comparison with other EU member states. Severance pay exemption is an important ingredient for effective job security policy especially when economic times are hard. The favorable outcomes of labor market performance in the Netherlands during the past decade are exemplary and result from the existence of duality in the country's institutional system of job security.

Our study uses the tools from modern micro- and labor economics to analyze job security provision and social insurance policies in times of economic recession. The equilibrium policy analysis presented in this paper leaves ample ground for extension, specialization, and generalization nevertheless. For example, in line with Michailat (2012) we assumed that in times of economic downturn there is excess labor supply, so that demand determines the level of employment. One of the most imperative steps to take next is to design a dynamic general equilibrium search model as in Landais *et al.* (2012). Such a model extended with cyclical severance pay exemption governmental policy is necessary for sensitivity analysis of the

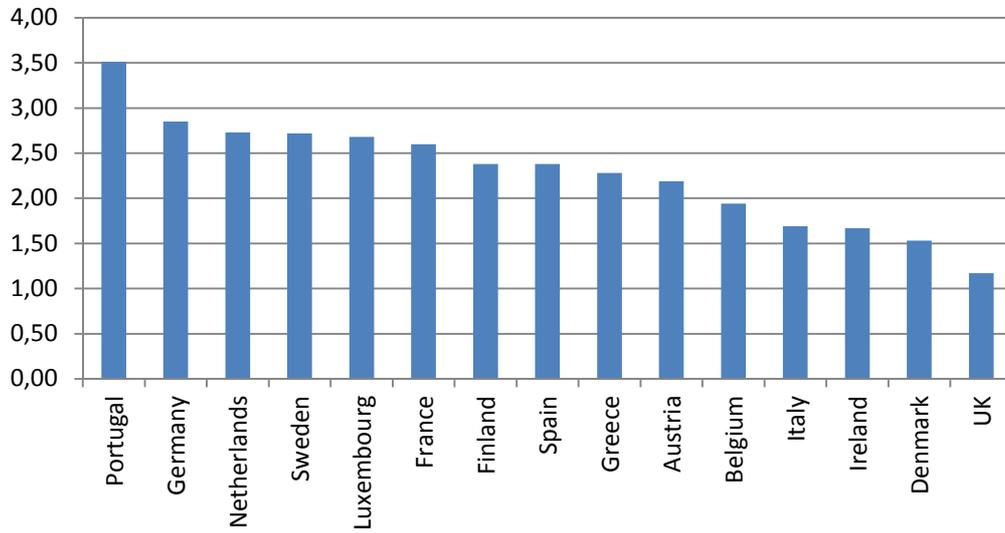
critical assumptions and to perform analyses of the influence of government policy on job protection during periods of economic expansion and recession separately.

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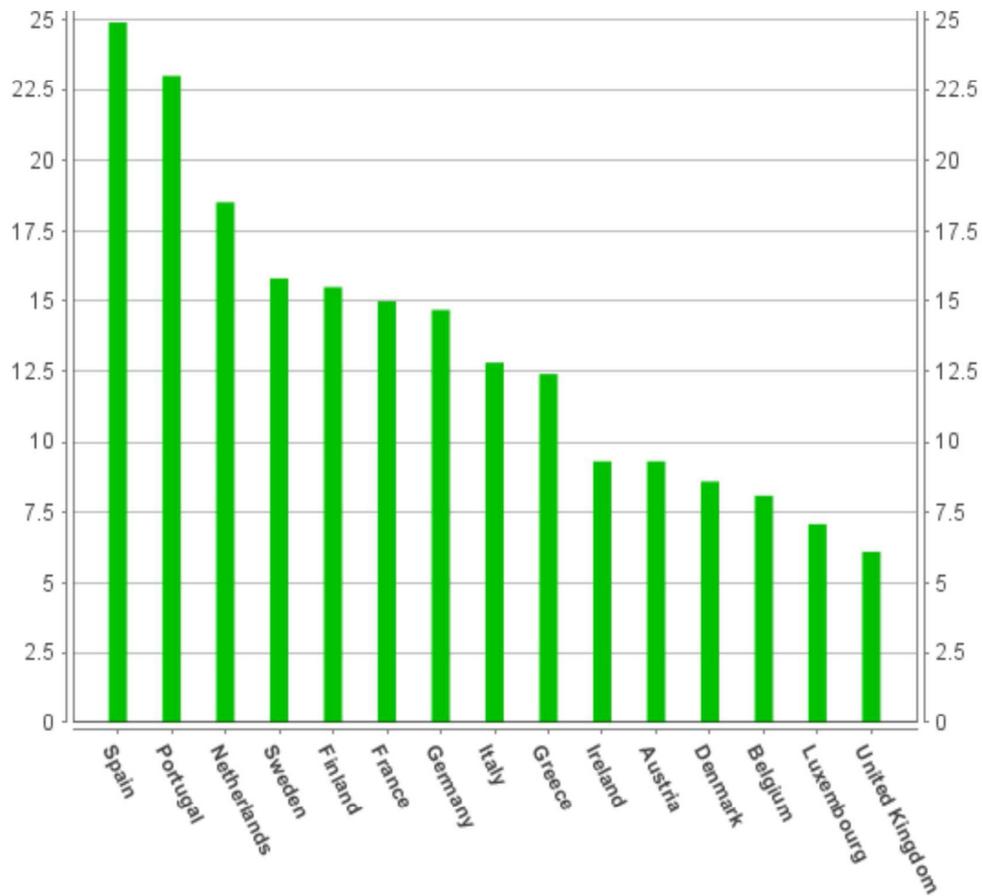
Figure 1:
Protection of Permanent Workers in EU15 Countries (OECD, 2008)*



*Data extracted on 23 May 2012 16:06 UTC (GMT) from OECD.Stat

Figure 2:

Temporary Employment Rates in EU15 Countries (Eurostat, 2011)*



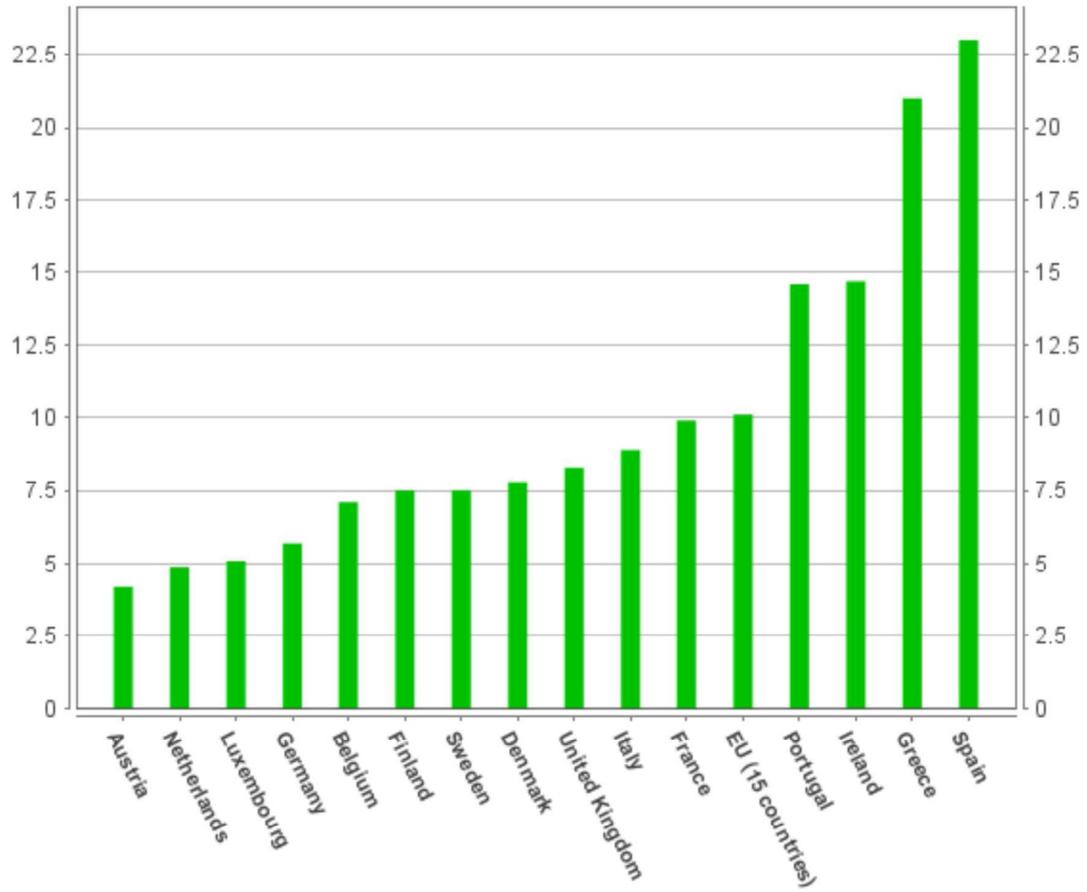
Source of Data: Eurostat

Date of extraction: 17 Apr 2012 10:27:14 CEST

Hyperlink to the graph: <http://epp.eurostat.ec.europa.eu/tgm/graph.do?tab=graph&plugin=0&language=en&pcode=tps00073>

Figure 3:

Unemployment Rates in EU15 Countries (Eurostat, 2011)*



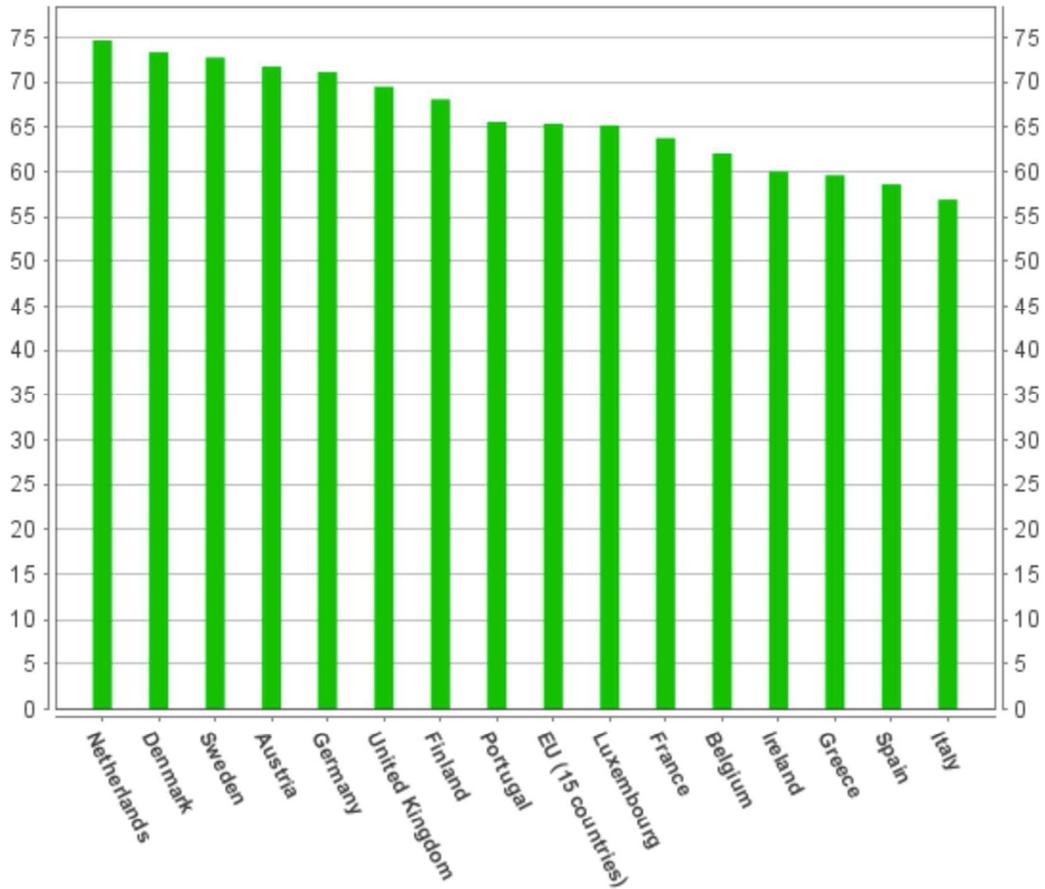
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Figure 4:

Employment Participation Rates in EU15 Countries (Eurostat, 2011)*



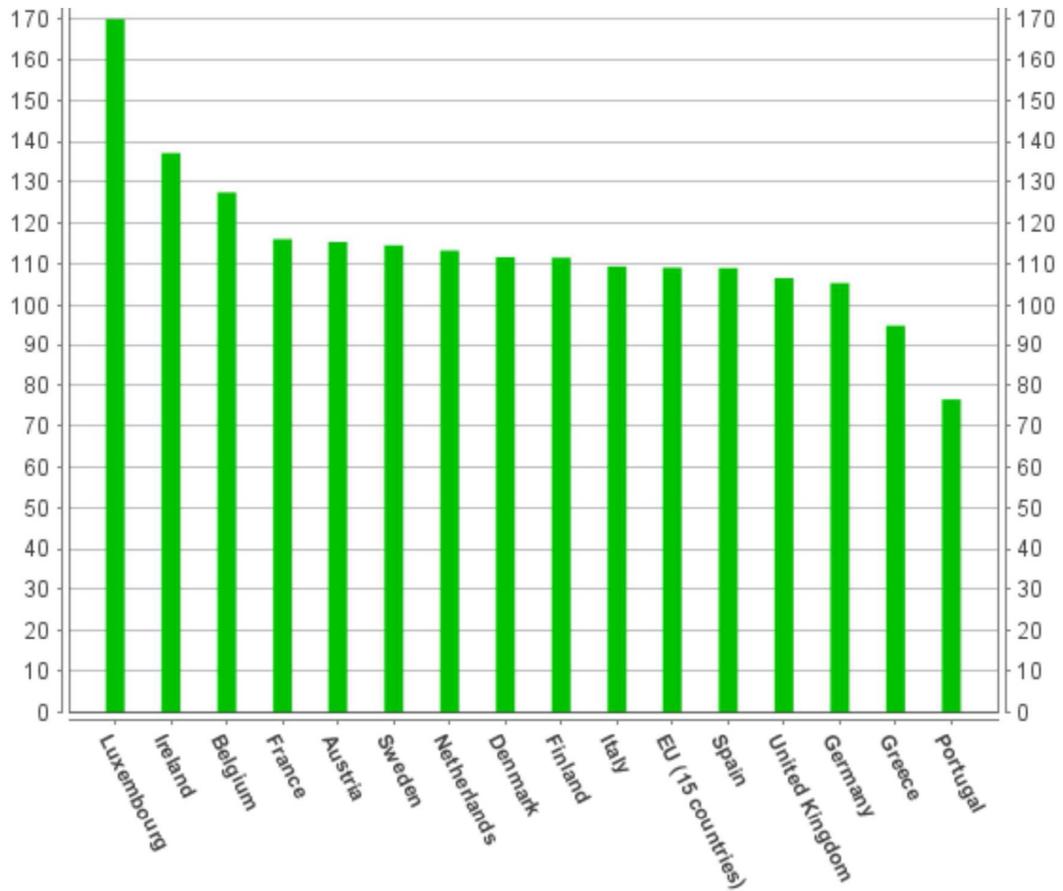
Source of Data: Eurostat

Date of extraction: 17 Apr 2012 10:13:05 CEST

Hyperlink to the graph: <http://epp.eurostat.ec.europa.eu/tgm/graph.do?tab=graph&plugin=1&language=en&pcode=tsiem010>

Figure 5:

Labor Productivity in EU15 Countries (Eurostat, 2011)*



Source of Data: Eurostat

Date of extraction: 17 Apr 2012 10:41:45 CEST

Hyperlink to the graph: <http://epp.eurostat.ec.europa.eu/tgm/graph.do?tab=graph&plugin=0&language=en&pcode=tsieb030>

Figure 6:
Employment Rate through Time (1992 - 2009)*

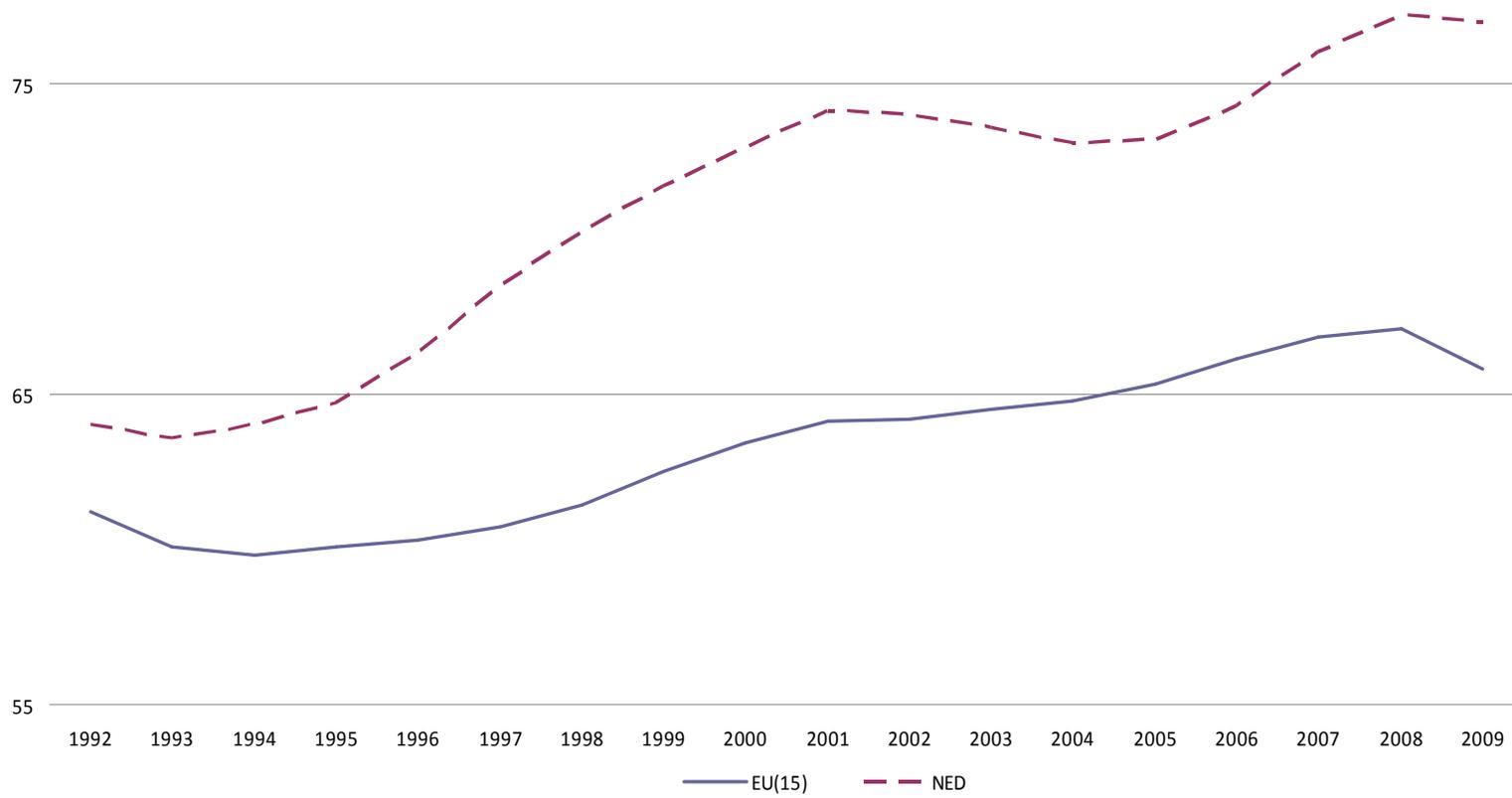


Figure 7:

Unemployment Rates of EU15 Countries through Time (1998 – 2011)

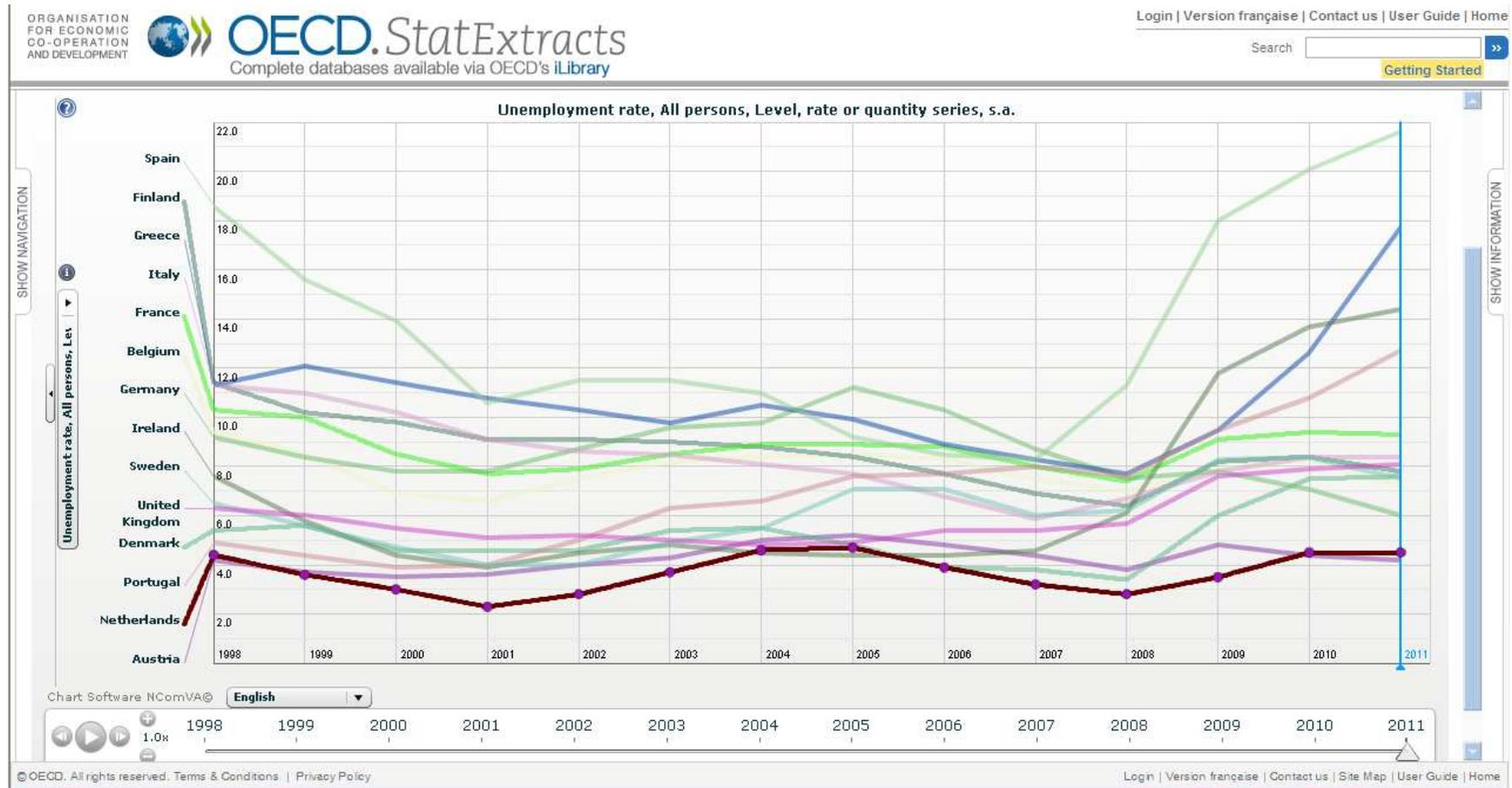


Figure 8A:

Permanent and Temporary Employment in the Netherlands*

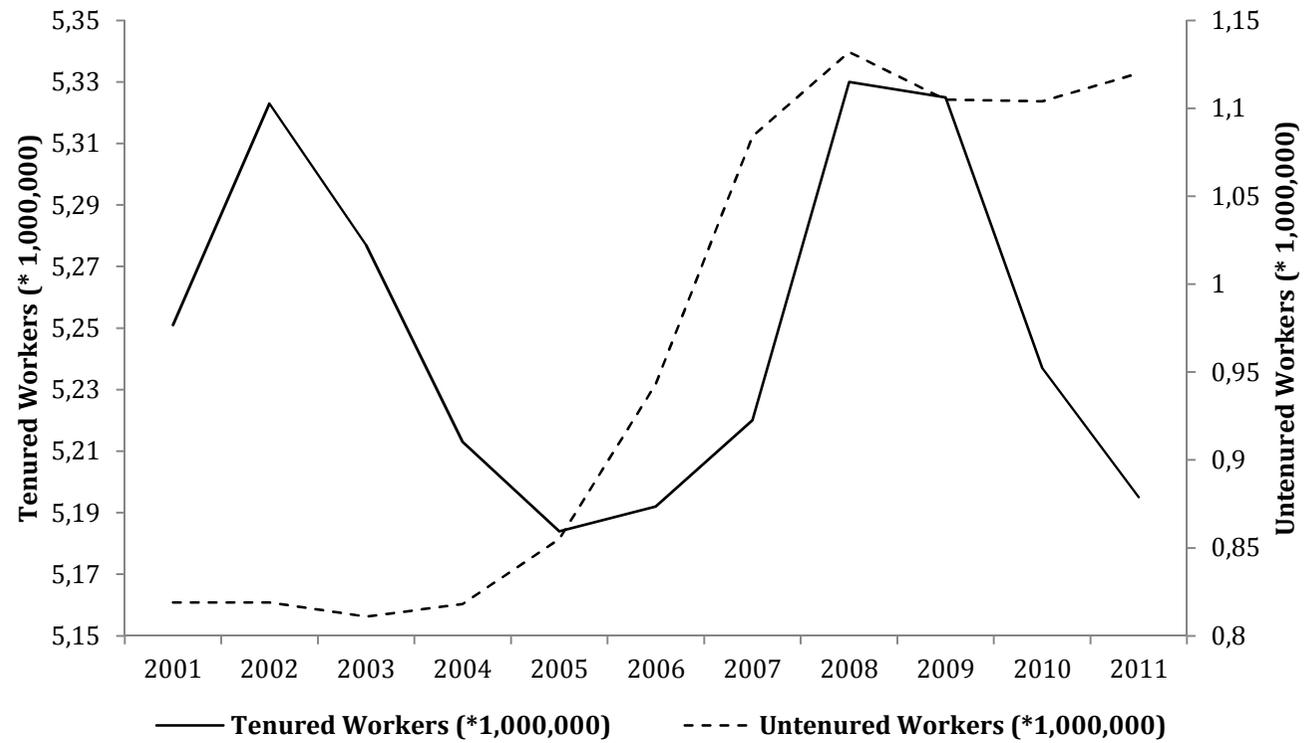


Figure 8B:

Duality in the Dutch Labor Market*

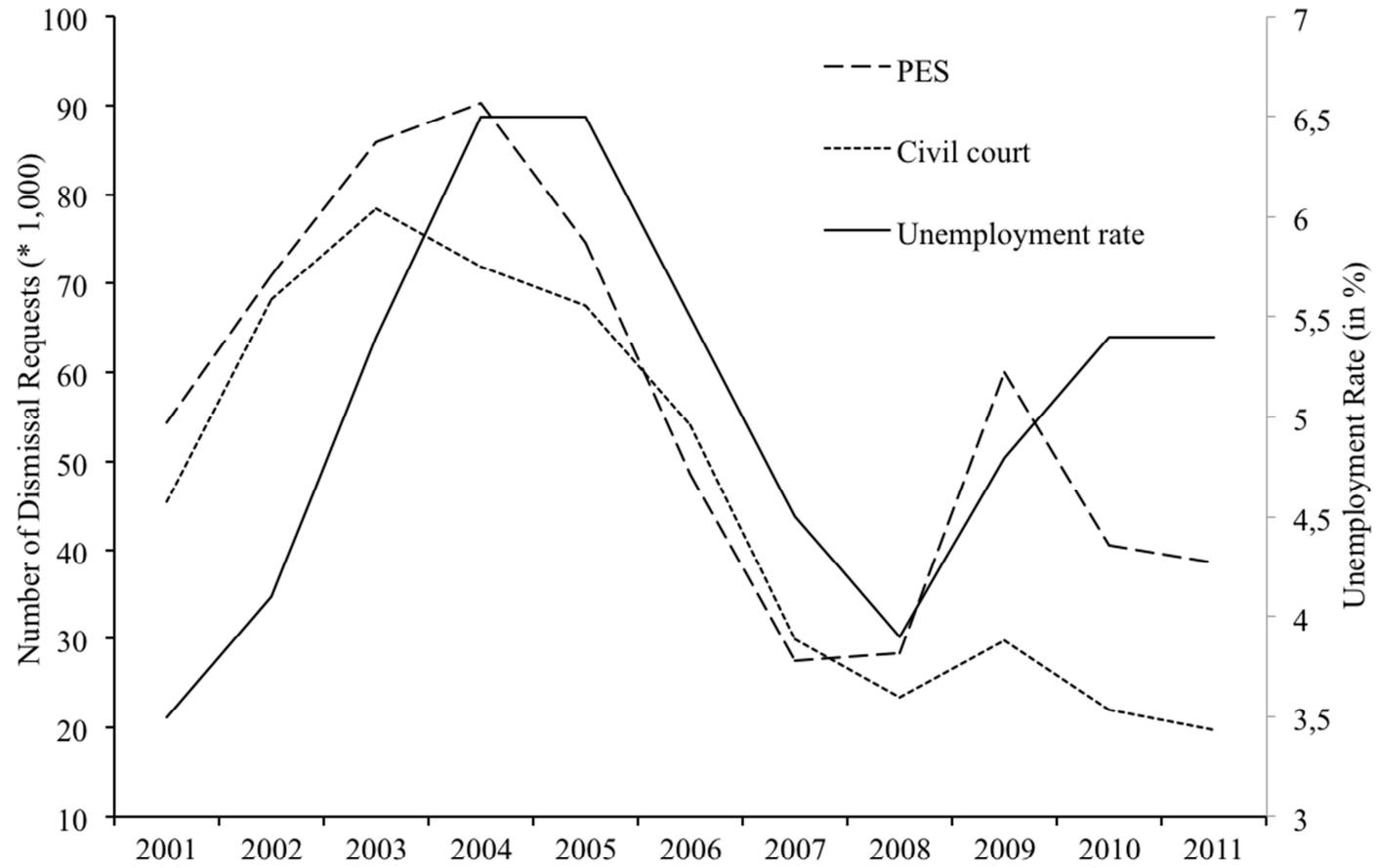


FIGURE 9A:

The Level of Employment With and Without Severance Pay Exemption Policy

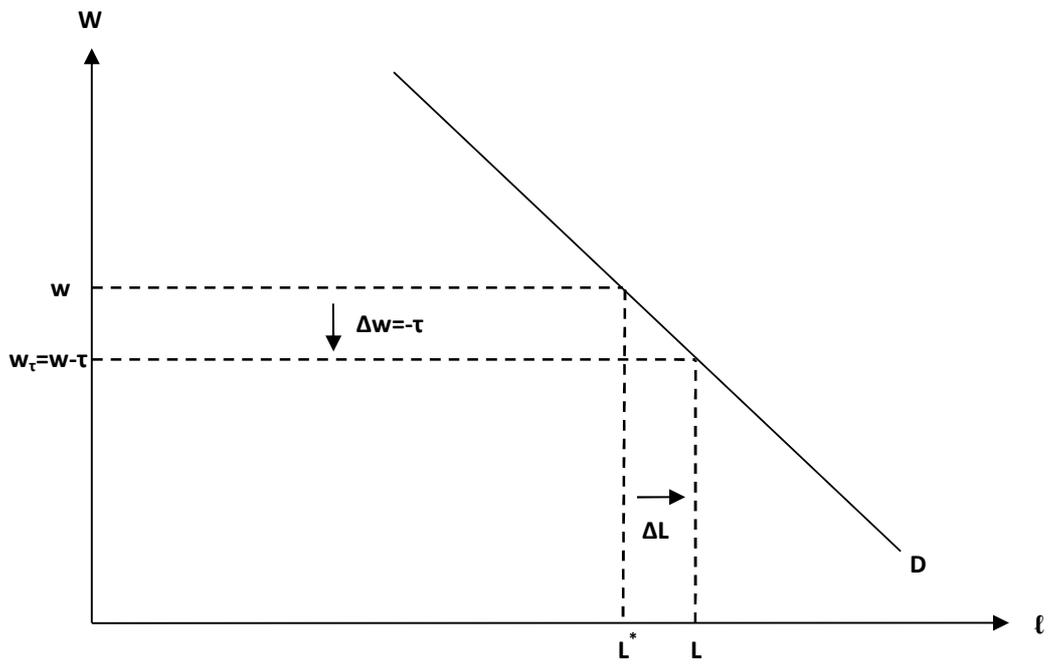


FIGURE 9B:

Labor Demand Elasticity and the Employment Effect of Severance Pay Exemption Policy

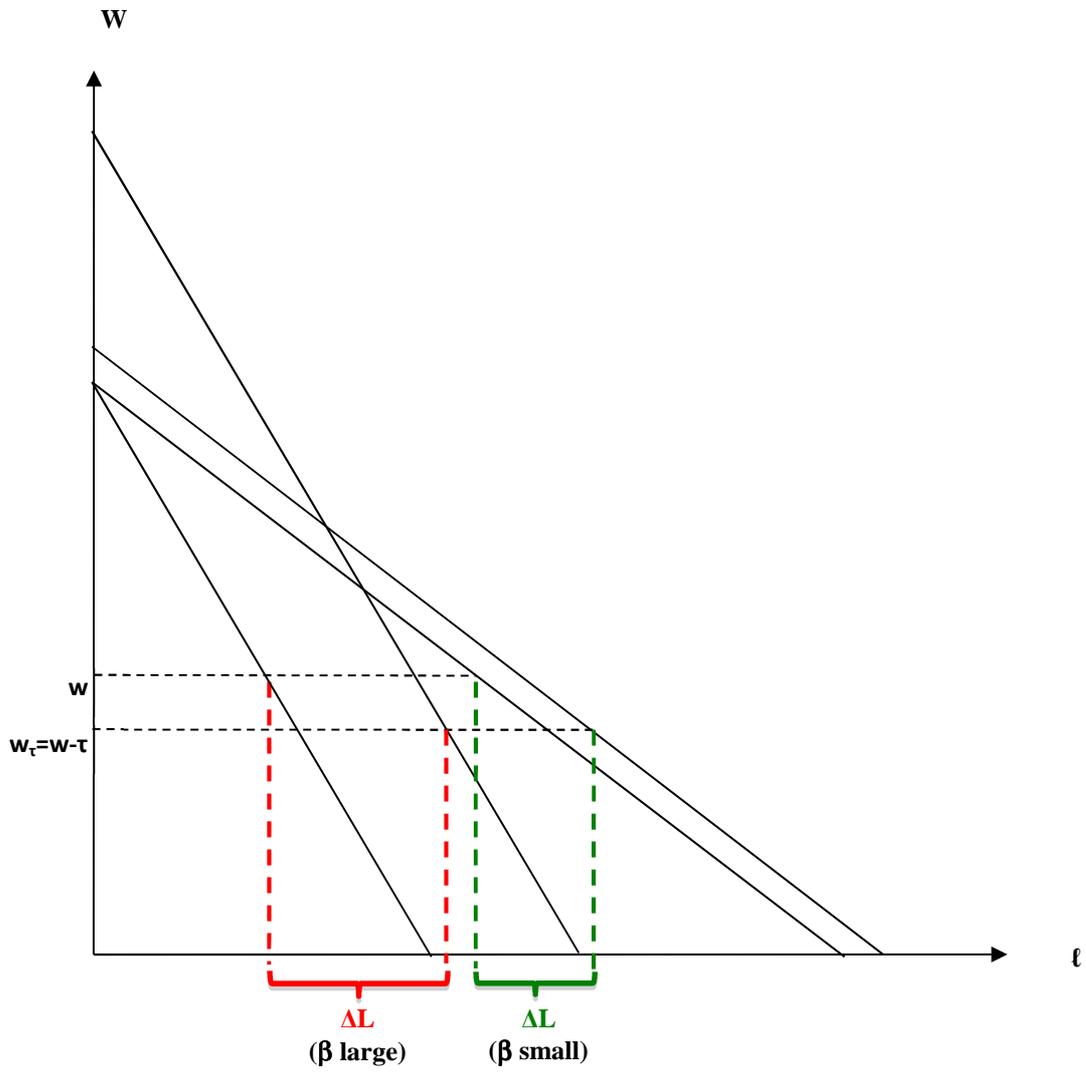


Table 1.**Dismissals through Civil Court or PES: Descriptives for the period 2006-2009**

	Civil court		PES	
<u>Sectors of Employment</u>	N	%	N	%
Industry	284	24,9	362	28,6
Wholesale	157	13,8	287	22,7
Transport	121	10,6	79	6,2
Hotel and catering	30	2,6	34	2,7
Commercial services	207	18,2	170	13,4
Health and wellness	129	11,3	159	12,5
Culture and recreation	41	3,6	40	3,2
Construction	49	4,3	79	6,2
Other	119	10,4	47	3,7
Missing	3	0,3	10	0,8
Total	1140	100,0	1267	100,0
<u>Firm size</u>				
Less than 10	171	15,0	257	20,3
Between 10 and 100	304	26,7	731	57,7
More than 100	570	50,0	265	20,9
Missing	95	8,3	14	1,1
Total	1140	100,0	1267	100,0
<u>Gender</u>				
Male	717	62,9	751	59,3
Female	423	37,1	516	40,7
Total	1140	100,0	1267	100,0

Table 2.

The Duration of the Dismissal Procedure

Civil court 2006-2009	Duration (in days)	Tenure (in months)	Age when employed	Hourly wage
Mean	13,54	123,38	32,21	15,81
Median	3,00	78,00	30,72	13,46
Std. Deviation	51,42	121,17	9,69	7,75
Minimum	0,00	0,00	15,16	4,80
Maximum	1122,00	606,00	64,88	83,33

PES 2006-2009	Duration (in days)	Tenure (in months)	Age when employed	Hourly wage
Mean	33,88	127,66	33,82	14,04
Median	25,00	91,00	32,83	12,69
Std. Deviation	32,25	105,45	10,35	5,70
Minimum	0,00	1,00	15,59	3,58
Maximum	309,00	513,00	65,45	73,48

Table 3A: Reasons for dismissal request: Descriptives for the period 2006-2009

Reasons of Dismissal:	PES		Civil Court	
	N	%	N	%
Economical	904	71,3	267	23,4
Dysfunctional	23	1,8	44	3,9
Disturbed relation	14	1,1	788	69,1
Reproachable behavior	28	2,2	26	2,3
Prolonged illness	286	22,6	13	1,1
Other	12	0,9	2	0,2
Total	1,267	100,0	1,140	100,0

Table 3B: Probabilities of Dismissals for Economic and Non-Economic Reasons

	PES	Civil Court	Both
Economic Reasons	0.376	0.111	0.486
	(904)	(267)	(1,171)
Non-Economic Reasons	0.151	0.363	0.514
	(363)	(873)	(1,236)
All	0.526	0.474	1.000
	(1,267)	(1,140)	(2,407)

Table 3C: Dismissal Requests Not Granted by PES through Time

Year	Percentage of Requests Not Granted	Percentage of Requests Not Granted (Economic)	Percentage of Requests Not Granted (Non-Economic)	Change in Unemployment Rate
2006	4.4	2.9	7.9	-1.0
2007	4.2	2.0	8.0	-1.0
2008	4.2	2.7	6.6	-0.6
2009	6.0	4.6	11.0	+0.9

Table 4.**Differences in Average Costs Between the Dismissal Procedures of Civil Court and Public Employment Service**

PES	Court fee	Wage costs duration of process	Wage costs time to notice	Wage costs period of notice	Total average dismissal costs
Mean		€ 2,964	€ 787	€ 3,728	€ 7,480
Median		€ 2,347	€ 583	€ 2,458	€ 6,054
Std. Dev.		€ 3,098	€ 685	€ 3,102	€ 5,648
Minimum		€ 0	€ 9	€ 92	€ 171
Maximum		€ 32,651	€ 3,948	€ 25,685	€ 61,714

Civil Court	Court fee	Wage costs duration of process	Wage costs time to termination	Severance payment	Total average dismissal costs
Mean	€ 102	€ 765	€ 3,496	€ 26,619	€ 30,982
Median	€ 104	€ 216	€ 2,213	€ 10,159	€ 13,708
Std. Dev.	€ 7	€ 1,791	€ 4,315	€ 52,370	€ 54,808
Minimum	€ 67	€ 0	€ 0	€ 0	€ 97
Maximum	€ 118	€ 17,033	€ 37,730	€ 664,174	€ 683,947

Table 5.

Differences in Average Costs Divided by Reason of Dismissal

	<i>1.Procedural costs</i>	<i>2. Wage costs during the process of dismissal</i>		<i>3.Severance pay</i>	<i>4.Total average costs</i>	
<i>PES</i>	No procedural costs	Duration of PES procedure	Time to notice	Period of notice	No severance pay	PES average dismissal costs
<i>Civil court</i>	Court fee	Duration of civil court procedure	Time to termination of the employment relationship		Severance pay	Civil court average dismissal costs
<u>NON-ECONOMIC REASONS</u>						
	<i>1.Procedural costs</i>	<i>2. Wage costs during the process of dismissal</i>		<i>3.Severance pay</i>	<i>4.Total average costs</i>	
<i>PES</i>	€ 0	€ 3,437	€ 866	€ 3,037	€ 0	€ 7,339
<i>Civil court</i>	€ 102	€ 740	€ 3,357		€ 22,718	€ 26,918
<u>ECONOMIC REASONS</u>						
	<i>1.Procedural costs</i>	<i>2. Wage costs during the process of dismissal</i>		<i>3.Severance pay</i>	<i>4.Total average costs</i>	
<i>PES</i>	€ 0	€ 2,786	€ 758	€ 3,988	€ 0	€ 7,532
<i>Civil court</i>	€ 104	€ 839	€ 3,905		€ 38,146	€ 42,994