Firing Tax vs. Severance Payment - An Unequal Comparison

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Abstract

The effects of firing costs crucially depend on the extend to which the additional costs can be shifted to the worker, which refers to the so called "bonding critique". In the recent literature about firing costs, these costs are assumed to be a wasteful tax, such that they can not be shifted to the worker. In this paper, we analyze the effects from respecting and non-respecting the bonding critique. We consistently show, that firing costs have to be introduced in a different way as severance payments. If they are introduced in a similar way, results are likely to be different, in particular for fluctuations of vacancies, unemployment and wages.

Keywords: Bonding Critique, Endogenous Separations, Firing Costs, Severance Payments.
JEL classification: E24, E32, J64.

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1 Introduction

Following Lazear (1988, 1990) and Nickell (1997) the impact of firing costs crucially depends on the extent to which the additional costs can be transferred to the worker due to wage adjustments. In this spirit, the firm reduces the wage for new hires by the present value of future firing costs and hence the wage bill of the worker remains unchanged. To avoid this "problem" the recent literature about firing costs follows the "standard view of firing costs" in the sense of Bertola and Rogerson (1997), i.e. firing costs are a wasteful tax on job destruction. This tax reflects real costs on separations and, since it is paid outside the firm-worker pair, the firm is not able to include these costs within the wage bargaining process, since it is non-Coasean. Garibaldi and Violante (2005) show that empirically firing costs have two intrinsic elements (i) transfers from firm to worker and (ii) a tax that is paid outside the firm-worker pair. While firing costs, i.e. (ii), are taxes, e.g. administrative or procedural costs[1], severance payments, i.e. (i), are paid directly to the worker, increasing consumption opportunities. Now, how to introduce firing costs properly? A severance payment for instance, has to be implemented within the bargaining problem and the worker's asset value functions, whereas the firing costs - by definition - can not be treated in this way. To be precisely, in the following firing costs are a wasteful tax - not influencing the bargaining process - and severance payments are payments to the worker - influencing the bargaining and the consumption path. We show that firing taxes have to be introduced in a different way as severance payments. If they are introduced in a similar way results are likely to be different. However, the overall performance differences are relatively small. The largest differences are obtained for the standard deviation of vacancies, unemployment and wages.

The paper proceeds as follows. In the next section we will derive the baseline model for later analysis and show two different ways to introduce firing costs and a possible way to introduce severance payments. Then, we will simulate the model and discuss the differences within the three approaches. Finally we will draw the conclusion.

[1] See e.g. Delacroix (2003).

2 Model Derivation

2.1 The Household's Problem

We assume a discrete-time economy with an infinite living representative household who seeks to maximize its utility given by

$$U = E_0 \sum_{t=0}^{\infty} \beta^t \left[\frac{C_t^{1-\sigma} - 1}{1-\sigma} \right], \tag{1}$$

where σ gives the degree of risk aversion. The household inelastically supplies one unit of labor, represented by the unit interval. Furthermore, household members pool there income as in Merz (1995). The household maximizes consumption and real money holding subject to the budget constraint

$$C_t + \frac{B_t}{P_t} = \mathcal{W}_t + R_{t-1} \frac{B_{t-1}}{P_t} + bu_t + \Pi_t + T_t. \tag{2}$$

Where b is the value of home production, $\mathcal{W}_t$ is labor income and B_t is Bond holding which pays a gross interest rate R_t. Π_t are aggregate profits and T_t are real lump sum transfers from the government. The demand function is given by $C_{it} = \left(\frac{P_{it}}{P_t}\right)^{-\epsilon} C_t$, where $P_t = \int_0^1 \left[P_{it}^{\frac{\epsilon-1}{\epsilon}} di \right]^{\frac{\epsilon}{\epsilon-1}}$ is the price index.
The FOC is given by

$$C_t^{-\sigma} \quad = \quad \beta R_t E_t \left[\frac{P_t}{P_{t+1}} C_{t+1}^{-\sigma} \right], \tag{3}$$

being a standard Euler equation.

2.2 The Firm's Problem

Monopolistically competitive firms maximize their profits by setting their price with respect to the households demand function, the production function and the employment evolution equation. Each firm consists of a continuum of different jobs. While aggregate productivity A_t is common to all firms, the specific productivity a_{it} is idiosyncratic and every period it is drawn in advance of the production process from a time-invariant distribution with c.d.f. $F(a)$. The firm specific production function is the product of aggregate productivity, the number of jobs and the aggregate over individual jobs and can be written as

$$y_{it} = A_t n_{it} \int_{\tilde{a}_{it}} a \frac{f(a)}{1 - F(\tilde{a}_{it})} da \equiv A_t n_{it} H(\tilde{a}_{it}). \tag{4}$$

Where $\tilde{a}_{it}$ is an endogenously determined critical threshold. If the specific productivity of a job is below this threshold, it is not profitable and separation takes place. This consideration results in an endogenous job destruction rate $\rho_{it} = F(\tilde{a}_{it})$. Although their is no consensus in the literature on the proper determination of the separation margin, following Fujita et al. (2007), Fujita and Ramey (2007, 2008) and Ramey (2008) empirical evidence seems to favor endogenous separations. Balleer (2009) shows that the separation rate increases after a positive technology shock, while Barnichon (2009) shows that around business cycle turning points the separation rate is causative for most of unemployment movements. Since employment decisions are subject to matching frictions, we introduce a Cobb-Douglas type matching function with constant returns to scale, i.e. $\Psi(u_t, v_t) = m u_t^{\mu} v_t^{1-\mu}$. u_t is the number of unemployed worker, v_t is the number of open vacancies, assumed to lie on the unit interval and $\mu \in (0,1)$ denotes the elasticity of the matching function. The match efficiency is governed by $m > 0$. The underlying homogeneity assumption leads to the probability of a vacancy being filled $q(\theta_t) = m\theta_t^{-\mu}$, where labor market tightness is given by $\theta_t = v_t/u_t$. Connecting the results for job creation and job destruction enables us to determine the evolution of employment at firm i as

$$n_{it+1} = (1 - \rho_{it+1})(n_{it} + v_{it} q(\theta_t)). \tag{5}$$

The firm controls the evolution of employment by adjusting the number of vacancies and by setting the critical threshold. As we will illustrate later on the worker is paid according to his specific productivity and we follow this approach by establishing the theorem that firing costs also depend on the worker's specific productivity. Initially, we define the firing costs function for a specific worker as a linear real-valued function given by $g(a_{it}) = k a_{it}$,[2] such that total firing costs

[2] Abowd and Kramarz (2003) and Kramarz and Michaud (2004) show in their empirical work that the estimated function for severance payments is roughly linear.

evolve as follows

$$G(a_{it}) = k \int_0^{\tilde{a}_{it}} a \frac{f(a)}{1 - F(\tilde{a}_{it})} da, \tag{6}$$

where $k > 0$ is the share of the productivity wasted as a tax. The function is twice continuously differentiable, strictly convex and strictly increasing in a. One should notice that we likewise could have introduced a firing cost function that features the individual real wage as an argument. However, our approach is w.l.o.g. since the wage also depends on the idiosyncratic productivity, i.e. this is only a scaling issue.

The firm maximizes the present value of real profits given by

$$\Pi_{i0} = E_0 \sum_{t=0}^{\infty} \beta^t \frac{\lambda_t}{\lambda_0} \left[\frac{P_{it}}{P_t} y_{it} - \mathcal{W}_{it} - cv_{it} - G(a_{it}) - \frac{\psi}{2} \left(\frac{P_{it}}{P_{it-1}} - \pi \right)^2 Y_t \right]. \tag{7}$$

Where the first term in parenthesis is real revenue, the second term is the wage bill, which is given by the aggregate of individual wages

$$\mathcal{W}_{it} = n_{it} \int_{\tilde{a}_{it}} w_t(a) \frac{f(a)}{1 - F(\tilde{a}_{it})} da. \tag{8}$$

This follows from the fact that the wage is not identical for all workers, instead it depends on the idiosyncratic productivity. The third term reflects the total costs of posting a vacancy, with $c > 0$ giving real costs per vacancy. The next term gives the total firing costs and the latter term formalizes staggered price setting à la Rotemberg (1982). The degree of the price adjustment costs is measured by the parameter $\psi \geq 0$. The current period average value of workers across job-specific productivities is given by ξ_t and φ_t reflects real marginal costs, given by

$$\varphi_t = \frac{\partial \mathcal{W}_t / \partial n_t}{A_t H(\tilde{a}_t)} + \frac{\xi_t - c/q(\theta_t)}{A_t H(\tilde{a}_t)}. \tag{9}$$

The job creation condition is given by

$$\frac{c}{q(\theta_t)} = E_t \beta_{t+1} (1 - \rho_{t+1}) \left[\varphi_{t+1} A_{t+1} H(\tilde{a}_{t+1}) - \frac{\partial \mathcal{W}_{t+1}}{\partial n_{t+1}} + \frac{c}{q(\theta_{t+1})} \right]. \tag{10}$$

This condition reflects the hiring decision as a trade-off between the costs of a vacancy and the expected return. Where $1/q(\theta_t)$ is the duration of the relationship between firm and worker. The lower the probability of filling a vacancy, the longer the duration of existing contracts, because the firm is not able to replace the worker instantaneously. Subsequently, we introduce three different ways to introduce separation costs.

2.3 The Bargaining Problem

2.3.1 Respecting the Bonding Critique

In this section we will strictly respect the bonding critique, i.e. we do not introduce the firing costs into the bargaining problem and the asset value function. Due to search frictions in the market, the match shares and economic rent, which is splitted in individual Nash bargaining. We maximize the Nash product

$$w = argmax\Big\{(W_t - U_t)^{\eta}(J_t - V_t)^{1-\eta}\Big\}. \tag{11}$$

$0 \leq \eta \leq 1$ is the relative bargaining power and due to a free entry condition the equilibrium value of V_t is zero. Consistently, the individual real wage satisfies the optimality condition

$$W_t(a_t) - U_t = \frac{\eta}{1-\eta} J_t(a_t). \tag{12}$$

To obtain an explicit expression for the individual real wage we have to determine the asset value functions and substitute them into the Nash bargaining solution (12). For the firm the asset value of the job depends on the real revenue, the real wage and if the job is not destroyed, the discounted future value. Otherwise the job is destroyed and hence has zero value. In terms of a Bellman equation the asset value is given by

$$J_t(a_t) = \varphi_t A_t a_t - w_t(a_t) + E_t\beta_{t+1}\left((1-\rho_{t+1})\int_{\tilde{a}_{t+1}} J_{t+1}(a)\frac{f(a)}{1-F(\tilde{a}_{t+1})}da\right). \tag{13}$$

The asset value of being employed for the worker consists of the real wage, the discounted continuation value and in case of separation the value of being unemployed

$$
\begin{aligned}
W_t(a_t) &= w_t(a_t) + E_t\beta_{t+1}(1-\rho_{t+1})\int_{\tilde{a}_{t+1}} W_{t+1}(a)\frac{f(a)}{1-F(\tilde{a}_{t+1})}da \\
&+ E_t\beta_{t+1}\rho_{t+1}U_{t+1}.
\end{aligned} \tag{14}
$$

Analogously, the asset value of a job seeker is given by

$$
\begin{aligned}
U_t &= b + E_t\beta_{t+1}\theta_t q(\theta_t)(1-\rho_{t+1})\int_{\tilde{a}_{t+1}} W_{t+1}\frac{f(a)}{1-F(\tilde{a}_{t+1})}da \\
&+ E_t\beta_{t+1}(1-\theta_t q(\theta_t)(1-\rho_{t+1}))U_{t+1}.
\end{aligned} \tag{15}
$$

Unemployed worker receive the value of home production b, the discounted continuation value of being unemployed and if he is matched he receives the value of future employment. Inserting these value functions into the Nash bargaining solution yields the individual real wage

$$
w_t(a_t) = \eta(\varphi_t A_t a_t + c\theta_t) + (1-\eta)b. \tag{16}
$$

The firm will endogenously separate from a worker if and only if

$$
J_t(a_t) < -ka_t, \tag{17}
$$

i.e. if the worker's asset value is lower than the associated firing costs.[3]
After some algebra, the threshold is defined by

$$
\tilde{a}_t = \frac{1}{(1-\eta)\varphi_t A_t + k}\left[(1-\eta)b + \eta c\theta_t - \frac{c}{q(\theta_t)}\right]. \tag{18}
$$

2.3.2 Non-Respecting the Bonding Critique

In contrast to the precedent section, we now introduce the firing costs within the bargaining problem and the asset value functions. Therefore the Nash bargining problem now looks as follows

$$
w = argmax\Big\{(W_t - U_t)^\eta(J_t - V_t + ka_t)^{1-\eta}\Big\}. \tag{19}
$$

[3] See Kugler and Saint-Paul (2000, 2004) and Lechthaler et al. (2008).

The optimality condition then consitently changes to

$$W_t(a_t) - U_t = \frac{\eta}{1-\eta}\left(J_t(a_t) + ka_t\right). \tag{20}$$

The asset value functions now are given by

$$\begin{aligned} J_t(a_t) &= \varphi_t A_t a_t - w_t(a_t) && (21)\\ &+ E_t\beta_{t+1}\left((1-\rho_{t+1})\int_{\tilde{a}_{t+1}} J_{t+1}(a)\frac{f(a)}{1-F(\tilde{a}_{t+1})}da - \rho_{t+1}ka_t\right), \\ W_t(a_t) &= w_t(a_t) + E_t\beta_{t+1}(1-\rho_{t+1})\int_{\tilde{a}_{t+1}} W_{t+1}(a)\frac{f(a)}{1-F(\tilde{a}_{t+1})}da && (22)\\ &+ E_t\beta_{t+1}\rho_{t+1}U_{t+1}, \\ U_t &= b + E_t\beta_{t+1}\theta_t q(\theta_t)(1-\rho_{t+1})\int_{\tilde{a}_{t+1}} W_{t+1}\frac{f(a)}{1-F(\tilde{a}_{t+1})}da && (23)\\ &+ E_t\beta_{t+1}(1-\theta_t q(\theta_t)(1-\rho_{t+1}))U_{t+1}. \end{aligned}$$

Some algebra then gives the expression for the individual real wage

$$w_t(a_t) = \eta\big(\varphi_t A_t a_t + c\theta_t + (1-\beta_{t+1}\rho_{t+1})ka_t\big) + (1-\eta)b. \tag{24}$$

The introduction of firing costs increases the individual real wage due to the change in the fall back position of the firm. Having discussed the wage setting process we sequentially want to focus on the firing decision and the corresponding threshold.
Since we now have a new expression for the wage, we consistently have to change the threshold, which is given by

$$\tilde{a}_t = \frac{1}{(1-\eta)\varphi_t A_t + (1-\eta+(\eta-1)\beta_{t+1}\rho_{t+1})k}\left[(1-\eta)b + \eta c\theta_t - \frac{c}{q(\theta_t)}\right], \tag{25}$$

where $(1-\eta+(\eta-1)\beta_{t+1}\rho_{t+1})k > 0$ such that firing cost decrease the threshold, i.e. protect less productive worker.

2.3.3 Severance Payments

Severance payments are close to the last subsection, in which I introduced the firing costs into the bargaining problem and the asset value functions. However, this approach goes beyond this adjustment in the sense that now the worker's asset value functions are influenced. The reason is straightforward: a severance payment is directly transferred to the worker and hence she considers this expected income in case of separation in the bargaining process. Consistently, the asset value function in case of being unemployed now looks as follows[4]

$$\begin{aligned} U_t &= b + \rho_{t+1} k a_t + E_t \beta_{t+1} \theta_t q(\theta_t)(1-\rho_{t+1}) \int_{\tilde{a}_{t+1}} W_{t+1} \frac{f(a)}{1-F(\tilde{a}_{t+1})} da \\ &+ E_t \beta_{t+1} (1 - \theta_t q(\theta_t)(1-\rho_{t+1})) U_{t+1}. \end{aligned} \tag{26}$$

The individual real wage is given by

$$w_t(a_t) = \eta\big(\varphi_t A_t a_t + c\theta_t + (1-\beta_{t+1}\rho_{t+1}) k a_t\big) + (1-\eta) b + (1-\eta)\rho_{t+1} k a_t. \tag{27}$$

The introduction of firing costs increases the individual real wage due to the change in the fall back position of the firm. Having discussed the wage setting process we sequentially want to focus on the firing decision and the corresponding threshold.
The threshold for the severance payments case is given by

$$\tilde{a}_t = \frac{(1-\eta) b + \eta c \theta_t - \frac{c}{q(\theta_t)}}{(1-\eta)\varphi_t A_t + (1 - \eta + (\eta - 1)\beta_{t+1}\rho_{t+1} - (1-\eta)\rho_{t+1}) k}, \tag{28}$$

where $(1 - \eta + (\eta - 1)\beta_{t+1}\rho_{t+1} - (1-\eta)\rho_{t+1}) k > 0$ such that firing cost decrease the threshold, i.e. protect less productive worker.

3 Model solution

The New Keynesian Phillips curve (NKPC, for short) is given by

$$\hat{\pi}_t = \beta E_t \hat{\pi}_{t+1} + \kappa \hat{\varphi}_t, \tag{29}$$

where $\kappa = (\epsilon - 1)/\psi$.
The model is then log-linearized around the steady state and simulated using the software package Dynare. In addition, we need to define the aggregate income

[4] Where J and W remain the same as in 2.3.2.

Table 1: Calibration

Parameter	Value	Note
σ	2	Smets and Wouters (2007)
β	0.99	Standard value
ϵ	11	Trigari (2004)
η	0.5	Symmetric Bargaining
μ	0.5	Hosios Rule
ψ	105	To equal Calvo staggering
μ_{LN}	0	Mean of Idiosyncratic Productivity
σ_{LN}	0.12	Cooley and Quadrini (1999)
ρ_A	0.9	Cooley and Quadrini (1999)
k	0.1	Bentolila and Bertola (1990)
ϕ_y	0.125	Standard value
ϕ_π	1.5	Standard value

given by

$$Y_t = \mathcal{W}_t + \Pi_t = A_t n_t \int_{\tilde{a}_{it}} a \frac{f(a)}{1 - F(\tilde{a}_{it})} da. \tag{30}$$

We assume a productivity shock that is AR(1), i.e.

$$A_t = \rho_A A_{t-1} + \alpha_{A,t}, \tag{31}$$

where $0 < \rho_A < 1$ is the autocorrelation of the shock and $\alpha_{A,t} \sim N(0, \sigma_A)$ is an i.i.d. error term following an univariate normal density distribution with standard deviation σ_A and $cov(A_{t-1}, \alpha_{A,t}) = 0 \; \forall \; t$.
Monetary policy targets the nominal interest rate by a standard Taylor rule, i.e.

$$i_t = \phi_y y_t + \phi_\pi \pi_t. \tag{32}$$

We calibrate the model on a quarterly basis for the U.S. and set parameter values according to some stylized facts and the recent literature shown in Table 1.

The steady state separation rate $\bar{\rho}$ is 0.10 according to den Haan et al. (2000). The critical threshold can be computed by building the inverse function, i.e. $\tilde{a} = F^{-1}(\rho)$. The steady state unemployment rate is set to $\bar{u} = 0.12$. This relatively high value of steady state unemployment reflects the shortcoming of the unemployment rate namely the nonconformity of effective searchers and unemployed workers.[5] Steady state firm matching rate is $\bar{q} = 0.7$ according to den Haan et al. (2000).

4 Discussion

Consider a one percent aggregate productivity shock. Our results for the three different specifications are presented in Table 1. We can infer that the variability of output and inflation do not significantly vary over the three different specifications, whereas a rough graphical analysis yields the insight that the respecting case has unambiguously much larger deviations from the steady state in all variables (see Figure 1). Related to the fluctuation of the job creation rate and the stated correlations, there is not much difference across the three approaches. However, a more or less significant difference is obtained in the variability of the job destruction rate, while unemployment and vacancies show different volatilities across approaches. Coherently, labor market tightness behaves differently, since it is created by these two variables. We obtain the largest differences in the real wage, being almost twice as volatile in the respecting case as in the severance case. This is straightforward and a direct consequence of the different implementation approaches. In the two cases, non-respecting and severance, separation costs directly influence the wage and hence decrease their volatility, since they decrease the heterogeneity across matches. The main differences across the approaches are caused by two transmission channels, namely (i) the entry site and (ii) the exit site channel. While the wage is rather an entry site effect (consider the job creation condition), the threshold is an exit site effect (since it determines separations). Therefore, more variability in wages implies a higher volatility in vacancies and a higher fluctuation of the threshold implies more volatility in employment and less volatility in unemployment.

Finally, we can summarize our findings as follows

1. The overall differences in business cycle fluctuations are relatively small.

2. Non-Respecting and severance payments show an - almost - identical behavior.

[5] See Cole and Rogerson (1999) for further discussion.

Table 2: Business Cycle Fluctuations

	Data	Respecting	Non-Respecting	Severance
Standard Deviations				
Output	1.6200	3.2729	3.3565	3.4083
Inflation	1.1100	1.7688	1.8132	1.8411
Real Wage	0.6900	0.2214	0.1496	0.1086
Unemployment	6.9000	7.6637	8.3308	8.7431
Employment	n.a.	6.8863	1.3985	1.4468
Vacancies	8.2700	2.1091	1.5771	1.8242
Tightness	14,9600	5.5667	6.7775	6.9405
$\tilde{a}$	n.a.	1.7635	0.4004	0.4165
JCR	2,5500	5.4728	5.6253	5.9804
JDR	3,7300	6.0788	6.3859	6.7532
Correlations				
u,v	-0,9500	0.6401	0.6060	0.6142
jcr,jdr	-0,3600	0.9958	0.9878	0.9906

Notes: Data responds to U.S. values taken from Krause and Lubik (2007).

3. Vacancies and wages are mostly influenced by the different concepts.

5 Conclusion

In this paper we have shown that the effects of firing costs, to a certain extend, depend on the way they are implemented. To be more precisely, there is a performance difference whether one talks about firing costs or severance payments. In particular firing costs, being a wasteful tax, can not be introduced into the bargaining process and the asset value functions. In contrast, severance payments have to be implemented within the bargaining process, the asset value function of the firm and the asset value function of the worker. We have shown that the impulse response functions following from non-respecting the bonding critique are close to the correspondings IRFs for severance payments and hence proved that one has to respect the bonding critique.

References

Abowd, John M. and Kramarz, Francis (2003): "The Costs of Hiring and Separations." *Labor Economics*, Vol. 10(5), pp. 499-530.

Balleer, Almut (2009): "New Evidence, Old Puzzles: Technology Shocks and Labor Market Fluctuations." *Kiel Working Paper*, No. 1500.

Barnichon, Régis (2009): "Vacancy posting, Job Separation and Unemployment Fluctuations." Mimeo.

Bentolila, Samuel and Bertola, Guiseppe (1990): "Firing Costs and Labor Demand: How Bad is Eurosclerosis?" *Review of Economic Studies*, Vol. 57(3), pp. 381-402.

Bertola, Guiseppe and Rogerson, Richard (1997): "Institutions and Labor Reallocation." *European Economic Review*, Vol. 41(6), pp. 1147-1171.

Cooley, Thomas F. and Quadrini, Vincenzo (1999): "A Neoclassical Model of the Phillips Curve Relation." *Journal of Monetary Economics*, Vol. 44(2), pp. 165-193.

Cole, Harold L. and Rogerson, Richard (1999): "Can the Mortensen-Pissarides Model Match the Business Cycle Facts?" *International Economic Review*, Vol. 40(4), pp. 933-960.

Delacroix, Alain (2003): "Transitions into Unemployment and the Nature of Firing Costs." *Review of Economic Dynamics*, Vol. 6(3), pp. 651-671.

Fujita, Shigeru, Nekada, Christopher J. and Ramey, Garey (2007): "The Cyclicality of Worker Flows: New Evidence from the SIPP." *Federal Reserve*

Bank of Philadelphia Working Paper, No. 07-5.

Fujita, Shigeru and Ramey, Garey (2007): "Reassessing the Shimer Facts." *Federal Reserve Bank of Philadelphia Working Paper*, No. 07-2.

Fujita, Shigeru and Ramey, Garey (2008): "The Cyclicality of Separation and Job Finding Rates." *Federal Reserve Bank of Philadelphia Working Paper*, No. 07-19.

Garibaldi, Pietro and Violante, Giovanni L. (2005): "The Employment Effects of Severance Payments with Wage Rigidities." *Economic Journal*, Vol. 105(506), pp. 799-832.

Den Haan, Wouter J., Ramey, Garey and Watson, Joel (2000): "Job Destruction and the Propagation of Shocks." *American Economic Review*, Vol. 90(3), pp. 482-498.

Kramarz, Francis and Michaud, Marie-Laure (2004): "The Shape of Hiring and Firing Costs." *IZA Discussion Paper*, No. 1170.

Krause, Michael U. and Lubik, Thomas A. (2007): "The (Ir)relevance of Real Wage Rigidity in the New Keynesian Model with Search Frictions." *Journal of Monetary Economics*, Vol. 54(3), pp. 706-727.

Kugler, Adriana D. and Saint-Paul, Gilles (2000): "Hiring and Firing Costs, Adverse Selection and Long-term Unemployment." *IZA Discussion Paper*, No. 134.

Kugler, Adriana D. and Saint-Paul, Gilles (2004): "How Do Firing Costs Affect Worker Flows in a World with Adverse Selection?" *Journal of Labor Eco-*

nomics, Vol. 22(3).

Lazear, Edward P. (1988): "Employment at Will, Job Security and Work Incentives." in **Hart, Robert**, ed., "Employment, Unemployment and Labor Utilization." Unwin Hyman, Boston.

Lazear, Edward P. (1990): "Job Security Provisions and Employment." *Quarterly Journal of Economics*, Vol. 105(3), pp. 699-726.

Lechthaler, Wolfgang, Merkl, Christian and Snower, Dennis J. (2008): "Monetary Persistence and the Labor Market: A New Perspective." *Kiel Working Paper*, No. 1409.

Merz, Monika (1995): "Search in the Labor Market and the Real Business Cycle." *Journal of Monetary Economics*, Vol. 36(2), pp. 269-300.

Nickell, Stephen (1997): "Unemployment and Labor Market Rigidities: Europe versus North America." *Journal of Economic Perspectives*, Vol. 11(3), pp. 55-74.

Rotemberg, Julio (1982): "Monopolistic Price Adjustment and Aggregate Output." *Review of Economic Studies*, Vol. 49(4), pp. 517-531.

Smets, Frank R. and Wouters, Rafael (2007): "Shocks and Frictions in US Business Cycles: A Bayesian DSGE Approach." *American Economic Review*, Vol. 97(3), pp. 586-607.

Trigari, Antonella (2004): "Equilibrium Unemployment, Job Flows and Inflation Dynamics." *European Central Bank Working Paper*, No. 304.

Figures

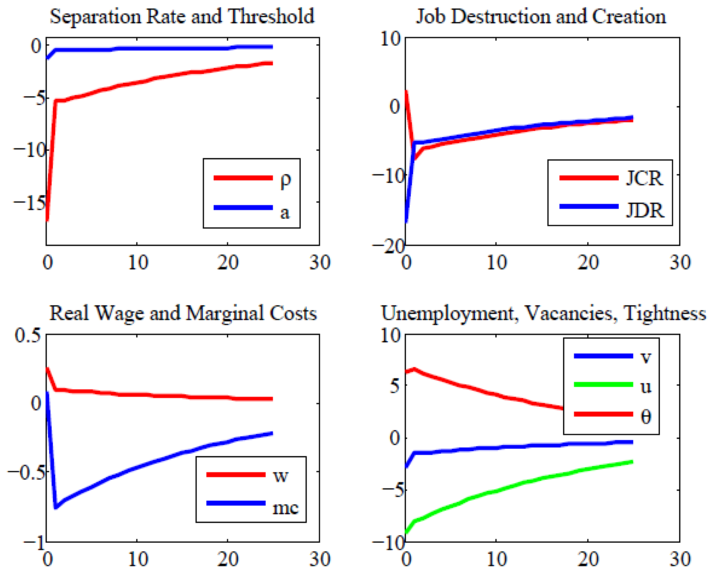

Figure 1: Respecting the Bonding Critique.

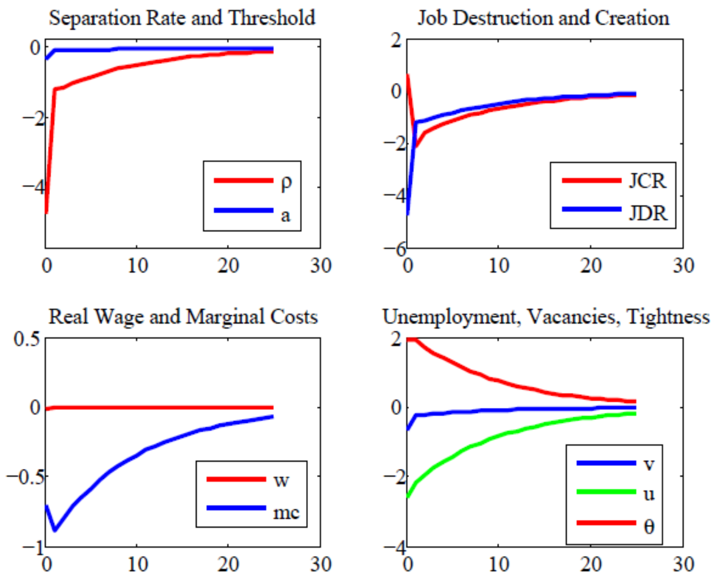

Figure 2: Non-Respecting the Bonding Critique.

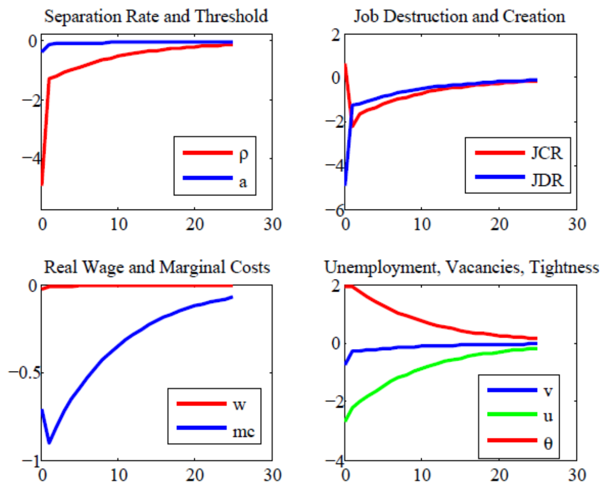

Figure 3: Severance Payments.