Cash On Hand and Job Market Outcomes

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Extended Abstract Job loss is an event that severely impacts consumption and many other aspects of households' lives. To insure against such a negative shock, most modern societies have built a system, insuring workers against losing their job. The two most popular instruments to insure against job loss are Unemployment Benefits (UB) and Severance Payments (SP). UB are typically monthly payments, contingent on being without a job, that workers receive for a limited amount of time. They have an incentive cost for the tax payer which might distort agent's behavior. SP instead are lump-sum payments paid out upon job loss and feature a pure liquidity effect, without distorting agent's behavior. In this paper we analyze the effect of SP and the interaction with UB on unemployment duration and on subsequent long-term post-unemployment outcomes (currently work in progress). We aim at investigating and disentangling the role of SP and UB on labor market outcomes up to 10 years after job loss.

The literature so far has mainly focused on the effect of benefits on re-employment wages and subsequent job durations, little attention (with the exception of [Gerard & Naritomi, 2019] and [Card *et al.* , 2007]) has been given to the effect of SP. Moreover, the works analyzing medium-term labor market outcomes ([Schmieder *et al.* , 2012b, Scrutinio, 2019, Degen & Lalive, 2013]) consider only the effect of benefits and the results are still puzzling. To this end, we want to expand our perspective not only including the effect of Severance Pay, but also expanding the spectrum of the outcomes.

Our results show that a shortage of cash on hand equivalent to two months of salary, conditional on unemployment benefits, reduces days in non employment before next job by 10%. The magnitude of this effect varies according to the experience of the job loser. While more and less experienced workers seem to spend roughly the same amount of time in nonemployment, younger workers display a larger liquidity effect. In the next step we will analyze the impact of benefits' generosity, distinguishing the role or UB and SP, on total employment duration, total labor income, and wage growth up to ten years after the first job loss relatig these outcomes to the quality of the subsequent job. This work speaks to several topics in the literature. First, we highlight how the size of the liquidity effects might vary based on workers' characteristics. Second, we are providing a framework that could help designing optimal income support programs. Third, the next step might show the very long term impact of severance pay on post unemployment outcomes.

In our analysis we exploit a reform in Austria which abolished SP for jobs starting later than 2003. We implement a difference in discontinuity design relying on eligibility rules for SP. Starting from January 1^{st} 2003, the Austrian government abolished the old SP system, replacing it with a new Occupational Pension System (OPS). In this setting, all workers starting their job before Jan 1^{st} 2003 are subject to the old SP regulation, while jobs starting afterward, are subject to the new OPS. In the *old system* workers with at least 3 years of tenure received, upon termination, an amount of cash on hand equal to 2 months of salary. Under the *new regime* instead, starting from

the second month of employment, the employer has to transfer every month 1.53% of a worker's salary to a pension fund. The reform significantly decreased the amount of cash on hand available to workers upon termination to at most one third of the amount under the old system. In terms of eligibility, in the old system workers were entitled to severance pay conditional on having at least three years of tenure and only after a lay off. After 2003, all workers are entitled to accumulate funds on the pension account. However, the criteria to be allowed to actually withdraw the funds from the account remained the same as before.

The Austrian social Security System also features a system of Unemployment Benefits. Workers with more than 12 months of experience in the last two years prior to a termination are eligible for 20 weeks of unemployment benefits, that roughly replace 55% of the previous salary. Workers with more than three years (36 months) of experience in the last five years before termination, are eligible to 10 weeks of Extended Benefits (EB), for a total of 30 weeks of benefits.

Under the old severance pay regime, all workers at their first job, become eligible for both severance pay and extended benefits at the same tenure-experience threshold. For workers that have previous work experience at another employer instead, the two thresholds do not coincide. However, every worker eligible for Severance Pay, is also eligible for extended benefits.

For our analysis we rely on the Austrian Social Security Database (ASSD).

We implement a Difference in Discontinuity analysis preforming an RDD around the tenure-experience thresholds, before and after 2003. At 36 months of tenure, workers become eligible to 2 months of SP. We compare nonemployment durations of individuals laid off shortly before and after the 36 months tenure threshold. Looking at this discontinuity before and after 2003 allows us to capture the effect of the new regime on nonemployment duration. We pursue this strategy with a Local Linear Regression (LLR) with optimal bandwidth (following [Calonico *et al.* , 2019]).We also exploit a duration analysis estimating several proportional hazard models for the risk of finding a new job. We performed the same analysis for the group of individual who are eligible for extended benefits at a different point in time. We find the magnitude of this effect varies according to the experience of the job loser. While workers seem to spend roughly the same amount of time in nonemployment regardless of their experience, younger workers seem more sensitive to Cash on Hand. Our main results are not affected by these changes.

Figure 1a and figure 1b plot the average residualized nonemployment duration of laid off workers around the 36 months (156 weeks) eligibility threshold using weekly bins. The graphs also show a local linear regression fit on both sides of the threshold for the pre and post reform periods. Looking at the threshold, people barely eligible for Severance Payments have approximately 20 days longer nonemployment duration in the pre-reform period. This effect narrows down to slightly more than 5 days after 2003. The duration analysis shows that before 2003, workers laid off with 36 month of tenure have, on average, a 20% lower probability of being employed in the first 20 weeks compared to people at the left of the cut-off. This effect is lower than 10% after 2003.

Table 1 presents the regression analysis. Columns 1 - 4 report the jump in nonemployment duration at the eligibility threshold estimated using a LLR with optimal bandwidth. The jump in nonemployment duration of SP eligible individuals at the threshold is around 20 days before 2003 and goes down to less than 10 days afterwards. This reduction is very stable across different samples and specifications. Column 5 reports the same results in terms of hazard rates. Again the effect is more than halved, and the probability of finding a job at the right of the cutoff is around 12% higher after 2003. Our results are very stable and robust to the inclusion of several contols, to bandwidth choice, and polynomial specification.

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Appendix: Figures and Tables

Figure 1a

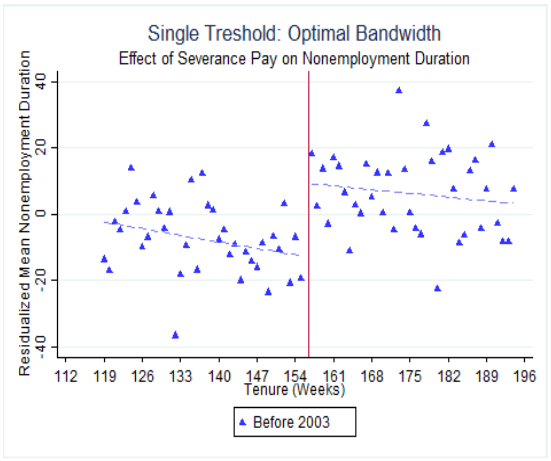
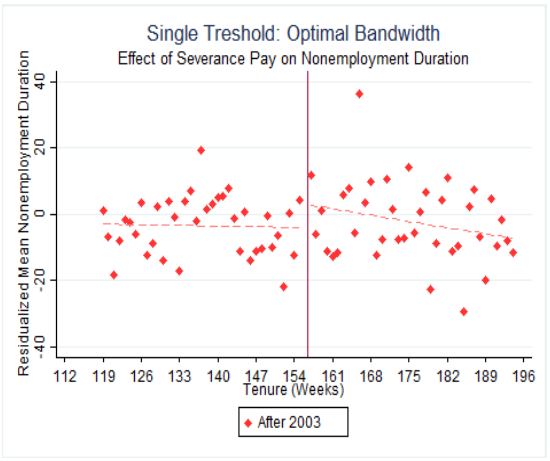


Figure 1b



Note: Figure 1a and 1b plot mean weekly residualized nonemployment duration relative to the 156 weeks of tenure eligibility threshold for Severance Pay. Red and blue line are a local linear function fit hilighting the trends in nonemployment duration. Figure 1a is for the old regime while fgure 1b is for the new regime. This sample includes people with $1 \leq tenure < 5$. Nonemployment is censored to 2 years.

Table 1: SP Effect on Nonemployment Duration: Tenure=Experience

	(1) Nonemp. Dur.	(2) Nonemp. Dur.	(3) Nonemp. Dur.	(4) Nonemp. Dur.	(5) Hazard
SP	-13.6	-13.6	-12.5	-12.0	0.12
	(6.35)**	(6.34)**	(6.46)*	(6.46)*	(0.053)**
SP & PBD30	22.2	21.9	21.2	20.8	-0.20
	(4.55)***	(4.55)***	(4.51)***	(4.50)***	(0.038)***
Mean y	166.83	166.83	167.62	167.62	
Time FE		yes	yes	yes	yes
Controls			yes	yes	yes
Time Interacted				yes	yes
BW Size (Days)	264	264	264	264	264
Pol. Order	1	1	1	1	1
Reg	LLR	LLR	LLR	LLR	COX
Obs.	42914	42914	40460	40460	52173

Note: Estimated effect of SP and Extended Benefit eligibility on nonemployment durations. Columns (1)-(4) report estimates from our Local Lonear Regression. Nonemployment durations are censored at 2 years. Column (5) reports estimates of a Cox proportional hazard model. Nonemployment durations are censored at twenty weeks; All specifications are linear in both job tenure and months worked. Control variables include age, sex, marital status, wage, blue collar status, education, and nationality. All estimates are based on the main sample of job losers with $1 \leq tenure < 5$. Robust standard errors shown in parentheses.