

Effect of Job Loss on Wealth Accumulation of Younger Workers

Stephen M. Kosovich

*Department of Economics and Finance
Stephen F. Austin State University*

Email: kosovichs@sfasu.edu

Abstract: This paper examines the extent to which permanent job losses affect the ability of younger workers to accumulate assets. A sample of both displaced and non-displaced male workers is created using information about job losses and net assets from the National Longitudinal Survey of Youth. Using a fixed effects specification for both the level and an inverse hyperbolic sine transformation of real net wealth, I find significant and persistent negative consequences of job loss on the ability of younger workers to build wealth, several years after a job displacement.

Keywords: Job Displacement, Assets, Wealth

JEL Classification Number: J63, N30

1. Introduction

Little is known about how permanent job losses affect the wealth of younger workers. This paper uses data from the National Longitudinal Survey of Youth 1979 cohort (NLSY79) to estimate the effects of permanent job losses of male workers on family net worth. By constructing a sample of non-displaced workers, this analysis allows a comparison of the assets of displaced workers to those not experiencing a job loss. The results in this paper suggest that a job loss negatively impacts the net worth of a displaced worker's family, several years after a job loss. Specifically, a fixed effects specification is estimated on both levels and an inverse hyperbolic sine (IHS) transformation of wealth. These findings add another empirical measure of the costliness of job loss to the literature.

Previous research in the job displacement literature has primarily focused on measuring the magnitude and length of earnings losses from permanent job displacements (Farber et al., 1997; Kletzer, 1998; Kletzer and Fairlie, 2003; Ruhm, 1991). These studies find earnings losses that are large and long-lasting, even among younger workers (Kletzer, 1998). Other work has measured additional negative consequences of job loss. For example, using the Panel Study of Income Dynamics, Stephens (2001) finds that household consumption decreases after a permanent job loss, although the decrease in consumption is estimated to be smaller than earnings losses. This result may suggest that households are either finding

additional sources of income through an “added-worker effect”, are borrowing, or reducing their contributions to other types of assets.

Only a few micro-level datasets exist that can be used to analyze the U.S. family wealth experience and even fewer contain information on both job history and family assets. Much of this research has focused on older workers. Chan and Stevens (1999) use the Health and Retirement Study to examine the impact of job losses on workers over the age of 50. They find significant decreases in wealth for these older workers following a job loss. As in Stevens (1997), which examines earnings losses of job displacements, the effects of displacement are felt both before and after the shock.

Gruber (2001) uses the Survey of Income and Program Participation (SIPP) to examine the wealth holdings of households. The survey is longitudinal, which allows Gruber to measure pre and post-separation characteristics of those that become unemployed. However, the survey does not permit the examination of the effects of job loss over longer time periods, and his main focus is the adequacy of unemployment benefits. Guariglia (1998) constructs several measures of income variability, meant to be proxies for risk, in the British Household Panel Survey. She estimates that agents’ saving decisions are affected by earnings variability, which she suggests is evidence of a precautionary motive for saving. Individuals appear to save more if they expect their financial situation to deteriorate.

These previous studies provide evidence that job losses have significant negative consequences for workers. However, little is understood about how job losses affect a younger family’s ability to accumulate assets. In April of 2008 the NLSY79 released updated data that fixed several known problems, including the elimination of implausible outliers, an adjustment of top-codes, and construction of a net worth variable that is consistent across years.¹ Along with the detailed information about job losses, these changes make the NLSY79 panel useful in understanding how job losses affect wealth.

2. Model

A fixed effects model is used to estimate the impact of job losses on subsequent family wealth. The basic specification is the following:

$$Wealth_{it} = \beta' X_{it} + \gamma' D_{it} + \pi_t + \lambda_i + u_{it} \quad (1)$$

The dependent variable is the net assets of the worker and spouse, if married. Independent variables include: a quartic in weeks of work experience, real income of the worker during

¹ An in-depth discussion of these problems can be found in Zagorsky (1999).

a year, and a dummy for current marital status. The vector D_{it} represents dummy variables that indicate a job loss in a current, previous, or subsequent year. Calendar year dummy variables are included to control for business cycle effects and secular changes. The fixed effects error term, λ_i , is used to control for time-invariant, unobserved characteristics. For example, one might imagine that a displaced worker may have unobservable characteristics that result in lower net wealth even if they had not been displaced. Also, I restrict my analysis to male workers, since they are more likely to have a strong connection to the labor market.

The large spread in wealth leads to the levels model being dominated by extreme values. I omit observations for those workers with assets in the top 5 percent of all respondents in the NLSY79 for each calendar year. An additional model is estimated using an inverse hyperbolic sine (IHS) transformation of wealth, without dropping any observations. The standard approach to reducing the effect of outliers in the dependent variable is to use a natural log transformation. This approach cannot be used in this model, as many families report negative net assets. I use the following IHS transformation, which is commonly used in the wealth literature (Burbidge et al., 1988; Kennickell and Woodburn, 1999):

$$\theta^{-1} \ln(\theta W + \sqrt{\theta^2 W^2 + 1}) \quad (2)$$

I set θ equal to .0001, as in several previous studies (Kennickell and Woodburn, 1999; Pence, 2002).

3. Data and Sample Description

The NLSY79 is a nationally representative sample of men and women between the ages of 14 and 22 in 1979. The survey contains information regarding a worker's labor market experience, job history, demographic characteristics, and family status. Beginning in 1985, the survey was expanded to collect information about assets, and in later years more detailed information about family net worth was gathered except in 1991 due to budgetary restrictions. The sample in this paper uses a computed measure of net worth described in Zagorsky (1999) for the years 1985 to 1994, excluding 1991.²

Assets are defined as the sum of home values, cash savings, stocks, bonds, mutual funds, trusts, businesses, farms, other real estate, vehicle values, major possessions, and retirement accounts. To compute net wealth, total debt outstanding on homes, businesses, farms, real estate, credit cards, vehicles, and other items are subtracted from assets. Net

² The survey was conducted biennially after 1994.

worth is then adjusted to 1994 dollars using the CPI-W. A more detailed examination of the wealth data is available in Zagorsky (1999).

The NLSY79 has several advantages over other surveys that are available to examine the effects of worker displacement. Unlike the Displaced Worker Survey, which was conducted every three or five years, the NLSY79 was conducted annually through 1994. Annual interviews likely result in fewer recall errors about job loss and asset values as compared to surveys that ask about longer periods. Also, because of the longitudinal nature of the survey, information about workers both before and after the job loss is readily available. Table 1 gives descriptive statistics of variables.

Table 1: Descriptive Statistics (Means) of Male Workers in Sample

Variable	Mean	Standard Deviation
Real net worth (household)	42582.19	122724.10
IHS (real net worth of household)	11316.98	12992.59
Real income (male worker)	31311.81	161725.80
Age (male worker)	27.70	3.40
Work experience in weeks (male worker)	428.17	170.09
Currently married (yes=1)	0.48	0.49
Job displacement in sample (yes=1)	0.43	0.49
Number of observations	14807	

Note: These means are reported before those observations with assets in the top 5 percent of all respondents in the NLSY79 for each calendar year are dropped.

Following a similar approach to Kletzer and Fairlie (2003), a sub-sample is constructed to compare displaced and non-displaced workers who have some attachment to the labor force. A male worker is classified as displaced if he reported no longer working at any one of five jobs because of a layoff or a plant closing, provided several conditions are met. Only job losses occurring after three consecutive years of work experience will be defined as displacements. This restriction guarantees that the workers had some minimal attachment to the labor force at the time of the job loss. Temporary job losses are not considered displacements, and those workers who report returning to their employers after such a loss are not considered to be displaced. Observations are only included for the year of displacement, one and two years prior to a displacement, and the five years after a displacement. Only the first observed displacement that satisfies the experience condition is included. This structure essentially assumes that additional displacements are a result of the initial displacement. This assumption is common previous research (Jacobson et al., 1993; Kletzer and Fairlie 2003; Ruhm, 1991).

The sample of non-displaced workers includes all male workers not experiencing a displacement in any year. For non-displaced workers, up to the first eight years of observations following four consecutive years of work experience are included. Unlike the full sample of civilian workers in the NLSY79, these workers have some minimum relationship to the labor market.

4. Results and Analysis

Table 2 contains the results of the wealth and transformed wealth fixed effects estimations. Columns (2) and (4) contain additional independent variables as described previously. For both the levels and transformed wealth estimations, permanent job losses are estimated to have a significant negative impact on the real net assets of displaced workers, as compared to the non-displaced sample. This effect persists several years after a job loss. The group of non-displaced workers provides a comparison group with which one can use to understand how assets would have grown if no displacement had occurred.

Table 2: Estimates for Fixed Effects Wealth Regressions

	(1)	(2)	(3)	(4)
Independent variable	Real Wealth	Real Wealth	HIS (Real Wealth)	IHS (Real Wealth)
Year before job loss	-2101.61*	-1448.26	-611.52*	-476.76
Year of job loss	-4700.68***	-3162.38***	-1226.62***	-879.18***
Year after job loss	-7190.45***	-4642.91***	-2071.46***	-1508.39***
Two years after job loss	-9498.65***	-6684.43***	-2446.49***	-1812.25***
Three years after job loss	-9764.05***	-6744.80***	-2324.95***	-1682.63***
Four years after job loss	-11599.27***	-8078.77***	-2348.89***	-1588.19***
Five years after job loss	-12099.32***	-7745.75***	-2291.66***	-1258.61**
Additional variables included	No	Yes	No	Yes
Year dummies included	Yes	Yes	Yes	Yes
Number of Obs.	13945	13945	14807	14807

Note: *,** and *** indicate significance at 10, 5 and 1% levels respectively. Additional variables include: a quartic in weeks of work experience, real income of worker during year and a dummy for current marital status. Estimates for the IHS transformation of real net wealth are the estimated marginal effects calculated at the median wealth in the sample, rather than the estimated coefficients from the fixed effects regression.

The inclusion of non-displaced workers allows these workers to contribute to the estimation of asset growth over the sample period. Not surprisingly, the estimated impact is larger for the levels estimation, as the IHS transformation seems to be more effective at compressing the wealth data.³ In the IHS estimation the asset costs of a job loss peak two years after a job loss. For families in which a male worker suffered a job loss and had the median level of real net assets, the estimated penalty is approximately \$1812 (1994 dollars), as compared to a similar non-displaced counterpart. This difference is large when considering that the median net wealth in the sample is \$9335 (1994 dollars). Because net assets are negative for many families, this effect could also be the result of households going into more debt after a job loss, rather than more slowly accumulating assets. The negative effect of the job loss from column (4) lessens after two years. This result suggests that displaced workers are able to partially recover from the impact several years after the job loss. In the levels model there is no such recovery. The difference is likely driven by a small number of non-displaced workers in the sample that experience large increases in assets in the later years of the sample.

5. Summary and Conclusion

With newly publicly available data in the NLSY79, this paper has examined the impact of a permanent job loss on the net assets of younger workers. For male workers, who are between the ages of 20 and 37 during the sample, a job loss is estimated to reduce family net assets even several years after a job loss. Results are reported for both an estimation on the level of net real wealth and an IHS transformation of real wealth. The model is estimated over both displaced and non-displaced workers for each year in the sample. The availability of a sample of non-displaced workers is essential in understanding how job losses affect wealth accumulation, as displaced workers may fall behind their non-displaced counterparts.

A stylized fact of the job displacement literature is that permanent job losses are associated with earnings losses for workers of all ages. As mentioned earlier, previous research has suggested that job losses reduce the assets of older workers (Chan and Stevens, 1999). In this paper, I provide evidence that those younger workers' assets are also negatively impacted by job loss, and that these effects can be long-lasting. A decline in net assets could be related to several negative consequences for these workers, including increased family borrowing or a decreased ability to save for retirement. Workers that fall behind in accumulating assets at an early age may have difficulty building wealth in later years. Understanding the effect of job losses on asset accumulation is a step toward understanding the many known costs associated with permanent job loss.

³ I report marginal effects at the median value of wealth in the sample, rather than the coefficients from the fixed effects regression.

References

- Burbidge, J. B., L. Magee, and A. L. Robb, 1988, Alternative Transformations to Handle Extreme Values of the Dependent Variable, *Journal of the American Statistical Association*, 83, 123-27.
- Chan, S. and A.H. Stevens, 1999, Employment and Retirement Following a Late-Career Job Loss, *American Economic Review*, 89, 211-216.
- Farber, H.S., J. Haltiwanger and K.G. Abraham, 1997, The Changing Face of Job Loss in the United States, 1981-1995, *Brookings Papers on Economic Activity, Microeconomics*, 55-142.
- Guariglia, A., 1998, Understanding Savings Behaviour in the U.K.: Evidence from the BHPS, *Institute for Labor Research, University of Essex*, pp. 22.
- Gruber, J., 2001, The Wealth of the Unemployed, *Industrial and Labor Relations Review*, 55, 79-94.
- Jacobson, L.S., R.J. LaLonde, and D.G. Sullivan, 1993, Earnings' Losses of Displaced Workers, *American Economic Review*, 83, 685-709.
- Kennickell, A. and L. Woodburn, 1999, Consistent Weight Design for the 1989, 1992 and 1995 SCF's and the Distribution of Wealth, *Review of Income and Wealth*, 45, 193-215.
- Kletzer, L.G., 1998, Job Displacement, *Journal of Economic Perspectives*, 12, 115-36.
- Kletzer, L.G. and R.W. Fairlie, 2003, The Long-Term Costs of Job Displacement for Young Adult Workers, *Industrial and Labor Relations Review*, 56, 682-98.
- Pence, K.M., 2002, 401(k)s and Household Saving: New Evidence from the Survey of Consumer Finances, *Finance and Economics Discussion Series 2002-06*, Board of Governors of the Federal Reserve System, pp. 40.
- Ruhm, C., 1991, Are Workers Permanently Scarred by Job Displacements?, *American Economic Review*, 81, 319-23.
- Stephens, M., 2001, The Long-Run Consumption Effects of Earnings Shocks, *The Review of Economics and Statistics*, 83, 28-36.
- Stevens, A.H., 1997, Persistent Effects of Job Displacement: The Importance of Multiple Job Losses. *Journal of Labor Economics*, 15, 165-88.
- Zagorsky, J.L., 1999, Young Baby Boomers' Wealth, *Review of Income and Wealth*, 45, 135-156.