

The Silver Lining of Unemployment

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1. Introduction

As of December 2016, the Bureau of Labor Statistics reported the unemployment rate to be 4.7%, which means that roughly 7.5 million Americans were unemployed. Beyond the obvious consequence of lost personal income, past research has shown that being unemployed has far-reaching, negative effects in sometimes surprising ways. For example, Oreopoulos, Page, and Stevens (2008) show that children of displaced fathers suffer from lower annual income than children whose fathers did not experience an employment shock. Clark, Knabe, and Rätzl (2010) list some non-pecuniary costs of unemployment, including a decrease in social status, time spent with non-family members, and sense of purpose. And Eliason and Storrie (2009) report that displaced workers are more likely to commit. All of this seems to make it clear that unemployment can have strong, detrimental consequences for those who have lost their jobs.

Given all of the hardships unemployed individuals face, it is only natural to wonder what happens to them once they start working again. There is evidence that those who have experienced unemployment can lose self-esteem, feel like their life is out of their control, and lose motivation (e.g., Darity and Goldsmith, 1996; Brockner et al., 1992; Reisel et al., 2010). If these unemployed individuals choose to work again, any one of these effects could negatively affect their performance. On the other hand, prior experiences of unemployment could cause an increase in productivity in their next place of employment. This might be the case if they feel motivated to retain their new jobs and are willing to work hard to avoid future bad outcomes (Probst et al., 2007; Brandes et al., 2010).

To test whether past unemployment increases or decreases individuals' level of productivity when they have been rehired, I conducted an experiment. I also study whether the cause of unemployment, being randomly laid off or being fired due to poor performance, matters. While past research has attempted to examine the effect of unemployment, the majority of these studies struggle to find clean measures of performance. For instance, some use wages as a measure of productivity; others use self-reported measures of performance or evaluations from colleagues (e.g., Kanfer and Hulin, 1985; Krueger and Rouse, 1998). By running an experiment, I am able to directly measure individuals' performance in a clean manner to determine the effect of past unemployment on worker productivity.

2. Experimental Design (Methodology & Description of Data)

108 subjects from Texas A&M University were recruited in November 2016 to participate in this experiment using ORSEE (Greiner, 2015). 58 of these subjects were assigned to the Performance Based Unemployment Treatment (PBUT), and the remaining fifty subjects were assigned to the Random Unemployment Treatment (RUT).

When subjects arrived to the laboratory, they were told that they would be participating in an experiment consisting of several rounds. Then they were given the instructions for Round One, in which subjects performed a real effort task for four minutes in exchange for \$4.50. The task originated from Benndorf, Rau, and Sölch (2014) and was designed to minimize learning over time. For each problem, subjects saw a 2x26 table where the first row contained each letter in the alphabet and the second row contained twenty-six, three-digit numbers. They were given a

random, three-letter “word” which they were supposed to encode by using the table. They then proceeded to the next problem when their submission was correct.

After Round One was over, subjects received feedback on how many problems they solved correctly and how much they earned. In addition, they were presented with an Employment Message. Each subject in the RUT was randomly assigned to the “unemployed” or “employed” group. Those with bad luck were told that they had a 50% chance of being allowed to participate for payment in the next round, and it was randomly determined that they would be using the next round to practice without pay. On the other hand, subjects with good luck remained “employed.” In other words, they participated in Round Two for another \$4.50.

Subjects in the PBUT were ranked based on their performance in Round 1 relative to others in their session. Those subjects who fell in the top half were told so and informed that they would be allowed to participate in Round 2 for \$4.50. In short, they stayed “employed.” Those who fell in the bottom half were informed that they would be practicing in Round 2 and would not receive any payment for their effort. This was because they were “unemployed.”

Round 2 then proceeded in the same fashion as Round 1, except half of the subjects were not earning money for that round. This cycle repeated in Round 3 and 4. In Round 3, all subjects played for money. Then some became unemployed in Round 4 using the same procedure as described above. That concluded the session, which lasted approximately one hour. At the end, subjects were paid in private with the maximum payment being \$20.00 and the minimum being \$11.00.

3. Preliminary Findings

When examining Round 3 (when the unemployed became rehired) performance within treatment, one finds an interesting result. For the RUT, Round 3 performance relative to Round 1 for those who experienced unemployment was not significantly different from relative Round 3 performance of subjects who remained employed ($p=0.45$). Yet, for the PBUT, those who were unemployed after Round 1 increased their relative Round 3 performance significantly more so than those who remained employed ($p=.01$).

When one compares Round 3 performance within employment history type, another interesting result appears. There was no significant difference between relative Round 3 performance for the RUT or PBUT subjects who remained employed ($p=0.38$). However, PBUT subjects who had experienced unemployment had a higher relative Round 3 performance compared to RUT subjects ($p=0.04$). This seems to suggest that fired individuals do learn from past mistakes and try harder at their next jobs whereas victims of layoffs understand that their efforts were unrelated to their job security and do nothing to change their behavior.

4. Significance to Symposium for Agricultural & Applied Economics Research

Aside from the fact that the majority of the audience will likely be employed (and perhaps curious about what would happen to them if that were to change), I believe that my research will spark conversation because of the unique methodology used to answer my research question. As mentioned above, past literature in economics tended to use preexisting data to study unemployment. Furthermore, most only studied layoff victims in an attempt to avoid endogeneity issues. Therefore, my new experimental approach should generate comments about the pros and cons of experimental research in studying employment and the external validity of such research. Because my topic is related to labor, it should also produce ideas about the policy implications of my finding.