



Labour Market Matters

Special points of interest:

- Study finds that the likelihood of getting a callback requesting an interview significantly decreases with the length of a worker's unemployment spell prior to a job application
- Education at both the secondary and post-secondary levels is found to increase the probability of re-employment among the unemployed; and additional post-secondary education reduces the likelihood of becoming unemployed.

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Kory Kroft
(University of Toronto)

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Study finds evidence that employers may discriminate against job applicants with long unemployment spells

How does time off from work affect an individual's job prospects? A study by CLSRN affiliates Kory Kroft (University of Toronto), Fabian Lange (McGill University) and Matthew J. Notowidigdo (University of Chicago) entitled **“Duration Dependence and Labor Market Conditions: Theory and Evidence from a Field Experiment”** ([CLSRN Working Paper no. 101](#)) examines the role of employer behavior in generating “negative duration dependence” – the adverse effect of a longer unemployment spell on individual reemployment prospects. The main finding is that the likelihood of getting a callback requesting an interview significantly decreases with the length of a worker's unemployment spell prior to a job application.

In a field experiment, the researchers submitted 12,054 fictitious resumes to 3040 job openings located in the largest 100 Metropolitan Statistical Areas (MSAs) in the United States. At random, the authors assigned unemployment spells of varying length (up to 36 months) to three quarters of the CVs, while the remainder of the CVs conveyed that the worker was currently employed.

Callback rates decline rapidly with the duration of unemployment, with the steepest decline coming in the first eight months of the unemployment

spell. For unemployment durations beyond that, the callback rate is flat. Since the spell length is randomly assigned to resumes, this decline in the callback rate represents the causal effect of unemployment durations on interview callbacks.



Matthew J. Notowidigdo
(University of Chicago)

The magnitude of duration dependence was found to vary according to the strength of the labor market. In particular, the study finds that duration dependence is stronger when the unemployment rate is relative low. In fact, after roughly six months of unemployment, expected callback rates are fairly similar across weak and strong labor markets, even though these markets differ significantly in expected callback rates for newly unemployed workers. For example, labor markets with unemployment rates above the national median had callback rates

for *short-term* unemployed of only about 4 percent, while callback rates for the same group in markets with unemployment rates below the median were roughly 5.5 percent. However, after 6 months, callback rates were almost equalized between these two markets because duration dependence is significantly stronger in robust labor markets.



Fabian Lange
(McGill University)

Overall, the results are consistent with the idea that employers discriminate against workers with longer unemployment durations. The finding that duration dependence weakens when labor markets are weak suggests that employer screening plays an important role in generating duration dependence. Employers use the unemployment spell length as a signal of unobserved productivity and recognize that this signal is less informative in weak labor markets

Does Education Reduce Unemployment? New Evidence on the Impact of Education on Unemployment Incidence and Re-employment Success

The labour market in the U.S., Canada, and many European countries has been characterized by dramatic structural changes in recent decades, partly due to technological change, globalization, and the shifting economic environment. In addition to these ongoing sources of adjustment, high unemployment rate and weak economic activities persist in many countries as they slowly recover from the “Great Recession” of 2008–09. Thus, whether unemployed workers are able to adjust efficiently to adverse employment shocks has become increasingly important for both individuals’ labour market success and the efficiency of the overall labour market.

A paper by CLSRN affiliates Craig Riddell (University of British Columbia) and Xueda Song (York University) entitled “[The Impact of Education on Unemployment Incidence and Re-employment Success: Evidence from the U.S. Labour Market](#)”¹ investigates the impact of formal education on transitions between labour force states, especially the transition from unemployment to employment. The study shows that education at both the secondary and post-secondary levels increases the probability of re-employment among the unemployed. Additional post-secondary education reduces the likelihood of becoming unemployed. Additional secondary education, however, does not have a significant influence on the likelihood of becoming unemployed.

In this study, the authors address the endogeneity of education problem by using data on

compulsory schooling laws and child labour laws as well as conscription risk in the Vietnam War period to create instrumental variables to identify the causal relationships between education and employment outcomes. Based on the U.S. Current Population Survey (CPS) (1980–2005) data, the study finds that the probability of re-employment conditional on being unemployed one year earlier is about 40 percentage points higher for high-school graduates than for those who did not complete high school, with each additional year of schooling leading to a 4.7-percentage-point increase in the probability of re-employment. Based on the U.S. 1980 Census data, the study also finds that graduating from college increases the probability of full-time re-employment by over 40 percentage points for those unemployed for more than 8 weeks in the previous year, with each additional year of schooling increasing that probability by 6 to 7 percentage points.



Craig Riddell
(University of British Columbia)

Findings from this study also suggest that the impact of education on probability of re-employment is heterogeneous. The impacts of additional schooling on re-employment rates are

particularly large in the ranges of 11–13 and 15–16 years of schooling. There are diminishing returns to schooling beyond 16 years, and there are below-average impacts for years of education less than 11 years. This study also provides support for a causal link between education and unemployment incidence (i.e., the probability of job loss). Specifically, both college attendance and college graduation reduce the probability of job loss by 11 percentage points, and an additional year of schooling reduces this probability by 2 percentage points. Additional formal education at the secondary school level, however, does not have a significant influence on the incidence of unemployment.

“[T]he probability of re-employment conditional on being unemployed one year earlier is about 40 percentage points higher for high-school graduates than for those who did not complete high school, with each additional year of schooling leading to a 4.7-percentage-point increase in the probability of re-employment.”

By providing the first evidence for the causal link between education and transitions between employment and unemployment, the study not only contributes to the growing literature on the private and social benefits of education, but also bears important implications for public



Xueda Song
(York University)

policy. First, it provides empirical evidence that supports education as an effective means to enhance adaptability, a valuable characteristic in a changing labour market. Second, to the extent that education may reduce unemployment incidence and improve re-employment outcomes among the unemployed, the private and social benefits of education may be understated by standard outcome measures (e.g., earnings). Third, the study lends support to the case for education as a “preventative” alternative to government-sponsored adjustment assistance policies, which are often based on a “repair shop” model that deals with problems ex post. As is believed to be the case with health care, preventative strategies may be more efficient than “repair shop” strategies in addressing labour market challenges.

¹*Labour Economics*, Volume 18, Issue 4, August 2011, pp.453–463

Endnotes

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Articles in *Labour Market Matters* are written by Vivian Tran - Knowledge Transfer Officer, CLSRN, in collaboration with the researchers whose works are represented. For further inquiries about *Labour Market Matters* or the CLSRN, please visit the CLSRN Website at:

<http://www.clsrn.econ.ubc.ca> or contact Vivian Tran at: Vivian.Tran@ubc.ca