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Labour Market Outcomes and Skills Acquisition of High-School Dropouts

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Abstract

We utilize an instrumental variable approach to analyse the effect that dropping out of high school has on 17 outcomes pertaining to wages, employment and subsequent skill acquisition for youths. Our analysis is based on the older cohort of the Youth in Transition Survey (YITS) for 2003, an ideal data set because it contains a rich array of outcome measures and their observable determinants as well as variables for instrumenting the dropout indicator (based on a link to the 1999 data). Our analysis indicates that dropouts have poorer wage and employment outcomes, and they do not make up for their lack of education through additional skill acquisition and training. The analysis thereby suggests that policies to curb dropping out could have both desirable efficiency effects (high returns) as well as distributional effects (high returns to otherwise more disadvantaged groups) and potential social spillover affects.

Executive Summary

We analyse the effect that dropping out of high school has on 17 outcomes pertaining to wages, employment and subsequent skill acquisition for youths. To account for the potential endogeneity of the dropout status we utilize an instrumental variable approach. Our identification strategy relies on differential effects of local labour market conditions on the dropout decisions of young persons based on youth and adult unemployment rates at the time the individual dropped out of school. High provincial youth unemployment rates may induce youths to stay in school given the difficulties they may otherwise have in obtaining a job (i.e., discouraged worker effect). Since this is a decision that would be made when they are likely under the age of 18 or 19, this would not affect their current labour market outcome when they are between the ages of 22 and 24 in our data set. As well, a high adult provincial unemployment rate for adults age 25-44 captures more general labour market conditions and an “added worker” effect whereby a high adult unemployment rate may induce youths to drop out to maintain otherwise declining family income.

Our analysis is based on the older cohort of the Youth in Transition Survey (YITS) for 2003 (cycle 3). The YITS is ideally suited for our analysis for three main reasons. First, it contains a wide array of outcome measures (17 in our study) for analysing the employment, wages and subsequent skill acquisition of dropouts compared to non-dropouts. Second, it contains a rich array of observables to control for the effect of a range of skills related to computing, writing, reading, communication, problem solving and maths. Third, and most importantly, it enables linking the 2003 cycle 3 file (which had information on respondent’s labour market outcomes and characteristics during the reference period of cycle 3 for estimating the second-stage outcome equations), with the 1999 cycle 1 file (which had information on peer, teacher, and parent characteristics and attitudes and behaviours while in school for estimating a first-stage dropout equation).

We utilize the older cohort of youth (cohort B) who were ages 18-20 in the year 2000 and hence who are ages 22-24 during the survey period February 2004 - June 2004. Since our comparisons of labour market and skill acquisition outcomes are between high-school dropouts and high-school graduates (but who did not go on to post-secondary education) we restrict our analysis to youths who are likely to have completed their education by completing high school or dropping out of high school, and who are not currently enrolled. The use of the older cohort ages 22-24 ensures that respondents are old enough to be at that stage since they typically would have completed high school around the age of 17 or 18.

We classify our outcome measures into three groups. The first refers to employment outcomes and includes: their employment status; whether they have a stable job that does not have a defined end-date; whether their first starting job was full-time; whether their ending job was full-time; and their job satisfaction. The second set refers to wage outcomes: their starting wage in their first job; their ending wage; their wage gains; and satisfaction with their pay. The third group of outcome measures refers to their skill acquisitions subsequent to their education: whether they participated in employer-sponsored training; whether they participated in more general career oriented training; and the hours they spent in such training.

Our analysis indicates that dropouts have poorer wage and employment outcomes, and they generally do not make up for their lack of education through additional skill acquisition and training. The analysis thereby suggests that policies to curb dropping out could have both desirable efficiency effects (high returns) as well as distributional effects (high returns to otherwise more disadvantaged groups) and potential social spillover affects.

This provides a rationale for reducing dropping-out through various policy initiatives: increases in the school leaving age; funding assistance; expansion of accessibility; providing alternative education opportunities; providing alternative pathways to the labour market; early targeting of “at risk” youths for counselling; campaigns against dropping out; and providing information on the consequences of dropping out.

From a policy perspective, the curbing of dropping out is particularly important given the substantial existing evidence from Canada and elsewhere of the high returns to education for youths as well as the fact that potential dropouts who continue in school appear to receive above-average returns to additional education, and especially the completion of high school. This is especially important given the additional evidence that initial negative experiences in the labour market for youths (as would likely occur for dropouts) have a longer-run negative scarring effect.

This challenge for youths is particularly daunting given the prominence of skill-biased technological change and the related industrial restructuring from manufacturing to a more polarized job distribution. Such forces have led to a “hollowing out” of the middle of the job distribution. Most dropouts no longer have the opportunity to move into jobs in the middle of the job distribution or to have a progression ladder to move from low-wage service jobs into the higher-wage jobs, and they do not have the skills to make the leap to the high-end jobs. As such, even if they obtain such low-wage jobs, dropouts are likely to be trapped in them for a lifetime.

The problem for high-school dropouts is particularly severe since the alternatives to acquiring additional education are not attractive. Apprenticeship programs have low enrolment rates for youths and low and declining completion rates, and they are not common in the emerging trades associated with the information economy. Minimum wage jobs are subject to a substantial adverse employment effect from minimum wages. And training as a substitute for a lack of high-school education is also not an attractive option given the poor record of such programs for disadvantaged youths. Basic education, literacy and numeracy appear to be a pre-condition upon which to build subsequent life-long learning and training. Clearly the phenomenon of dropping out of high school merits more attention given its negative consequences and the lack of viable alternatives for such dropouts.