



Canadian Labour Market and Skills Researcher Network

Working Paper No. 99

Returns to Apprenticeship: Analysis based on the 2006 Census

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April 2012

CLSRN is funded by the Social Sciences and Humanities Research Council of Canada (SSHRC) under its Strategic Knowledge Clusters Program. Research activities of CLSRN are carried out with support of Human Resources and Skills Development Canada (HRSDC). All opinions are those of the authors and do not reflect the views of HRSDC or the SSHRC.

**RETURNS TO APPRENTICESHIP: ANALYSIS
BASED ON THE 2006 CENSUS**

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[CLSRN-ApprenticeCensus1112]

Abstract

We utilize the 2006 Census -- the first large-scale, representative Canadian data set to include information on apprenticeship certification -- to compare the returns from apprenticeships with those from other educational pathways (high school graduation, non-apprenticeship trades and community college). An apprenticeship premium prevails for males but a deficit is evident for females, with this pattern prevailing across the quantiles of the pay distribution, albeit with the premium being larger for males at the lower quantiles. Reasons for these patterns are discussed as are the relative importance of differences in the endowments of wage determining characteristics and differences in pay for the same wage determining characteristics.

JEL Classifications: I21 and J24

Keywords: Apprenticeship, Earnings, Canada, Decomposition and Census

Executive Summary

We utilize the 2006 Census -- the first Canadian data set to include information on having an apprenticeship certification to compare with the returns from other educational pathways.

Our results indicate that, when compared to other alternative education pathways for apprentices, male apprentices earn substantially more (24%) than those whose highest level of education is high school graduation, considerably more (15%) than those with other trades, and even slightly more (2%) than college graduates. Overall, as the level of education of the comparison group increases from high-school graduate, to other trade certificate to community college, the relative importance of differences in pay received for the same endowments of wage determining characteristics decreases (respectively from 54% to 37% to 3%). This likely reflects a combination of the lower credential value of the training and of the unobservables possessed by apprentices relative to the more qualified comparison groups.

Since the returns from an apprenticeship for males are considerably higher than those from other non-apprentice trades, then combining them (as had to be done in studies prior to the 2006 Census) clearly underestimated the returns from apprenticeships.

For females, a vastly different picture emerges. Acquiring an apprenticeship yields lower returns than simply completing high school and substantially lower returns than completing community college, likely reflecting the fact that female apprenticeships tend to be in low-wage jobs in industries like food and service.

The patterns are fairly similar whether apprentices have or do not have a high school diploma. The patterns also tended to prevail across all quantiles of the pay distribution. However, for males the apprenticeship pay premium was generally higher at the lower quantiles with apprenticeships being a better pathway for higher earnings compared to high school or college, especially for those who otherwise would be at the lower ends of the wage distribution. For females, the overall pay deficit for apprentices relative to the other alternative pathways generally did not change much over the wage distribution- apprenticeships do not appear to be beneficial for females at any percentile in the overall pay distribution.

Overall, our results are robust across the various econometric approaches used in this paper. They show a return to apprenticeship accreditation for males that is basically equivalent to community college graduation, and significantly higher than the returns estimated for males in other trades and high school graduates. In contrast, female apprentices earn slightly less than women whose highest degrees are high school diplomas or other trades certificates, and significantly less than community college graduates.