
# Canadian Labour Market and Skills Researcher Network

## Working Paper No. 64

# Crucial Contributors? Re-examining Labour Market Impact and Workplace-training Intensity in Canadian Trades Apprenticeship

*John Meredith*
**University of British Columbia**

**June 2010**

CLSRN is supported by Human Resources and Skills Development Canada (HRSDC) and the Social Sciences and Humanities Research Council of Canada (SSHRC). All opinions are those of the authors and do not reflect the views of HRSDC or the SSHRC.

# Crucial contributors?
## Re-examining labour market impact and workplace-training intensity in Canadian trades apprenticeship

John Meredith

## Abstract

Canadian apprenticeship policy has recently turned to direct subsidies for participants, including a federal tax incentive for employers. Some assumptions underlying the employer subsidy are: that apprenticeship training is a principal contributor to the skilled trades labour supply; that employers of apprentices typically incur high training cost and risks; and that in the absence of offsetting incentives, these would deter their participation. These assumptions are tested, using an analysis of 2006 census data and a series of 33 employer interviews. The census data reveal that, in 74 "skilled trades" occupations (NOC-S group H), the proportion of the labour force reporting an apprenticeship credential is 37%. When certificates granted to "trade qualifiers" are excluded from the total, registered apprenticeship certification is found to contribute roughly 25% of the skilled trades labour supply. A closer examination of the census data reveals strong inter-occupational differences in the certification rate and in the ratio of certified to less-than-certified workers, suggesting a *de facto* hierarchy of trades occupations. The interviews reveal sharp variations in employers' workplace training efforts, challenging the twin suppositions that employers of apprentices are uniformly high contributors to skill formation, and that high training-related costs risks generally deter their participation. Differences in training behaviour are attributed to high-skill versus low-skill business strategies that in turn reflect differing product markets and regulatory constraints. Whatever the level of their training effort, all of the participating employers are able to minimize the training-related risks that have been cited as the principal rationale for employer subsidies. The paper argues for a more nuanced approach to skills policy and research in Canada, with greater attention to the diversity of actors' strategic interactions with the training system.

*Keywords:* *Apprenticeship, Skill, Trades, Training, Labour Supply, Canada*

*JEL Code:* *J21, J23, J24, L23, L88, Z13*

## Acknowledgments

I gratefully acknowledge the many sources that contributed to this work. The paper benefited from comments of participants in the CLSRN-HRSDC apprenticeship papers workshop, an anonymous peer reviewer, and Leslie Kenny. Kjell Rubenson provided valuable help with the census data. Financial assistance came in the form of a research grant from HRSDC and a post-doctoral fellowship funded by the Social Sciences and Humanities Research Council.

## Executive Summary

An analysis of 2006 census data and a series of 33 employer interviews are used to test four apparently influential assumptions in current Canadian apprenticeship policy and research. These are that: (a) apprenticeship is the main source of skill supply for trades occupations; (b) employers of apprentices are generally high investors in workplace training; (c) the costs and risks of workplace training are a deterrent to employer participation; and (d), as a general description, the apprenticeship system in Canada consists of a productive core of employer-delivered, workplace-based training, supported by a variety of publicly-provided services.

### Literature

These assumptions are clearly evident in the academic literature and popular media, and form the basis for current federal and provincial policies, including financial incentives for apprenticeship participants. Yet the Canadian literature offers little or no analysis of the premises themselves, and few resources for investigating them. In popular and official discourse, terms such as ""the trades" and "apprenticeship" are used casually and often interchangeably, reinforcing a perception that low participation and completion rates in apprenticeship constitute a crisis in the skills supply. Investigating the "trades"/"apprenticeship" relationship has been impeded by imprecise and non-aligned data classification systems, a problem partly resolved by the 2006 census. The apparent under-performance of apprenticeship in Canada is conventionally explained in terms of market failure, caused by supply-side "barriers" that deter investment by employers and/or trainees. The federal apprenticeship job creation tax credit (AJCTC) aims to offset the deterrent risks ostensibly incurred by employers of apprentices. Again, research into the nature and actual deterrent effect of such barriers is limited. A common weakness has been the extrapolation of participant characteristics (based on survey and focus-group data) onto non-participants. Research on employer costs and risks is also limited and inconclusive. The Canadian Apprenticeship Forum's (2006) estimates of the cost of apprenticeship to employers appear excessive on methodological and theoretical grounds, and are inconsistent with other empirical research.

### Research methods and findings

Assumption (a) was tested by examining 2006 census data on occupation and educational attainment. Of the total adult labour force in 74 "trades" occupations (NOC-S group H), the proportion found to hold an apprenticeship qualification is 37%, slightly smaller than the proportion with education below the apprenticeship level (39%). When certificates granted to "trade qualifiers" are excluded from the total, registered apprenticeship certification is found to contribute roughly 25% of the skilled trades labour supply. The data further reveal strong inter-occupational differences in the certification rate and in the ratio of certified to less-than-certified workers, suggesting a *de facto* hierarchy of trades occupations. In a small number of occupations at the "top" of the hierarchy (mainly in electrical and pipe trades), workers who hold apprenticeship certification make up at least 50% of the labour force, and outnumber uncertified workers by a ratio of 2:1 or more. The remaining occupations show a progressively lower

prevalence of apprenticeship certification, and higher proportions of uncertified workers. The census findings demonstrate, first, that the apprenticeship system is not the principal source of labour for most "trades" occupations, and secondly, that the labour market's uptake of apprenticeship-trained workers varies strongly by occupation.

In-person interviews with 33 employers of trades workers were used to investigate the remaining three assumptions, and the occupational patterns revealed in the census research. The interviews are not a survey, but rather a source of insight into employers' training and HR strategies, based on structured discussions of their investment behaviour, business characteristics, perceptions, and understandings. Premise (b) is countered by the discovery of sharp variations in employers' workplace training efforts, within and across occupations. On the basis of the interview data, the employers are categorized as high or low investors in workplace training, and assigned to several subgroups reflecting distinct strategies. These are interpreted as rational adaptations to differing product markets and regulatory constraints. Despite this diversity of practice, and contrary to assumption (c), all of the participating employers are evidently able to minimize training-related risk. Finally, the diverse employer practices are interpreted as a challenge to assumption (d) which depicts the apprenticeship system as a rather monolithic institution, centred on employer-delivered training, and (imperfectly) protected from market failure by public policies and services. Instead, the interviews reveal that labour market actors incorporate the institutional resources of the apprenticeship system into a range of distinct interest strategies, with diverse consequences for skill formation. While these strategies respond to a variety of demand-side conditions mentioned above, they also capitalize in different ways on distinct institutional facets of the apprenticeship system, including wage-setting, registration/indentureship, certification, and in-class technical training.

## Conclusions and implications

The findings challenge a policy orientation in Canada that has arguably overestimated the contribution of apprenticeship to the labour supply, while underestimating the diversity of labour market actors' training behaviour and the nature of their engagement with the institutions of apprenticeship. The findings point to a research agenda that, on the one hand, would further investigate the diversity of needs, capabilities, and strategies for skill formation in the industrial labour market, and on the other would help put current Canadian practice into historical and comparative perspective.