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# The Journey of Ontario Apprentices: From High School to the Workforce Appendix

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## Appendix A: Methodology

We employed different methods of classification for trade types depending on the data set used. This is because National Occupation Classification (NOC) codes, the Classification of Instructional Programs codes (CIP) and the Government of Ontario use different coding and classification systems.

The NAS contains information on the occupation codes of apprentices both during and after their program. Occupations and jobs are identified in the data sets using codes; unfortunately, NOC codes (the federal system) are not aligned with the Ontario trade codes used by the Ontario government. The coding systems are similar, however, in that they are based on specific occupations and jobs such as “plumber,” “policy analyst” or “elevator technician.” Occupation coding is important because it allows researchers to get a clear picture of the specific jobs apprentices are being trained to do. Occupation codes can be more easily tied to long-term labour market activities.

The census includes NOC codes only at the time of the survey and does not provide any previous NOC codes such as those from when an individual was enrolled in postsecondary education or training. Instead, the census categorizes education and training by CIP code during the time of education and training. This is in contrast to the NAS, which provides NOC codes both during the time of apprenticeship training and afterward. This is a key distinction between the NAS and most other Canadian surveys.

CIP codes reflect an individual’s field of study. Again, the CIP codes are not perfectly aligned with NOC codes. However, when it comes to trades, CIP codes are closely aligned to NOC and Ontario trade codes (CIP codes such as “glazier” and “education assistant” are completely aligned). This allowed us to align the data using CIP codes and NOC/Ontario trade codes to construct four categories of trades, which we used to conduct our analysis.

### The Data Caveats

#### *Alignment of Trade Groupings Across Data Sets*

To facilitate our analysis and maximize the utility of the data linkages, we have undertaken a data harmonization exercise to align three slightly different approaches to classifying the occupations of apprentices. We have done this to align with the Ontario trade codes — construction, industrial, motive power and service. These categories have been used in Ontario for many years but are not employed by the census or the NAS, which use NOC and CIP codes to categorize the trades. While there is much alignment between the three approaches, they are not identical and so we used the most detailed level of the CIP and

NOC codes to align the categories by assigning each field of study or occupation to the Ontario trades framework.

### *Limitations of Aggregation*

We present aggregate results, either for all apprentices or across the four Ontario trade codes. The aggregate data provides a global picture of apprenticeship. However, aggregates — presenting average or median outcomes across multiple trades — mask important variations at the individual trade level.

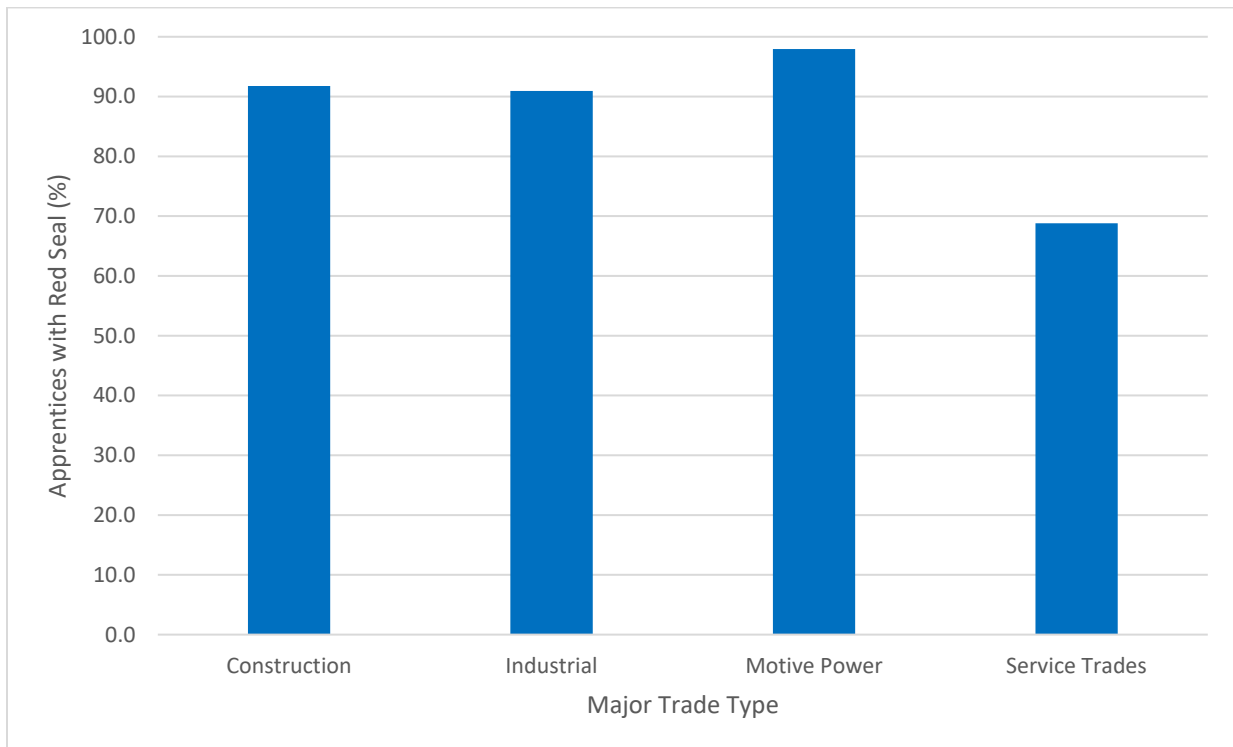
In our next paper, we propose to examine an illustrative sample of individual trades in order to reveal the variance in results across the trades.

## Appendix B: Additional Data and Figures

### Red Seal Designation

Figure B1 shows the percentage of those who completed an apprenticeship that also has a Red Seal designation. This is self-reported data. Red Seal designation for most trade types is very high (over 90%), except for service trades, where 69% of all individuals have the Red Seal designation.

**Figure B1: Percentage of Completed Apprenticeships with Red Seal Designation, 2015**



Source: NAS, n=2,600.



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