Are Canadian jobs more or less skilled than American jobs?

Kristyn Frank and Marc Frenette

Introduction:

Current debates about the future of work focus on the degree to which technological advancements will change the skills required of workers and suggest that the automation of job tasks will change the nature of many occupations. Consequently, workers whose current jobs require higher level technical skills, such as those required in science, technology, engineering, or mathematics (STEM) occupations and skills that are complementary to new technologies, such as complex problem solving, analytical thinking, or social perceptiveness, may be better prepared for changing skill demands.

Canadian and U.S. labor markets share many similarities, suggesting that the occupational skill requirements of Canadian and American workers may be comparable. However, previous research indicates that Canadians have higher educational attainment, literacy, and numeracy skills than Americans. These differences may contribute to occupational skill gaps between the two countries.

This study compares the occupational skill level requirements of jobs held by paid employees aged 25 to 64 in Canada and the United States. PIAAC data (2012) were linked to 35 occupational skill level ratings from the Occupational Information Network (O*NET) database. The following questions are addressed:

1. Are the occupational skill level requirements of Canadians' jobs higher or lower than those of Americans' jobs? Are there notable gaps in particular skill areas (e.g., STEM skills)?
2. How do occupational skill requirements differ among workers with the same level of education?
3. To what extent do workers' characteristics (e.g., sex, age, immigrant status, education level, literacy, numeracy) account for differences in occupational skill levels?

Findings:

- Canadian workers are generally employed in more highly skilled jobs than their American counterparts, particularly in STEM areas such as science, math, programming, operations analysis, equipment maintenance and selection. Canadian workers' jobs also had higher skill level requirements in reading, writing, speaking, negotiation, and complex problem solving.
- The Canadian advantage in occupational skills is mostly attributable to its large proportion of workers with non-university post-secondary credentials, who hold higher skilled jobs than their U.S. counterparts.
- Overall, numeracy explained a large portion of Canada-U.S. occupational skill gaps. Literacy and educational attainment played smaller, but still notable, roles in explaining the skill gaps.

Policy/Theory Implications:

The results suggest that higher numeracy skills have led Canadian workers to be matched to higher skilled occupations than their U.S. counterparts. Therefore, improving workers' numeracy skills could increase their likelihood of obtaining higher skilled employment, which may facilitate their readiness for the changing skill demands of future jobs.