

# EDUCATION AND WAGE GAPS: A COMPARATIVE STUDY OF IMMIGRANT AND NATIVE EMPLOYEES IN THE UNITED STATES AND CANADA

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# THE IMMIGRANT WAGE GAP

- Immigrants in both the U.S. and Canada earn less, on average, than their native-born peers (Aydemir & Sweetman, 2006; Borjas, 1994; Coulombe, Grenier, & Nadeau, 2012; Nadeau & Seckin, 2010; Oreopoulos, 2011; Papademetriou & Sumption, 2011).
- Limitations to past research:
  - Single country samples
  - Less focus on worker's numeracy and literacy skills
  - Do not match immigrants and native-born peers by occupational field

# COMPARING THE UNITED STATES AND CANADA?

- Differing immigration policies
  - Canada = Points Based
  - U.S. = Focus on Family Reunification
- Both are destination countries
  - 50% of all OECD immigrants and two-thirds of OECD immigrants with higher education (Grogger & Hanson, 2011)
- Strategic contrast
  - Relative similarities of their school systems “make it possible to isolate those factors responsible for any observed differences” (Davies and Hammack, 2005, p. 91)

# IMPORTANCE OF COMPARISON

- U.S. interest groups have been concerned with immigrants' skill levels and employment (see e.g., Kim, 2013; Parker & Martin, 2013)
- It is important to understand the effects of skill-based and family reunification-based policies as well as relationships between immigration status, education, skills, and employment outcomes

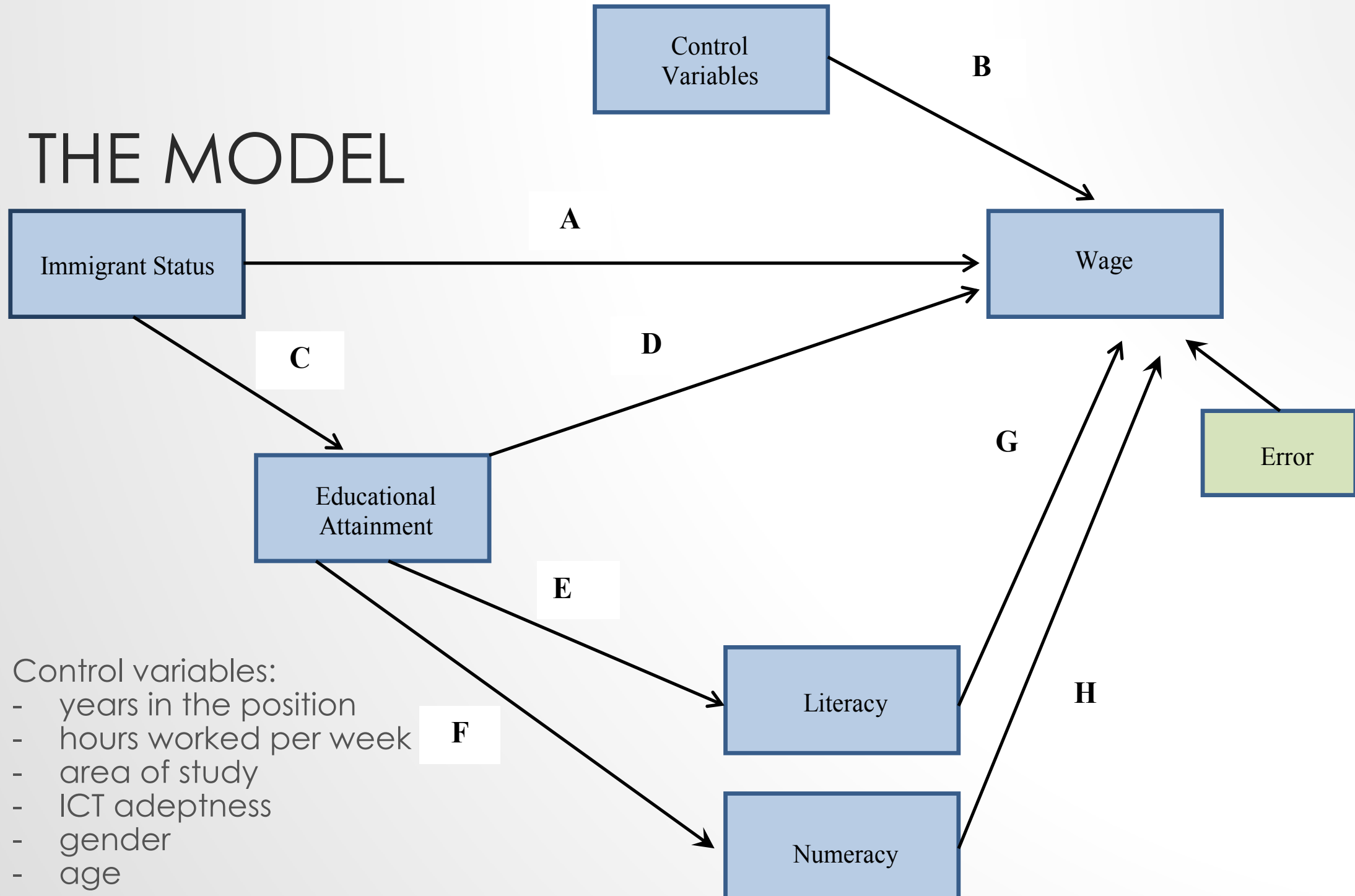
# HYPOTHESES

- H1: First generation immigrants in Canada will have relatively more education and higher skills than their peers in the U.S.
- H2: The more educated and higher skilled immigrant population in Canada will hold positions in higher wage fields, relative to the immigrant population in the U.S.
- H3: The immigrant wage gap will be less pronounced in Canada, relative to the U.S.
- H4: The immigrant wage gap within the U.S. and Canada will differ by occupational field

# DATA AND METHODS

- 2012 Program for the International Assessment of Adult Competencies (PIAAC)
  - Public Use Files for literacy and numeracy skill assessments, work data, education levels, and demographic information
  - Restricted wage data obtained with assistance from the OECD
  - Multiple imputations for missing data
- Path analysis (simultaneous regression) to test for direct as well as indirect effects of education on skills and wages
  - Separate analyses for each country
  - Separate analyses for different occupational fields
- Multinomial logistic regression to predict occupations from immigrant status

# THE MODEL



Control variables:

- years in the position
- hours worked per week
- area of study
- ICT adeptness
- gender
- age

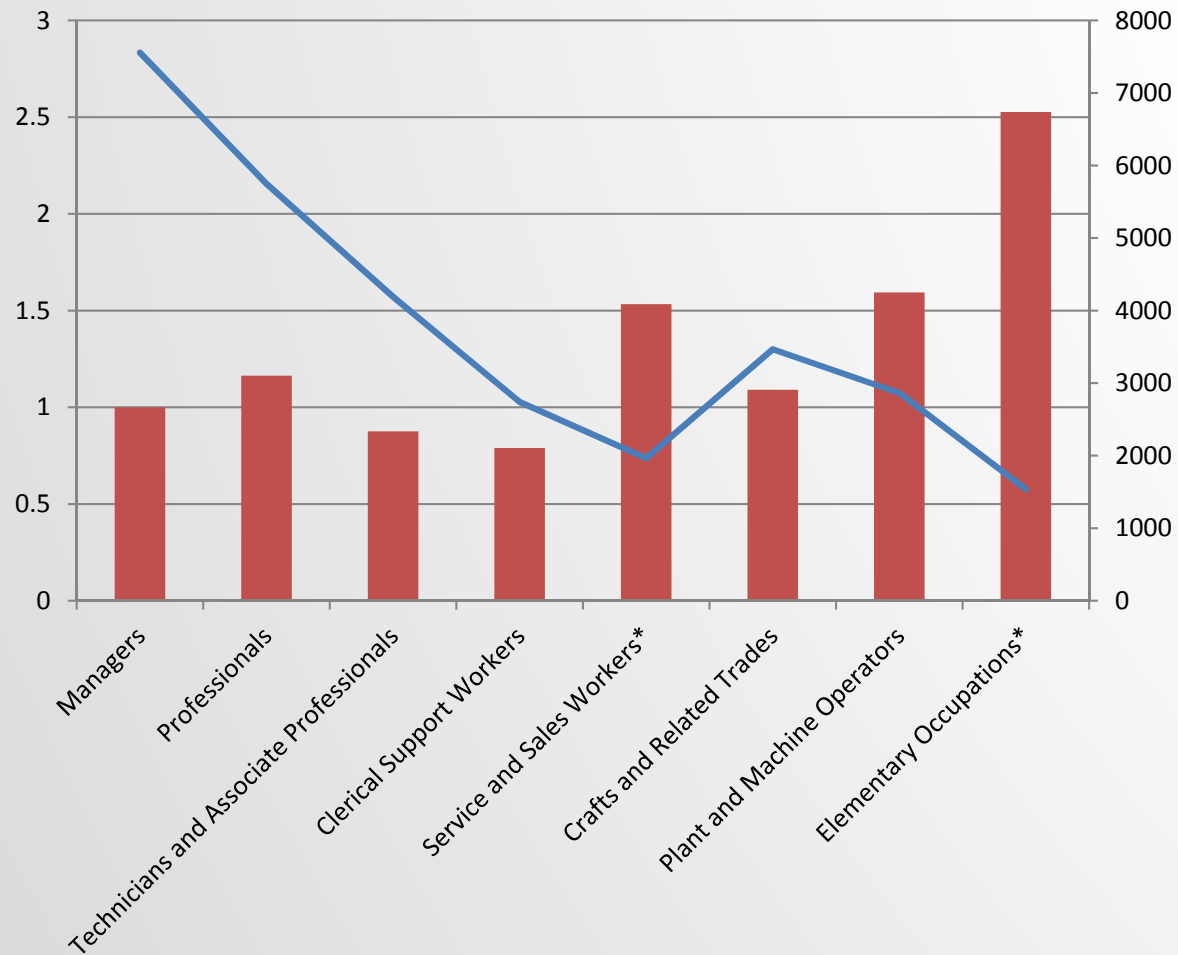
# RESULTS H1: FIRST GENERATION IMMIGRANTS IN CANADA WILL HAVE RELATIVELY MORE EDUCATION AND HIGHER SKILLS THAN THEIR PEERS IN THE U.S.

- Immigrants in Canada complete over one and a half more years of education on average (1.611,  $p < .001$ ). In the U.S. a significant education gap is present with immigrants completing a half year less than their native peers (-.706,  $p < .001$ )
- Test scores indicate a significant gap in literacy ( $p < .001$  for both) and numeracy skills ( $p < .001$  for both) between immigrants and native peers in both countries
- The magnitude of the gap is roughly three times larger in the U.S. (Literacy, 37.347; Numeracy, 32.850) than in Canada (Literacy, 13.254; Numeracy, 9.151)

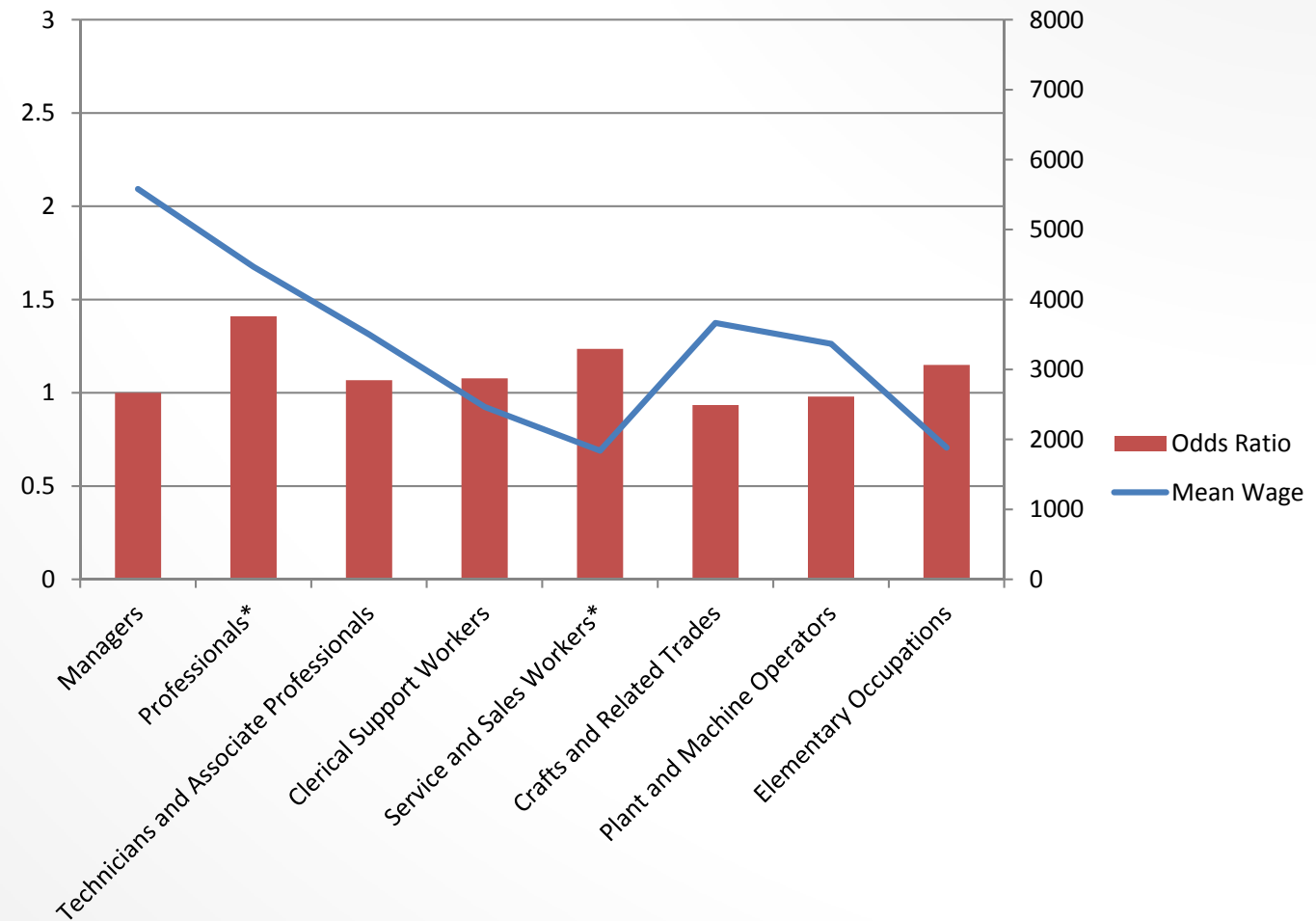


# RESULTS – H2: THE MORE EDUCATED AND HIGHER SKILLED IMMIGRANT POPULATION IN CANADA WILL HOLD POSITIONS IN HIGHER WAGE FIELDS, RELATIVE TO THE IMMIGRANT POPULATION IN THE U.S.

## United States



## Canada



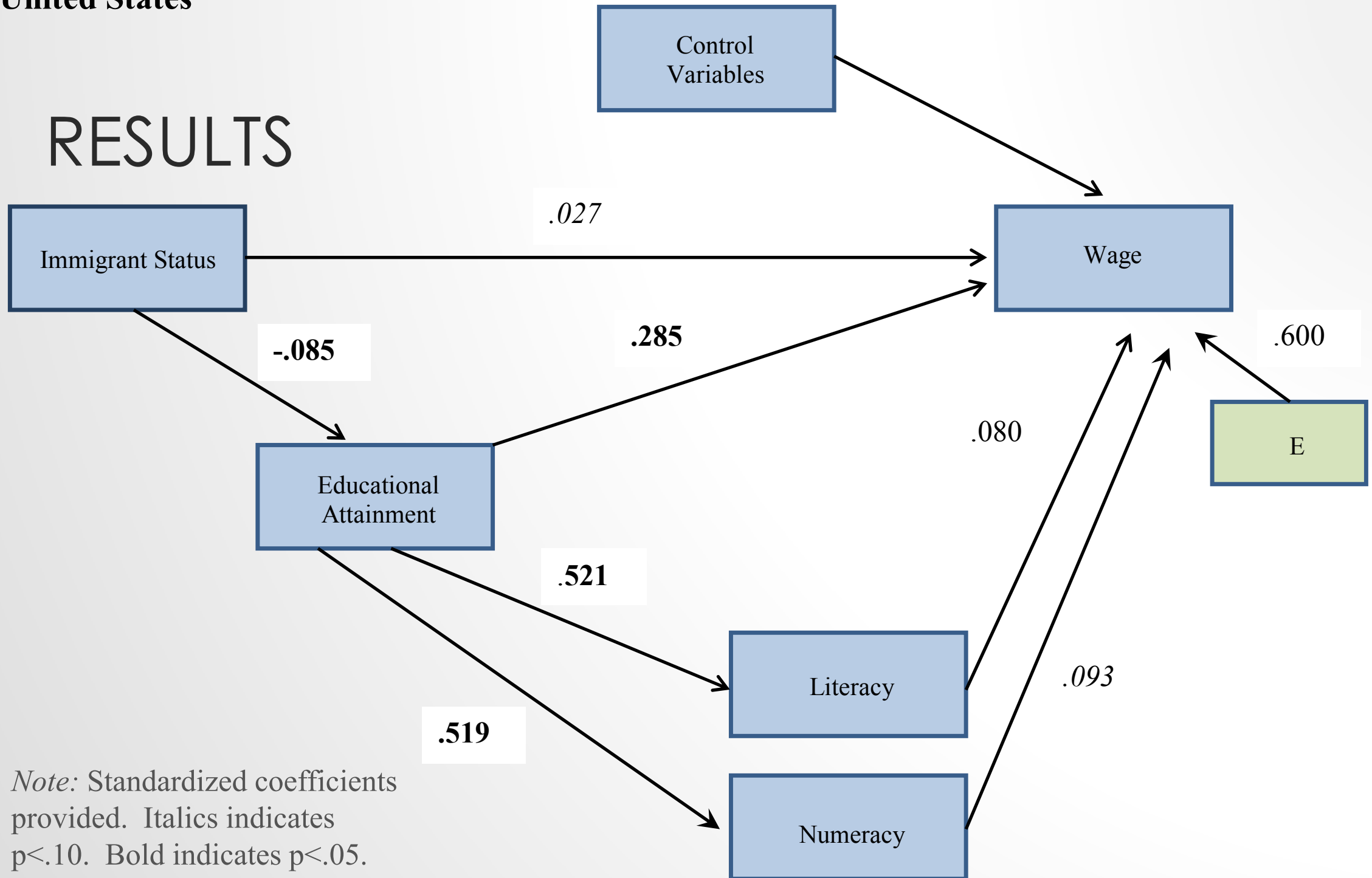
Note: Managers were used as the reference group (OR=1.0). \* p<.05

# RESULTS – H3: THE IMMIGRANT WAGE GAP WILL BE LESS PRONOUNCED IN CANADA, RELATIVE TO THE U.S.

- Initial Wage Gap
  - U.S. = \$282.33
  - Canada = \$233.00

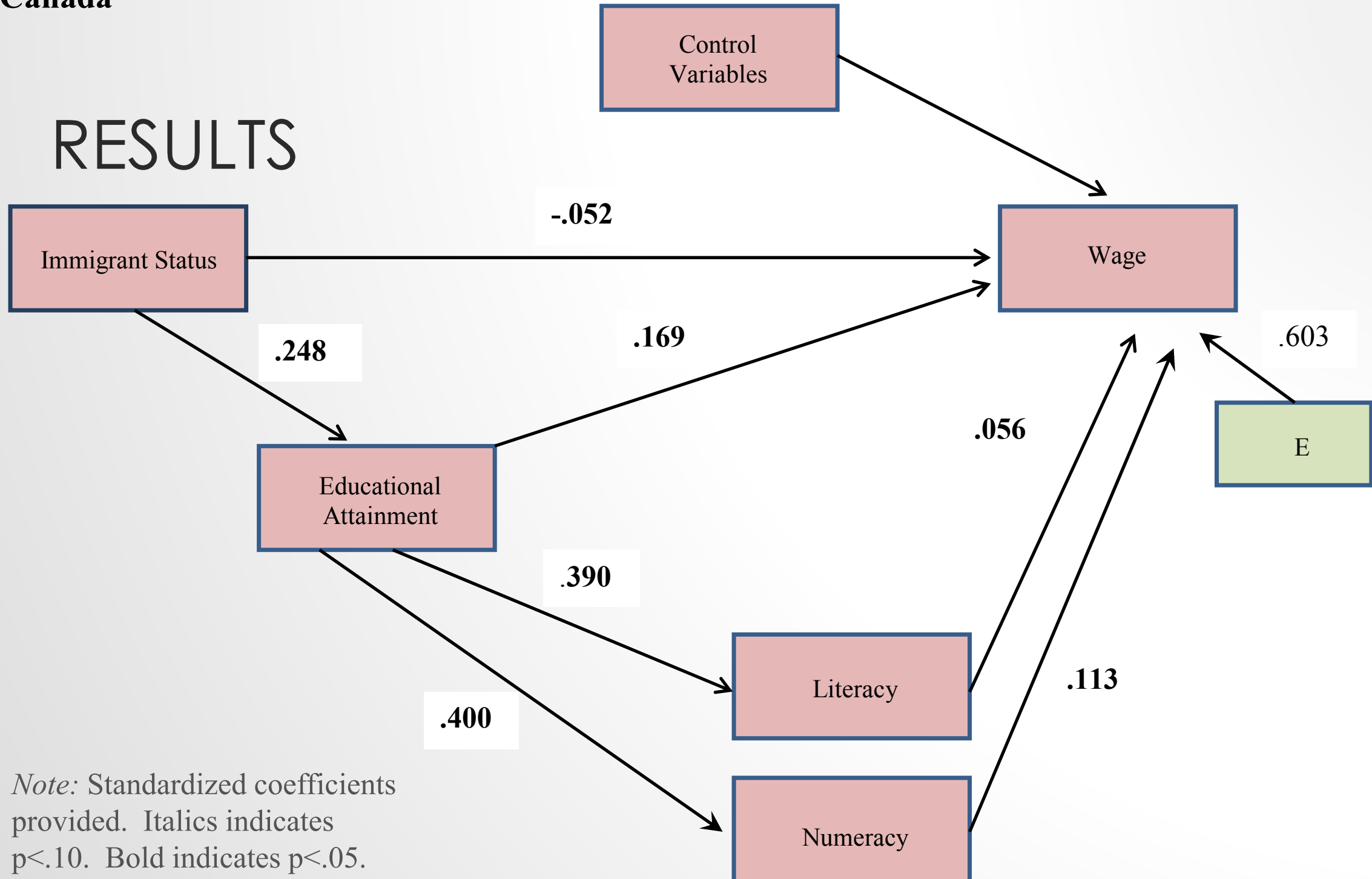
# United States

## RESULTS



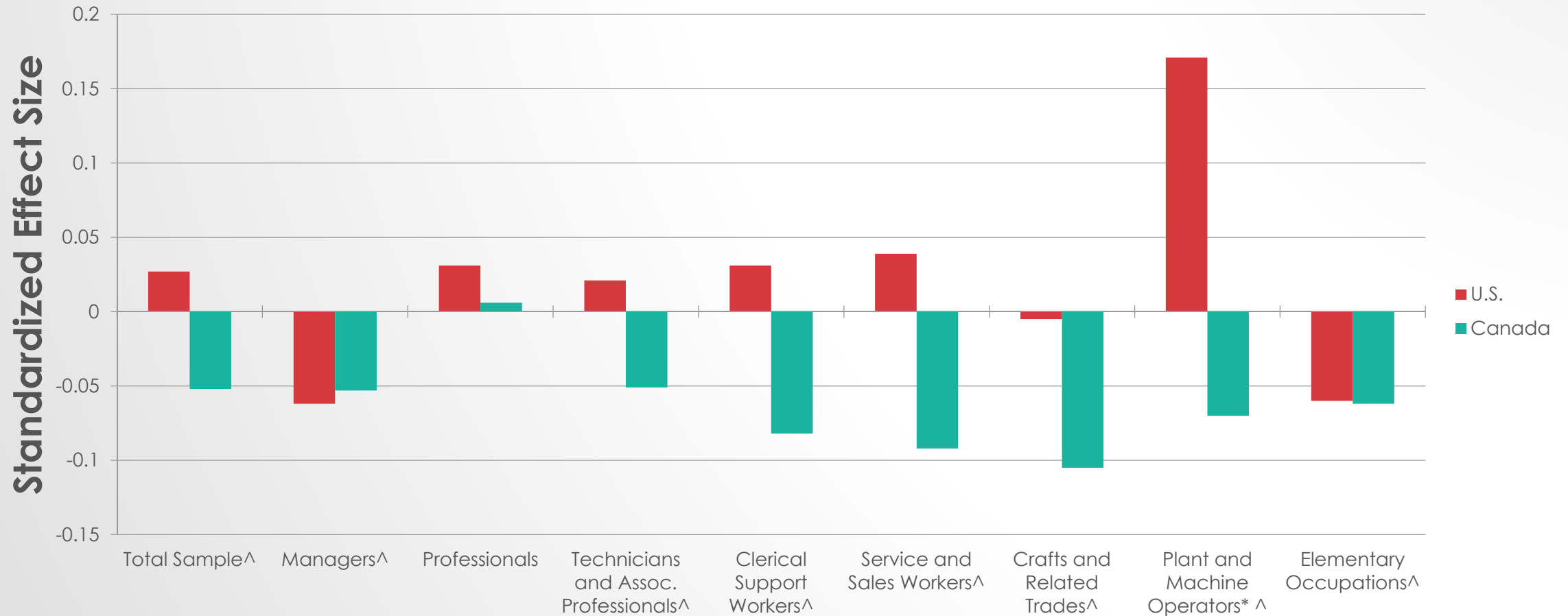
*Note:* Standardized coefficients provided. Italics indicates  $p < .10$ . Bold indicates  $p < .05$ .

# RESULTS

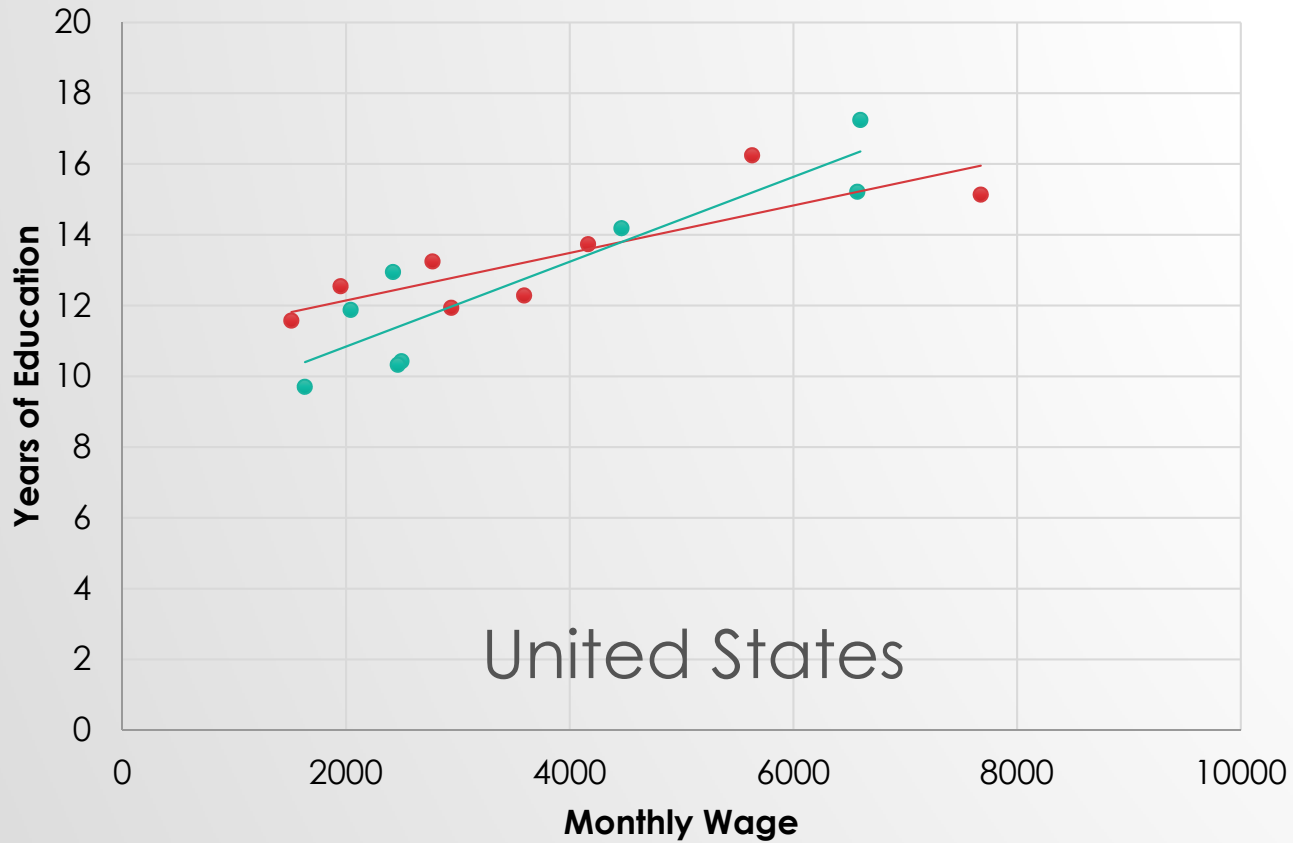


*Note:* Standardized coefficients provided. Italics indicates  $p < .10$ . Bold indicates  $p < .05$ .

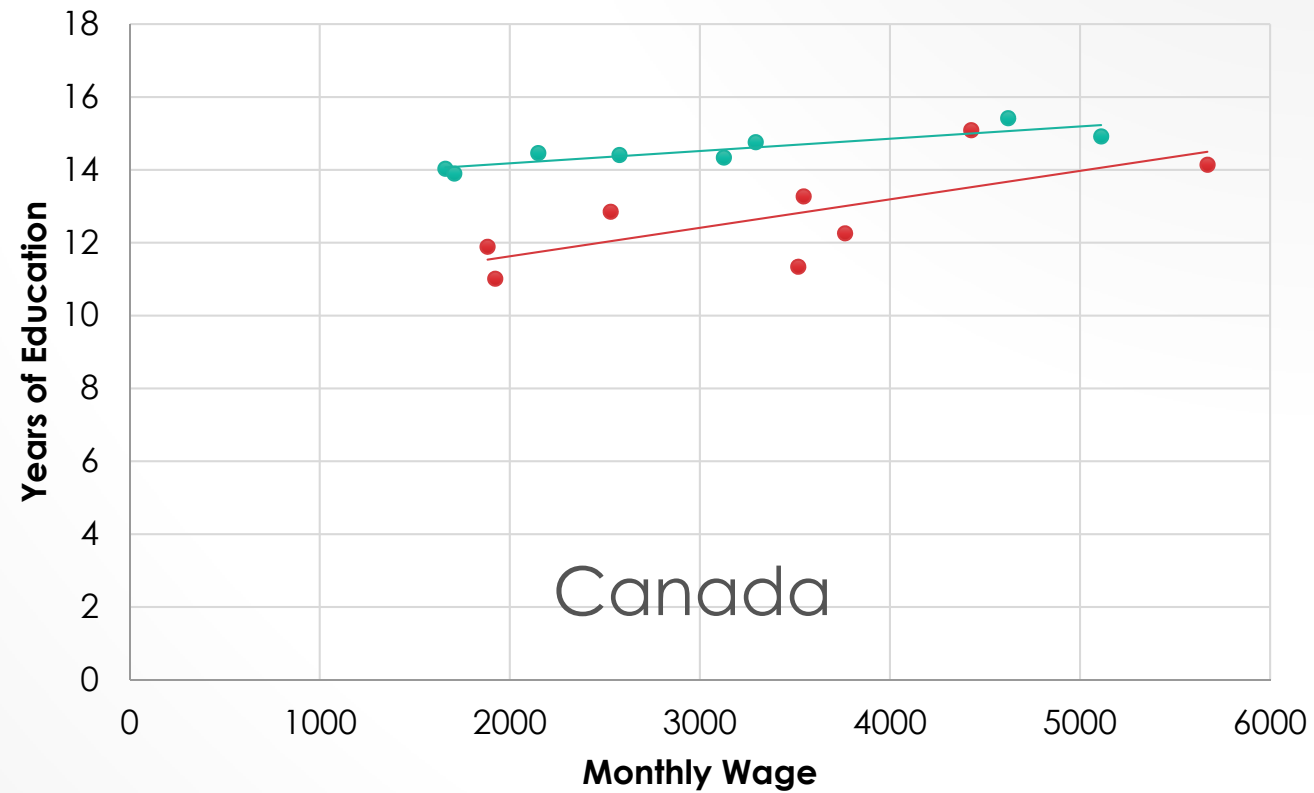
# RESULTS – H4: THE IMMIGRANT WAGE GAP WITHIN THE U.S. AND CANADA WILL DIFFER BY OCCUPATIONAL FIELD



*Note:* Standardized coefficients provided. Negative numbers indicate immigrant wage gaps. Positive numbers indicate immigrant wage advantage <sup>^</sup> p<.05 (Canada) \* p<.05 (U.S.)



- U.S.-Native
- U.S.-First Generation Immigrants
- Linear (U.S.-Native)
- Linear (U.S.-First Generation Immigrants)



- Canada-Native
- Canada-First Generation Immigrants
- Linear (Canada-Native)
- Linear (Canada-First Generation Immigrants)

# MAJOR FINDINGS AND IMPLICATIONS

- Differences between immigrant populations in education and abilities are at least partially an effect of different national immigration policies
- After controlling for education, numeracy and literacy skills, as well as a host of other demographic and work specific variables, a significant immigrant wage gap is present in nearly all occupational fields in Canada (with the exception of managers) with the monthly wage differential ranging from \$223 to \$601
- Neither an immigrant wage gap nor advantage is present in any occupational field within the U.S. suggesting that within a given occupation immigrants make roughly the same monthly wage as native peers with equivalent education and literacy and numeracy skills

# MAJOR FINDINGS AND IMPLICATIONS – *UNITED STATES*

- In the U.S. the initial wage gap appears to be a result of the disproportionate concentration of immigrants in low wage positions. This wage differential is eliminated once we match immigrants and natives by occupation and control for education and literacy and numeracy skills
- In the U.S., in general, immigrants are having difficulty accessing higher wage jobs—likely due in part to immigrants' significantly lower levels of education and literacy and numeracy skills
- To address the immigrant wage gap in the U.S., attention needs to be targeted to the well-documented educational attainment and achievement gaps between immigrants and natives



# MAJOR FINDINGS AND IMPLICATIONS – CANADA

- The immigrant wage gap in Canada is not a by-product of controlling for education
  - Controlling for the immigrant education advantage in Canada does not expose the immigrant wage gap but expands it
- The presence of a wage gap across nearly all occupational fields in Canada suggests that, consistent with prior literature, there may be underlying cultural preferences or practices that lead to differential wage outcomes (employment discrimination)
- Although the point based immigration policy in Canada appears to be successful at recruiting highly educated immigrants, more needs to be done to support their transition once they arrive in-country.

# FUTURE RESEARCH

- Differences in wage returns between international and domestic education credentials.
- Post-hoc matching (i.e. propensity score matching) to explore how similarly educated and skilled immigrants in one country might fare in the other.
- More in-depth within occupational field investigations.
- Restricting the sample to those outside of typical school age (16-23).

# THANK YOU

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