DEMOGRAPHIC INFLUENCES ON CONSTRUCTION CRAFT SHORTAGES IN THE U.S. AND CANADA

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Data Sources

• **Secondary (Raw) Data**
  1. National Opinion Research Center, University of Chicago, General Social Survey on Craft Job Satisfaction
     • 2,251 Craft Workers
     • Current Population Survey (CPS), 705,321 Craft Workers
  3. Statistics Canada (Gov’t)
     • 79,022 Craft Workers
  4. National Craft Assessment and Certification Program
     • 381,729 Craft Workers
  5. Associated Builders & Contractors Craft Championships Registrations
     • 156 Craft Workers
  6. CII Benchmarking and Metrics Data
     • 68 projects

• **Other Secondary (Aggregated)**
  7. U.S. Bureau of Labor Statistics
     • Current Employment Statistics (CES)
  8. Build Force Canada Data
     • 858,260 Craft Workers
  9. Alpha Resources
     • ~20,000 Craft Workers (estimated)
  10. Industrial Projects Report
     • 864 job advertisements (12 months)
  11. U.S. Department of Education, High School Transcript Study
     • Digest of Education Statistics
  12. Construction Users Roundtable
     • Construction Labor Market Analyzer

• **Primary Data**
  13. CII RT-318 Survey
     • 29 projects
Actual Annual Unemployment Rate

[Craft workers only]

The Great Recession

Natural Unemployment Rate

Actual Monthly Unemployment Rate
[Craft workers only] Jan 2013 - Apr 2015

Agenda

• Primary Structural Change in Craft
  Demographics

  ▪ Age
  ▪ Race and Immigration
  ▪ Educational Attainment
Aging of the U.S. construction workforce is accelerating.
Average Age

Construction vs. All Other Industries

Average Aging Rate = 0.092 years/year

Average Aging Rate = 0.248 years/year

Average Aging Rate = 0.405 years/year

Average Age at Trades level

Construction Industry’s Average Age
U.S. vs. Canada [Craft trades only]

CANADA SOURCE: Build Force Canada

Average Age

- U.S.
- Canada

**Age Distribution: Electricians**

**2007 vs. 2013**

**2007:** Average Age = 38.7

**2013:** Average Age = 41.4

**Age Distribution: Pipefitters**

**2007 vs. 2013**

**2007:** Average Age = 39.7

**2013:** Average Age = 41.5

Immigration and construction in the U.S. and Canada... short-term solutions?
Canadian Citizenship

[Construction vs. All Other Industries]

SOURCE: Statistics Canada.
High School Graduates or Higher in Construction
[By Canadian Citizenship]

SOURCE: Statistics Canada.
Skilled Workers Immigration System in Canada

The diagram compares the points weighting in Canada’s Old System versus the Express Entry System. The Old System and Express Entry System are shown with different bar graphs, indicating how the points are distributed among various factors:

- **Work experience**
- **Skill transfability**
- **Adaptability**
- **Age**
- **Education**
- **Language**
- **Job offer**

The Express Entry System places a significantly higher emphasis on factors such as work experience and job offers. The diagram is sourced from the Government of Canada.
Construction vs. All Other Industries
Growth in the U.S. Hispanic workforce

Hispanic Population vs. Residential Construction Spending

The Great Recession

SOURCE: Construction Spending, U.S. Census Bureau.
### Construction Hispanic at Trades level

<table>
<thead>
<tr>
<th>Trades</th>
<th>Hispanic Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roofers</td>
<td></td>
</tr>
<tr>
<td>Drywall installers, concrete and terrazzo finishers, and plasterers</td>
<td></td>
</tr>
<tr>
<td>Painters, construction and maintenance</td>
<td></td>
</tr>
<tr>
<td>Carpet, floor, and tile installers and finishers</td>
<td></td>
</tr>
<tr>
<td>Construction laborers and helpers</td>
<td></td>
</tr>
<tr>
<td>Brickmasons, blockmasons, and stonemasons</td>
<td></td>
</tr>
<tr>
<td>All Trades</td>
<td></td>
</tr>
<tr>
<td>Carpenters</td>
<td></td>
</tr>
<tr>
<td>Pipelayers, plumbers, pipefitters, and steamfitters</td>
<td></td>
</tr>
<tr>
<td>Electricians</td>
<td></td>
</tr>
</tbody>
</table>

High School Graduates or Higher (Hispanic vs. Non-Hispanic)

Recent challenges with U.S. career and technical education (AKA vocational programs).
Average Number of Credits Earned in Each Subject Area by Public High School Graduates. [1990 - 2009]

Areas of Average Number of Credits Earned in Career and Technical Education by School Location [2000 - 2009]

US Rural and Urban Population
[1900 – 2010]

SOURCE: U.S. Census Bureau, Decennial Censuses
Conclusion

• There is a “greying” of the U.S. workforce.
  – Implications on methods and safety
  – Canada appears more stable

• Significant differences in educational gap between Hispanic and non-Hispanic U.S. craft
  – Minimal difference between Canadian craft by immigration status

• Shifts in Career and Technical Educational programs and the geographic shifts in the U.S. may become hindrance to the U.S. craft