

# Why do STEM immigrants do better in one country than another?

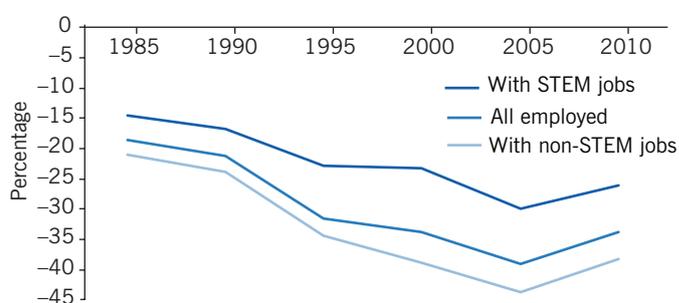
Where STEM immigrants were educated strongly influences their economic success and possibly their impact on innovation

Keywords: STEM skills, immigrant selection, US-Canada differences

## ELEVATOR PITCH

Canada, the US, and most Western countries are looking to STEM (science, technology, engineering, and mathematics) immigrants to boost innovation and economic growth. Canada in particular has welcomed many STEM immigrants over the past quarter of a century. In the US, there is an ongoing debate about whether the H-1B visa program is being used effectively to attract more STEM immigrants. Interestingly, significant differences exist between the two countries in earnings and likely the innovation activity of highly educated immigrants, which highlights the likely role of immigration policy in determining such outcomes.

Earnings gaps between immigrant and Canadian-born STEM-educated workers



Note: Adjusted for age, gender, geographic location, education level, weeks worked, and full/part-time status.

Source: Based on data in [1].

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## KEY FINDINGS

### Pros

- + Immigration leads to a large supply of highly educated STEM workers in some countries, such as Canada and the US.
- + Highly educated immigrants contribute disproportionately to patent filing activity in the US and perhaps other countries largely due to the high proportion educated in STEM fields.
- + In the US, highly educated immigrants working in STEM jobs have a relatively small entry earnings gap with the native born, and “catch up” to the native born very quickly.

### Cons

- The earnings gap between highly educated immigrants and native STEM employees is much larger in some countries, like Canada, than in others, namely the US.
- STEM-educated immigrants who do not find STEM jobs can face very poor economic outcomes, as observed in Canada.
- Economic and possibly innovation outcomes are much more positive for STEM immigrants educated in Western developed nations than in developing countries.

## AUTHOR'S MAIN MESSAGE

Simply attracting highly educated STEM immigrants does not necessarily result in technical innovation and productivity gains. The host country should be concerned with the immigrant selection process and how STEM immigrants respond to it, the supply (number) of STEM immigrants added to the labor force through immigration, where the immigrants are educated, and any potential barriers to their economic integration. Involving employers appears to improve the selection process. In some cases, smaller and better-targeted STEM immigrant selection programs may be more useful than large increases in the number of STEM immigrants, as in Canada.