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Trade and productivity: insights from Canadian firm-level data

Presentation to the Senate Committee on Foreign Affairs and International Trade

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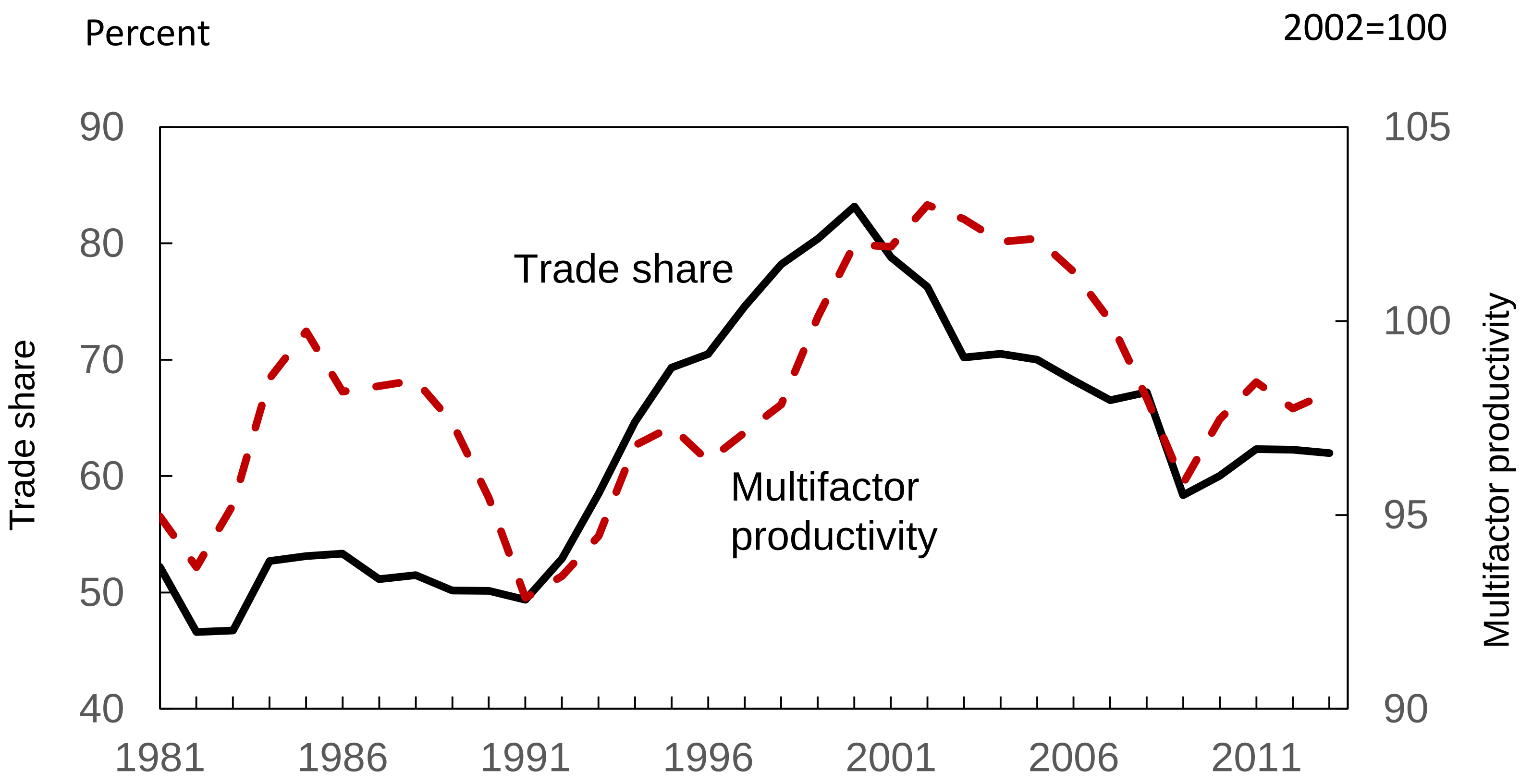
Close relationship between international trade and productivity in Canada



Sources: Authors' calculations based on Statistics Canada CANSIM database, tables 380-0064 and 383-0021.
Note: Trade share equals exports plus imports relative to gross domestic product (GDP), all in current dollars. Multifactor productivity is the ratio of real GDP to combined labour and capital inputs (base year 2002 = 100).

Access to foreign markets has improved productivity in Canadian manufacturing

- Exporters were the dominant source of aggregate productivity growth in the 1990s (Baldwin and Yan 2015, Baldwin and Gu 2003).

- Imports also matter for Canada’s productivity growth (Gu and Yan 2014).

Firm responses to trade liberalization

Access to foreign markets increases a firm's productivity, via

- Product-line specialization and economies of scale as plants grow larger (Baldwin et al 2002, 2005, 2006);
- Transfer of knowledge (technology adoption, R&D collaboration and spending) (Baldwin, Gu, Yan 2003, 2004a);
- Intensified competition (Baldwin and Gu 2004a).

Adaptation and investment requirements

Trade benefits do not happen automatically.

- Businesses that succeed abroad tend to be adaptable and innovative, introducing new products and processes (Baldwin and Gu 2004a, Lileeva and Trefler 2010).
- They also tend to be those who invest in advanced technologies, research and development and training (Baldwin and Gu 2004a).

Trading environment also affects a firm’s success

- Conditions in the macro environment that are beyond the direct control of Canadian firms also matter, such as tariffs, exchange rate movements and general global economic conditions.
- These factors have had important effects on the magnitude of productivity gains (Baldwin and Yan 2015a, 2012a,b, 2011, Baldwin, Gu and Yan 2013).

Industrial restructuring promotes productivity growth

- Trade raises productivity by promoting industrial restructuring. The least productive firms exit, the more productive firms expand, and aggregate productivity improves.

- This production reallocation is estimated to have accounted for 50 -60% of productivity gains in Canada's manufacturing sector that were associated with the Canada-US tariff cuts in the 1990s (Baldwin and Gu 2004b, Trefler and Melitz 2012).

Conclusion

- Adaptation to new larger markets promotes productivity growth.

- Successful expansion to new markets is affected by broader macroeconomic conditions as well as firm-level factors (such as the ability to adapt, invest and innovate).