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Centre for the
Study of Living
Standards:
Invitational Series on
Living Standards

Outlines of a National Productivity Strategy

Dr. Robert D. Atkinson
September 22, 2016

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About ITIF

- One of the world's top science and tech think tanks
- Formulates and promotes policy solutions that accelerate innovation and boost productivity to spur growth, opportunity, and progress
- Focuses on a host of issues at the intersection of technology innovation and public policy:
 - Innovation processes, policy, and metrics
 - Science policy related to economic growth
 - E-commerce, e-government, e-voting, e-health
 - IT and economic productivity
 - Innovation and trade policy

Today's Presentation

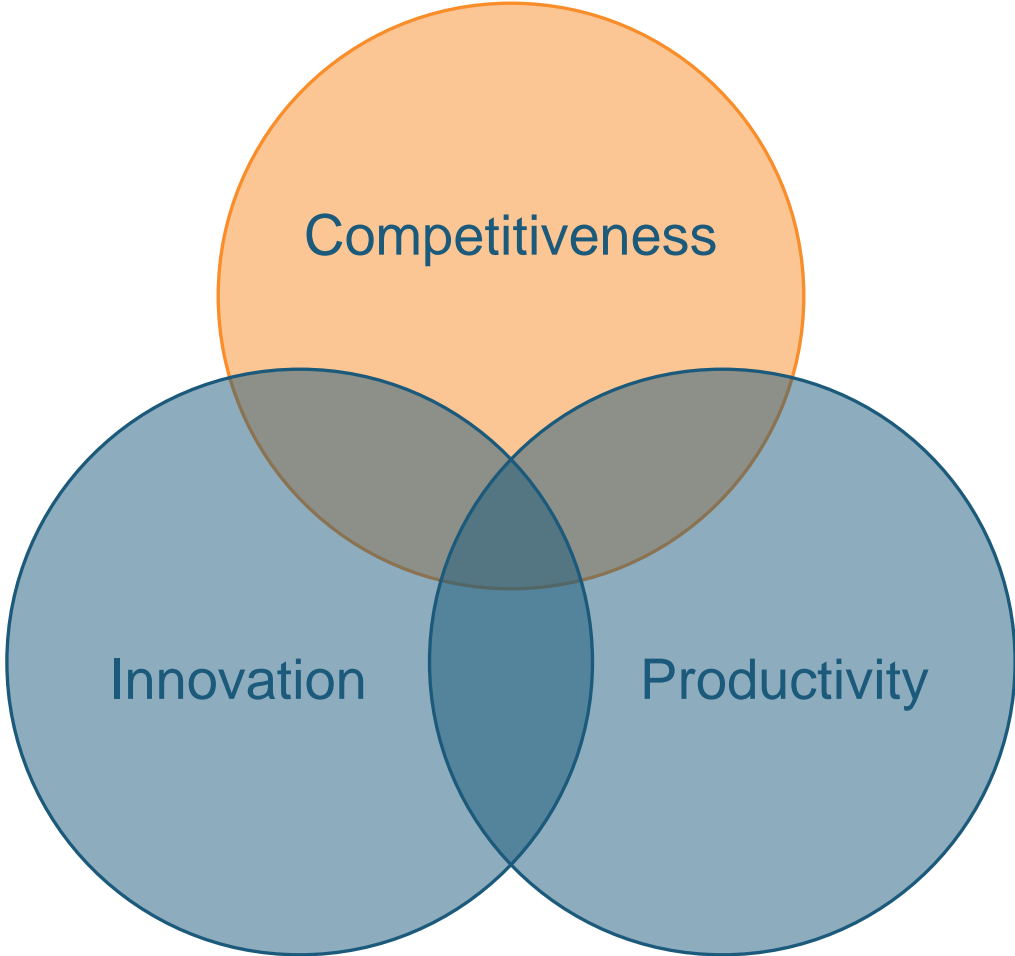
1 Overview

2 The Case for a Productivity Strategy

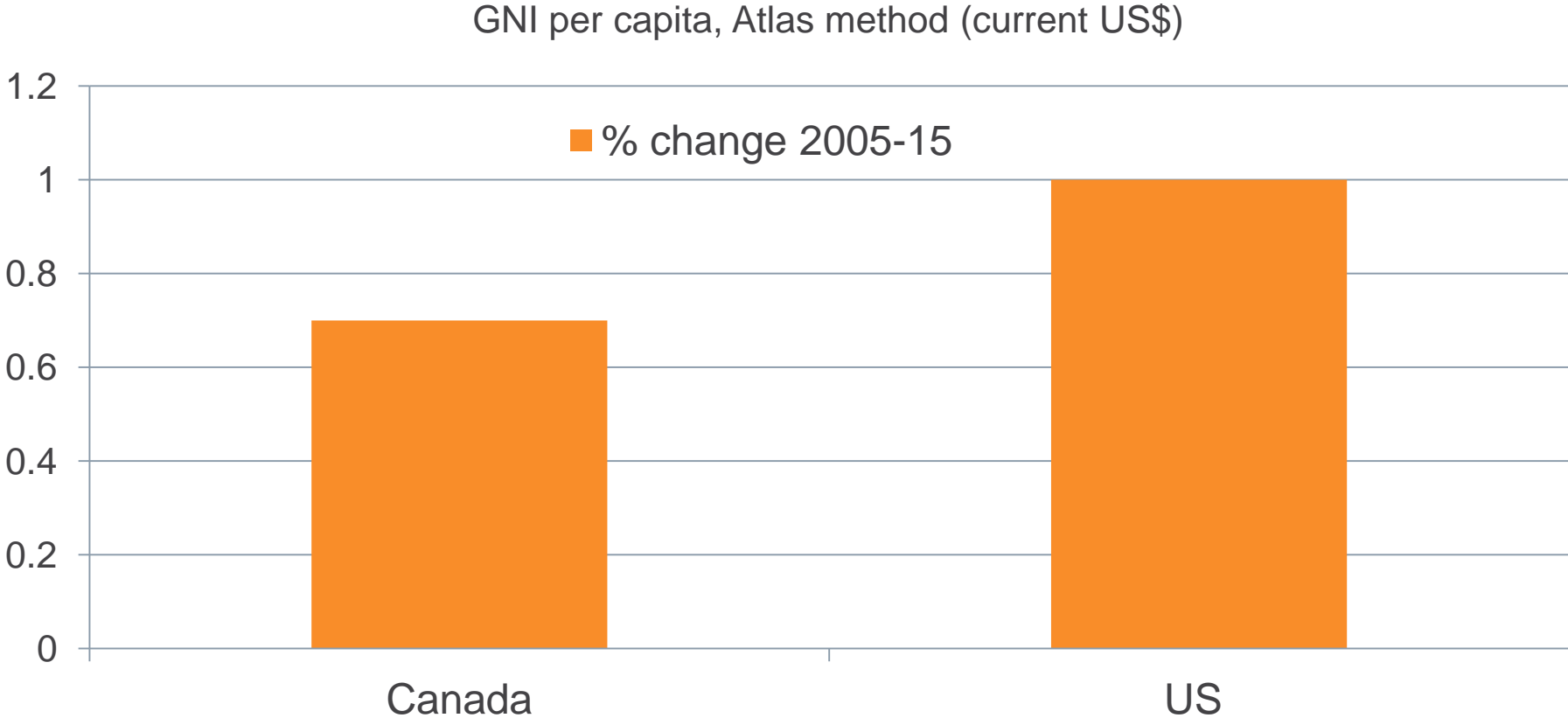
3 Components of a Productivity Strategy

4 Jobs?

Productivity, Innovation, & Competitiveness Are Different



Canada's is Worse



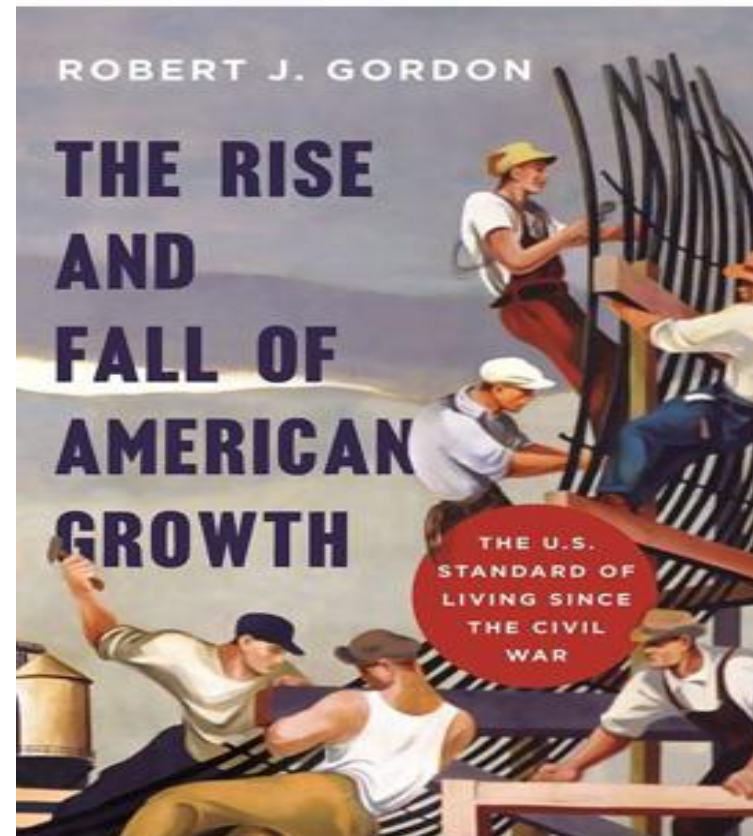
Source: Conference Board, "Total Economy Database," Labor productivity per person employed in 2014 US\$; World Bank, "Gross National Income per Capita, Atlas method (current US\$)"

Why Has Productivity Lagged?

- Not mismeasurement
- Inadequate Investment
- Difficulty adopting new tools, especially tech platforms
- Failure to take advantage of technology (gap between leaders and laggards growing)

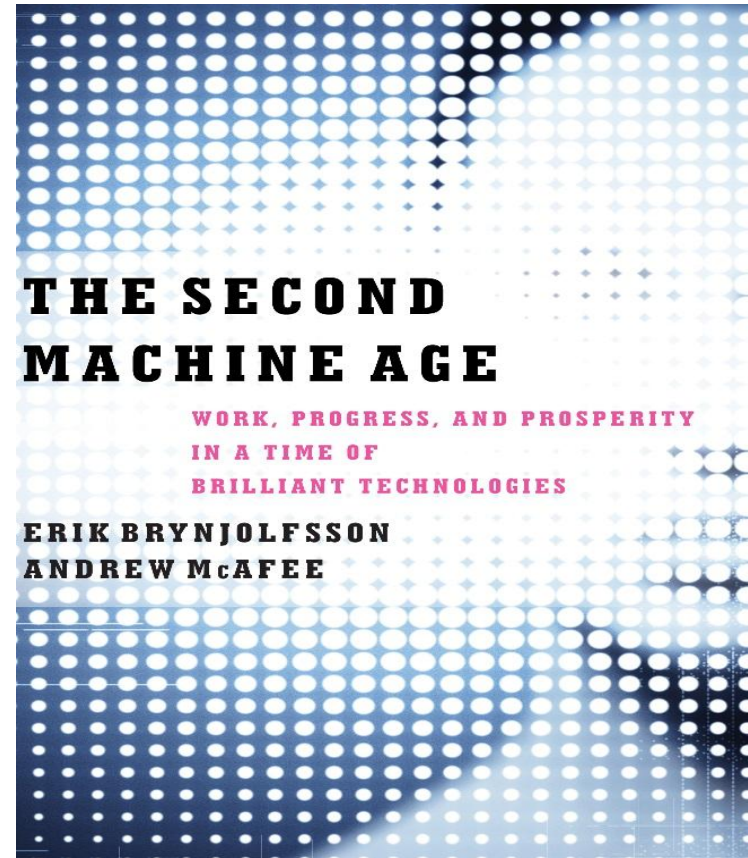
Where is Productivity Going?

- Stagnation?



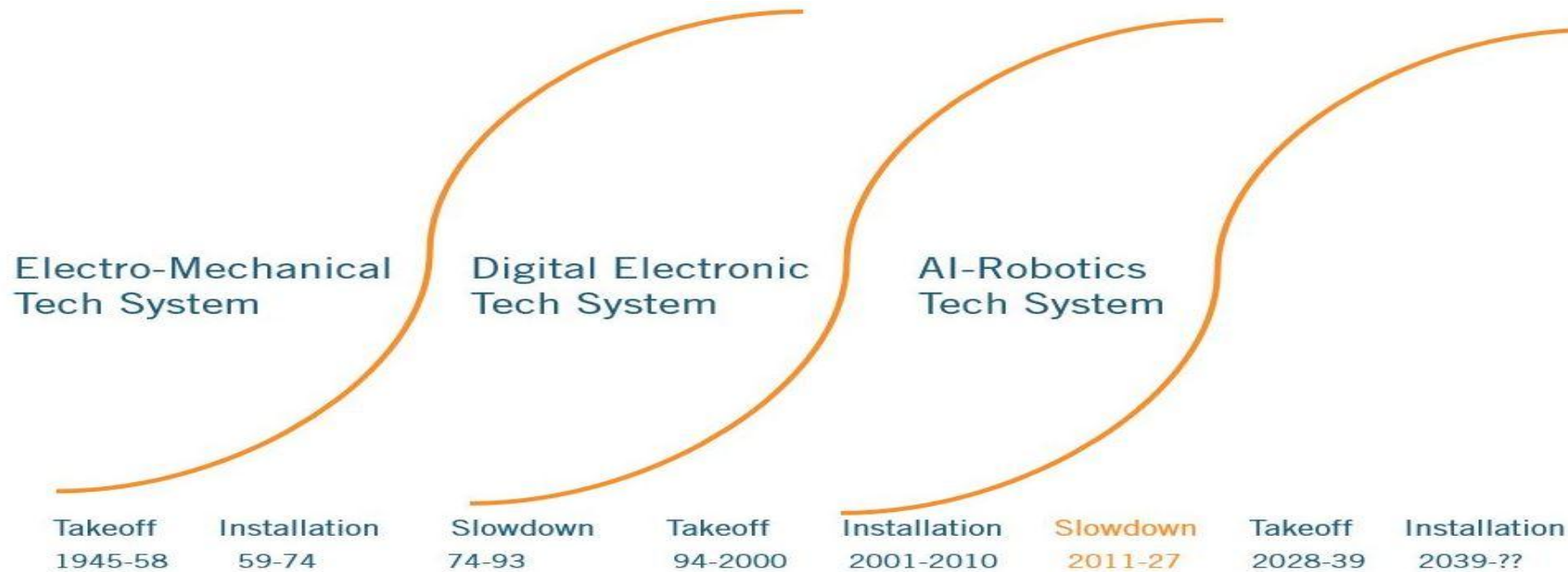
Where is Productivity Going?

- Turbo-Charged “Fourth Industrial Revolution”



Where is Productivity Going?

- Neither hopeless nor boundless.
- More like 1 to 3 percent annual growth



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The Case for a National Productivity Strategy

- Public goods
- Externalities from investments, including in equipment
- Rise of “quarterly capitalism” reduces long-term investments
- Principal-agent problems in some industries (e.g., health care, real estate, optometry)
- System independencies and platforms

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Productivity Policy Components: Framework Conditions and Factor Inputs

- Virtually all productivity policy reports begin and end with framework conditions (tax, regulation, competition policy, monetary policy, etc.) and factor inputs (infrastructure, skills, R&D).
- While necessary, these are vastly insufficient. How do we explain poor U.S. productivity performance if framework conditions are the key?

On Key Framework Condition: Firm Size

- “Difference in the employment distribution over firm sizes between Canada and the U.S. can account for half of the Canada-U.S. labour productivity gap in manufacturing.”

Danny Leung, Césaire Meh, and Yaz Terajima, “Firm Size and Productivity” (working paper, Bank of Canada, 2008)

- Most nations favor small business (exemptions from regulation, lower taxes, procurement preferences, protections against entry from large firms, subsidized financing, etc.)
- Time for size agnosticism

Productivity Policy Components: Organizational Incentives

- Increase the capital/labor ratio:
 - Increase cost of labor (e.g., minimum wage, reduced low skill immigration)
 - Decrease cost of capital (reduce taxes and tariffs on capital goods; tax incentives for cap ex)

Reform equity markets and corporate governance (“the post-crisis system is not well structured to facilitate long-term investment approaches and the provision of growth capital.”

– *UK Investment Association*

Productivity Policy Components: R&D

- Design R&D programs to explicitly develop better tools and materials:
 - Robotics
 - AI
 - Autonomy
 - New materials



Productivity Policy Components: Platform Policies

- Many tools are shared by multiple organizations and cannot be effectively used without interfirm and interindustry coordination
- Many emerging IT tool platforms (e.g., smart grids, mobile payments, digital signatures, IOT, health IT)
- Government policies to address chicken or egg issues are key

Productivity Policy Components: Sectoral Analysis and Policies

- Industries differ by scale economies, competitive forces, technology tools, and nature of control.
- This requires sectoral analysis and a focused on targeted policies in procurement, R&D, and regulation.
- Governments present special opportunities and challenges.



Productivity Policy Components: Institutional Capabilities

- Require that nation's major economic policy bodies have as a core part of their mission advancing productivity
- Establish a national productivity commission
- Government agencies need to develop explicit productivity policies, not only for internal productivity, but also externally in the areas of the economies they influence

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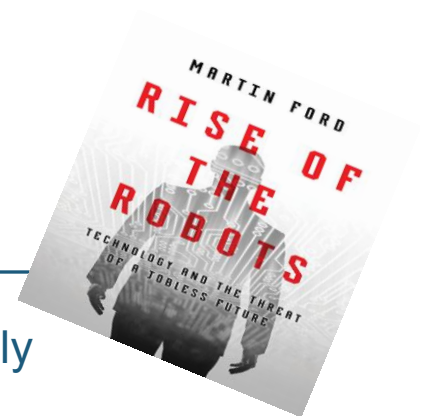
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What About Jobs?



- “A much darker picture of the effects of technology on labor is emerging. In this picture, highly educated workers are as likely as less educated workers to find themselves displaced.”
— (Paul Krugman)
- “Rise of the Machines: Downfall of the Economy?”
— (Nouriel Roubini)
- “Brain work may be going the way of manual work.”
— (The Economist)
- “Technology is leading to job loss, “This isn’t some hypothetical future possibility. This is something that’s emerging before us right now.”
— (Larry Summers)
- “75% unemployment by 2100.”
— (Martin Ford)
- “Will the last human worker please turn out the lights?”
— (Mike Rettig, Brookings)

Faster Productivity Growth Won't Lead to Fewer Jobs

- McKinsey Global Institute finds that increases in productivity are correlated with increases in subsequent employment.
- Productivity leads to second order income effects (higher wages or lower prices) and this income is spent, thus creating other jobs.



Human Wants Are Far From Being Satisfied



Thank You!

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