Why Is Productivity Growth Slow?

Comments by Chad Syverson
Technology Optimism and Slow Productivity Growth: Potential Explanations

1. False hopes
   - Technological optimism unwarranted; future productivity acceleration won’t happen

2. Mismeasurement
   - Reality better than measured; no current slowdown

3. Distribution and dissipation
   - Technological benefits are real but concentrated; large dissipative efforts to grab or guard benefits

4. Implementation and restructuring lags
   - Technology is real, but benefits take time to emerge
Technology Optimism and Slow Productivity Growth: Potential Explanations

1. False hopes: Certainly some past technologies have disappointed
   – But not hard to estimate large productivity gains from existing technologies

2. Mismeasurement: Reasonable prima facie case
   – But lots of recent work indicating this isn’t the story

3. Distribution and dissipation: Consistent with more skewed/concentrated company and worker outcomes
   – But hardly dispositive, and implies huge amounts of dissipative activity
Tests of the Mismeasurement Hypothesis

1. Is the size of measured slowdown in a country related to importance of IT in that economy?  No

2. Researchers have tried to measure surplus from web-related technologies. How large are their numbers?  Too Small

3. Compute how large IT-related sectors would have to be if we measured the purportedly “missing” growth  Enormous

4. See if total income is systematically higher than output  Yes, but in a way inconsistent with mismeasurement hypothesis

5. “Qualitative” tests
   – All results hard to reconcile with the hypothesis
Case for the AI Implementation Lag Story

• Current productivity growth does not predict future productivity growth
• Back-of-the-envelope examples of achievable productivity growth
• AI as a GPT
Why Are There Implementation Lags?

1. Enough new capital stock must be accumulated to affect aggregates

2. Complementary assets need to be invented, built, and installed

*These processes can take years or decades*
History’s Lens on Today’s Paradox

Labor Productivity in the Portable Power and IT Eras

- Portable Power
- IT
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Labor Productivity in the Portable Power and IT Eras

Portable Power  Portable Power (cont.)  IT
Implementation Will Depend on Producers’ Complementary Assets/Capabilities

• Firms differ massively in capabilities. Why?
• “Levers”
  1. Managerial practices/talent
  2. Higher-quality labor and capital
  3. IT and R&D
  4. Learning-by-doing
  5. Product innovation
  6. Firm structure decisions
• External factors
  1. Productivity spillovers
  2. Competition—both intra-market and through trade
  3. Regulatory environment
  4. Input market flexibility