

**A Practitioner's Perspective on the Productivity Slowdown**  
**Thomas I. Barkin**  
**President, Federal Reserve Bank of Richmond**

**Sandridge Lecture**  
**Virginia Association of Economists**  
**Richmond, Virginia**  
**April 4, 2019**

Thank you for inviting me to join you this evening. It's an honor to be here. While I'm quite certain I won't coin a phrase as memorable or significant as, say, the "global saving glut,"<sup>1</sup> I do hope you'll find what I have to say interesting.

I came to Richmond after a 30-year career at McKinsey in Atlanta, where in addition to management consulting I had many line roles, including serving as the CFO. I am deeply respectful and appreciative of the insights created in the field of economics and by my team at the Richmond Fed. Building on both, I hope to leverage my background to bring a unique perspective as a businessperson on topics such as pricing, the real drivers of wages, the impact of tariffs or tax cuts, and the causes and implications of slower productivity growth. The latter will be the subject of my talk this evening.

You know why productivity growth matters. In an environment where demographic trends are contributing to slow growth in the labor force, productivity growth is essential for our economy to grow. Stronger growth would improve living standards. Stronger growth would create revenues to reduce the federal budget deficit at a time when it seems unlikely to be addressed

otherwise. But since 2006, average annual labor productivity growth has been just 1.3 percent. In contrast, it averaged 2.3 percent between 1985 and 2005. What’s changed?

Before I try to answer that question, I have to note that the views I express are my own and not necessarily those of my colleagues on the Federal Open Market Committee (FOMC) or in the Federal Reserve System.<sup>2</sup>

### **The Productivity Boom**

Let’s start by looking at the 1970s. At that time, general macroeconomic volatility—particularly rising and volatile inflation—created an environment that discouraged investing.

In addition, because the market for corporate control was dormant, companies and CEOs faced limited performance pressure. CEOs were statesmen, as focused on their workforce and their communities as they were on their shareholders. And many leaders spent their entire careers at the same company, limiting the diffusion of best practices. We also had less foreign competition, strong unions and stricter regulations in many industries. All these factors contributed to average labor productivity growth of 1.6 percent between 1975 and 1985.

I saw the corporate world change significantly during the 1980s and 1990s in ways that drove productivity growth. A strengthened market for corporate control brought about a fundamental change in focus. Investment banks and “corporate raiders” put companies on notice that they had to “perform or die.” Stock options became a much larger share of executive compensation, tying a CEO’s performance more closely to shareholder value.<sup>3</sup>

Companies also faced more competition as global trade barriers were eliminated and industries were deregulated. And once inflation was finally tamed, firms had less pricing power and were forced to become more efficient in order to maintain their profit margins. The “big box” retail format also drove productivity growth, in large part because monopsonistic buyers could exert significant pressure on their suppliers to become more efficient themselves. Between 1995 and 2002, productivity growth in the retail sector averaged nearly 4 percent annually.<sup>4</sup>

Greater efficiency was made possible by a variety of new practices and new technologies, including strategic sourcing and outsourcing, re-engineering and lean management, information technology and internet distribution, to name a few. These practices and technologies spread to other companies more quickly via a more robust business press, greater talent mobility and—if I may say so—the growth of management consulting. The result was a productivity boom.

### **The Productivity Slowdown**

Over the past decade or so, however, productivity growth has slowed considerably. As a businessperson, I find this hard to explain. During my consulting career, I worked for large companies in multiple industries on a range of productivity topics, including manufacturing efficiency, overhead reduction and process redesign. I didn’t observe any particular cliff around 2005. I saw management equally motivated to drive a focus on the bottom line. I saw clients continuing to invest, to automate and to innovate. And I saw new, powerful practices implemented, such as voice recognition and offshoring. I saw my individual clients get *more* productive.

I've been on a journey to understand what's going on, recognizing that every sector has its own story. I considered the possibility that the mix of businesses has shifted, for example because of the growth in services or productive sectors moving to foreign locales. But the slowdown is widespread. Nearly every sector has experienced some decline in productivity growth since the mid-2000s (although the extent varies across sectors).<sup>5</sup>

I considered mismeasurement. Some surely exists; for example, the leisure value of free apps on a smartphone isn't measured, while the price of toys is. But again, the widespread nature of the decline makes mismeasurement unlikely as an across-the-board explanation.

Productivity growth could also be hampered by regulatory costs and the expense of implementing cybersecurity. Costs have certainly been created that don't generate revenues. But back-of-the-envelope calculations suggest these costs aren't large enough to explain the slowdown.

It's also possible that this is just a pause before an acceleration due to AI and digitization. That would be great! But I never saw the pause, and I worry about hope as a strategy.

Some have argued that we've already picked all the "low-hanging fruit" when it comes to transformative technologies.<sup>6</sup> That's a depressing thought. But it can't be true. Spend time with any researcher in AI or biotech and your mind will reel with the possibilities.

Finally, at my house, there's some debate about whether email, texting and social media are enablers of productivity or whether they may well be the problem. I'll leave that debate for dinner tonight.

### **The Role of Investment**

So what do I think I know? I believe the decline in productivity growth is real. And I believe that part of the cause is at least 15 years of business underinvestment. Recent research has found that between 2000 and 2015, business investment was low relative to measures of corporate profitability, even when taking into account increased investment in intangible assets.<sup>7</sup> This “investment gap” has been driven by industry leaders and productivity leaders not investing in growth the way they once did. Airlines have moderated capacity growth, banks aren't adding branches and even successful retailers aren't adding stores. And in my view, it's easy to draw a line from lower investment to lower productivity growth, particularly to the extent large incumbent firms drive productivity.<sup>8</sup>

Many factors might be contributing to lower investment. Short-termism is increasing as CEO tenure decreases and corporate activism escalates. Share repurchases and M&A have become compelling alternate uses of capital, especially as more and more industries focus their metrics on return on capital employed (ROCE). The number of publicly traded firms has fallen more than 50 percent, deferring to private market strategies that manage capital tightly.<sup>9</sup> Cyclical industries have learned the lessons of overcapacity. And, finally, some companies are still feeling “hungover” from the Great Recession. I've spoken with business leaders who, even if they see

opportunities for investment, are reluctant to take them. They continually see the next recession as “just around the corner.” You hear that today.

The good news is investment could come back in the context of a stronger economy. This seems to be what recent data suggest. In 2018, year-over-year investment growth was 6.9 percent, compared with 5.2 percent in 2017 and just half a percent in 2016.<sup>10</sup> We need that momentum to continue.

### **The Drop in Startups**

Another factor contributing to slower productivity growth might be declining startup rates. Successful entrants drive innovation, which drives productivity. But the data show a massive reduction in entry rates in all states and all sectors. Startups accounted for 12 percent of all firms in the late 1980s. That fell to 10.6 percent in the mid-2000s and to 8 percent after 2008.<sup>11</sup> As with investment, some of this decline might reflect lingering risk aversion after the Great Recession. Some might be the impact of regulation (for example, there have only been 13 de novo banks in the past nine years). Research also points to the slow growth of the working-age population and challenges to immigration as explanations.<sup>12</sup> In addition, I hear there are tangible impediments—such as acquiring the necessary technology and talent—to building the scale and sophistication required to compete in today’s world.

### **Barriers to Exit**

In addition, there’s evidence that the dispersion of productivity within industries has increased—more-productive firms are getting more productive, and less-productive firms lag behind.<sup>13</sup>

When we talk to firms at the frontier, productivity gains seem robust. But aggregate productivity is potentially being held back by the laggards. This could be occurring because there are greater barriers to the diffusion of productivity enhancements, such as the required investments in intellectual property or information technology. And, at the same time the productivity gap is getting wider, less-productive firms have become less likely to exit the market.<sup>14</sup> It sounds counterintuitive, but it's real. Bankruptcies have dropped consistently over time (excepting, of course, the Great Recession). Perhaps this is a temporary result of the long economic upturn. Perhaps the rising median rate of profitability is keeping underperformers afloat, with the winners choosing profit over market share. Or perhaps low interest rates have helped keep low-performing companies alive.<sup>15</sup>

The fact that we're late in the business cycle is both a challenge and an opportunity. On the one hand, marginal hires might be less productive. On the other hand, firms may find themselves pressed to do more with less, which would boost productivity. The last year has been interesting, with productivity growth averaging 1.7 percent, compared with 1.1 percent in 2017 and just 0.1 percent in 2016. It's too early to call a turn, but a former consultant can dream!

### **Prospects of Change**

Let me leave you with the thought that change is possible. Technological innovations such as AI and digitization aren't going away. As the Great Recession fades further into memory, economic tailwinds may give both entrepreneurs and existing firms more confidence to invest in their businesses and grow their markets. Policymakers can help. Corporate leaders need a healthy environment for business investment and entrepreneurship. As I talk to my contacts, that is their

primary topic of discussion. “If the rules are clear and the political environment is stable,” they say, “American businesses will find a way to grow.”

Thank you, and I look forward to your questions and comments.

---

<sup>1</sup> Ben S. Bernanke, “[The Global Saving Glut and the U.S. Current Account Deficit](#),” Sandridge Lecture, Virginia Association of Economists, Richmond, Virginia, March 10, 2005.

<sup>2</sup> Thank you to Jessie Romero for assistance preparing these remarks.

<sup>3</sup> The increased use of stock options was driven by several factors, including shareholder pressure, changes in accounting and disclosure rules, and regulation limiting the deductibility of CEO salaries. For more, see Kevin J. Murphy, “[Executive Compensation: Where We Are, and How We Got There](#).” In Constantinides, George M., Milton Harris, and Rene M. Stulz (eds.), *Handbook of the Economics of Finance*, 2013, vol. 2, part A, pp. 211-356.

<sup>4</sup> Mark Doms, “[Productivity Growth and the Retail Sector](#),” Federal Reserve Bank of San Francisco Economic Letter no. 2004-37, December 2004; and McKinsey Global Institute, “U.S. Productivity Growth 1995-2000: Understanding the Contribution of Information Technology Relative to Other Factors,” October 2001.

<sup>5</sup> Martin Baily and Nicholas Montalbano, “[Why is U.S. Productivity Growth So Slow?](#)” Brookings Institution Hutchins Center Working Paper no. 22, September 2016.

<sup>6</sup> For example, see Robert J. Gordon, *The Rise and Fall of American Growth*, Princeton University Press, Princeton, N.J.: 2016.

<sup>7</sup> German Gutierrez and Thomas Philippon, “[Investmentless Growth: An Empirical Investigation](#),” *Brookings Papers on Economic Activity*, Fall 2017.

<sup>8</sup> Daniel Garcia-Macia, Chang-Tai Hsieh, and Peter J. Klenow, “[How Destructive is Innovation?](#)” U.S. Census Bureau Center for Economic Studies Paper no. CES-WP-17-04, January 01, 2017.

<sup>9</sup> Craig Doidge, Kathleen Kahle, Andrew Karolyi, and René Stulz, “[Eclipse of the Public Corporation or Eclipse of the Public Markets?](#)” *Journal of Applied Corporate Finance*, Winter 2018, vol. 30, no. 1, pp. 8–16.

<sup>10</sup> Based on annual percent change in real private nonresidential fixed investment.

<sup>11</sup> Ryan Decker, John Haltiwanger, Ron Jarmin, and Javier Miranda, “[The Role of Entrepreneurship in U.S. Job Creation and Economic Dynamism](#),” *Journal of Economic Perspectives*, Summer 2014, vol. 28, no. 3, pp. 3–24.

<sup>12</sup> Fatih Karahan, Benjamin Pugsley, and Aysegul Sahin, “[Demographic Origins of the Startup Deficit](#),” Manuscript, May 2018.

<sup>13</sup> Ryan A. Decker, John C. Haltiwanger, Ron S. Jarmin, and Javier Miranda, “[Changing Business Dynamism and Productivity: Shocks vs. Responsiveness](#),” NBER Working Paper no. 24236, January 2018.

<sup>14</sup> Ibid.

<sup>15</sup> Andrew G. Haldane, “[Productivity Puzzles](#),” Speech at the London School of Economics, London, England, March 20, 2017.