

**ECONOMY**

# **A Study of 16 Countries Shows That the Most Productive Firms (and Their Employees) Are Pulling Away from Everyone Else**

by Giuseppe Berlingieri, Patrick Blanchenay, and Chiara Criscuolo

JULY 13, 2017



The corporate landscape has become increasingly unequal, with the most productive firms thriving and the least productive ones failing to keep up. This matters not just for economic growth but also for inequality: Our research shows that as they grow apart in productivity, firms are also becoming more unequal in how much they pay workers.

Other research has documented that the pay gap between firms is contributing to increased income inequality, but our work makes two additional contributions. First, we use new OECD data that is representative of the whole population of businesses in 16 countries. And second, we are able to link it to firms' productivity and several measures of labor market policies.

## **The Most Productive Firms Are Pulling Ahead, Across Industries**

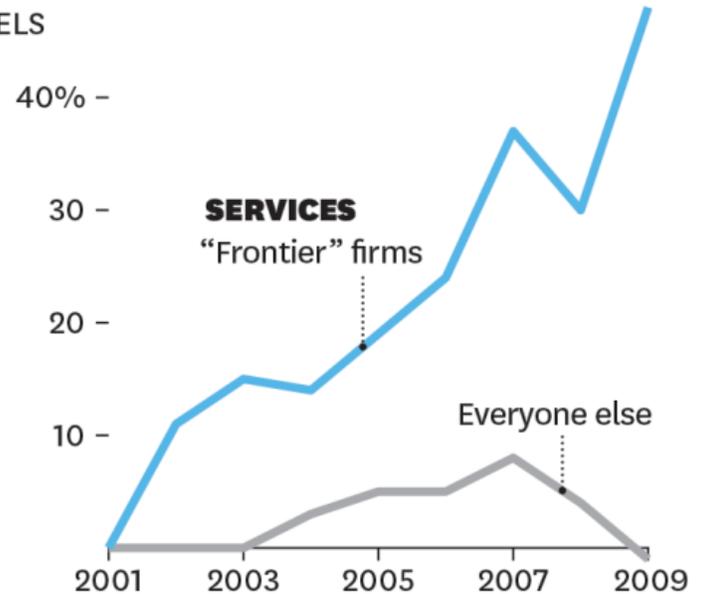
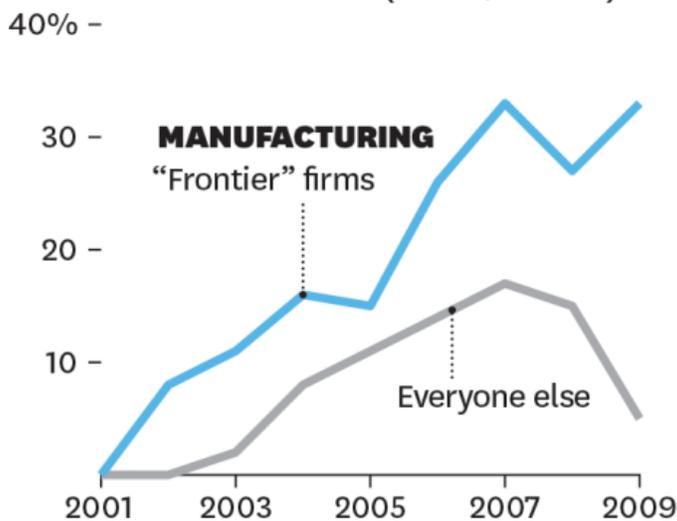
Given the number of unicorn firms in Silicon Valley, it might be tempting to think that tech companies are the ones running ahead in terms of productivity, while firms in more traditional sectors are left behind. But in new research, we show that the productivity gap is growing both within countries and within sectors in the same country. Indeed, the gap between firms in the top 10% by productivity and those in the bottom 10% increased by approximately 14% from 2001 to 2012.

The data also shows that at the beginning of the 2000s this divide was mainly driven by the bottom performers not keeping up with the median firms. Since the mid-2000s – and especially in the services sector – it is also increasingly the case that the top performers have left the median firms behind.

## The Gap Between the Most Productive Firms and the Rest Is Growing

A look at labor productivity in manufacturing and services.

PERCENTAGE DIFFERENCE IN LABOR PRODUCTIVITY LEVELS FROM THEIR 2001 VALUES (INDEX, 2001=0)



SOURCE "THE FUTURE OF PRODUCTIVITY," OECD, 2015

© HBR.ORG

## The Productivity Gap Is Causing a Wage Gap

In the afterword to his 2003 book, *Wage Dispersion*, Nobel Prize winner Dale Mortensen argued that productivity differences could cause wage dispersion: “Why are similar workers paid differently? Why do some jobs pay more than others? I have argued that wage dispersion of this kind reflects differences in employer productivity.”

When higher productivity means higher wages, the increasing productivity gaps between firms could translate into wage gaps. Indeed, that’s exactly what we see in the data.

As firms have grown apart in productivity, they have also become more unequal in how much they pay workers – a second great divergence. Again, it is not just Silicon Valley firms paying more than fast-food restaurants. The pay gap between the top- and bottom-paying firms in the same sector has increased by more than 12% from 2001 to 2012. And we find that wage inequality has grown most in sectors in which productivity differences have increased the most. It’s not just what sector you work in – it’s which company you work for.

Our estimates suggest that the growing productivity gap between firms could account for almost half of the increase in wage inequality between firms in the same sectors. Part of this might be driven by higher investment by highly productive firms. But even when we account for investment, productivity still accounts for one-sixth of the increase in wage dispersion. As Nicholas Bloom wrote earlier this year in “Corporations in the Age of Inequality,” his HBR Big Idea, “The real engine fueling rising income inequality is firm-level inequality.”

### **How Trade and IT Fit In**

As MIT economist David Autor told HBR in late 2015 when asked about the causes of inequality, “There are many moving parts here. One of them has clearly been information technology. A second one has been international trade. I also think the decline of unionization has mattered a great deal.”

Our new data confirms these suggestions. First, sectors that made more use of IT have experienced a stronger growth in wage dispersion, which suggests that IT gives an edge to some firms while others fail to reap its potential. Second, sectors more exposed to international trade have also experienced more wage divergence. In fact, in sectors with more IT and more trade, rising productivity gaps translated into even larger wage gaps than in industries less exposed to IT and trade.

### **What About Labor Markets?**

In *Capital in the Twenty-First Century*, Thomas Piketty wrote that to study wage inequality, “We must introduce other factors, such as the institutions and rules that govern the operation of the labor market in each society.” If productivity divergence is linked with wage divergence, is it possible that this link is affected by the way labor markets are organized?

Our research examined labor market policies and institutions that could affect wage inequality: minimum wages, employment protection legislation, unionization, and the degree of coordination of the wage bargaining process (the extent to which wages are negotiated at the single plant or firm level or are centrally negotiated with large unions). We find that all of these policies have the intended consequence of reducing inequality.

But by changing how easy it is for firms to hire workers or dismiss them, these policies affect how labor flows to the best firms. This affects the link between productivity gaps and wages. For example, increases in the minimum wage strengthen the correlation between wage and productivity gaps over time. So even though a higher minimum wage lowers overall inequality by raising wages for the lowest-paid workers, it increases the difference between how well workers are paid at more- and less-productive firms. On the other hand, a more centralized bargaining process – for instance, through the use of collective agreements – tends to break the link between productivity gaps and wage inequality.

Economic theory predicts that countries that attempt to shield workers and firms during tough economic conditions should experience less inequality, both in terms of wages and firm productivity. This is beneficial to workers, as their jobs and salaries would be better protected. But less dispersion in wages and productivity due to regulations may inadvertently damage the economy's overall productivity by making it harder for resources to flow from less- to more-productive firms.

Thus policies that are beneficial in the short run may have a detrimental impact in the long run. Policies that hinder the reallocation of resources from poorly performing to highly productive firms can result in slower aggregate productivity growth. And this can have adverse implications for the workers themselves, inadvertently trapping them in low-paying firms rather than giving them the opportunity to earn higher wages in more-productive firms.

This is the conundrum that policy makers have to solve: Productivity gaps create inequality. Public policy can and should help. But in trying to protect workers, policies might well endanger future productivity growth, and with it, workers' prospects.

---

Giuseppe Berlingieri is Assistant Professor in Economics at ESSEC Business School, as well as Economist in the Directorate for Science, Technology and Innovation at the OECD. He is a research associate of the Centre for Economic Performance (CEP) at the London School of Economics (LSE) and of the THEMA research centre at the University of Cergy-Pontoise.

---

Patrick Blanchenay is Assistant Professor, Teaching Stream at University of Toronto's Department of Economics. His research focuses on productivity patterns, and the impact of institutions.

---

Chiara Criscuolo is a senior economist at the Paris-based OECD.

---

## This article is about **ECONOMY**

 FOLLOW THIS TOPIC

Related Topics: LABOR

## Comments

Leave a Comment

POST

### 2 COMMENTS

---

**Eric Hall** 4 hours ago

More productive firms do better than less productive firms. But apparently that's bad.  
More productive people get paid more than less productive people. Agan, apparently that's bad.  
Cartels and government regulations squish pay scales ensuring more productive people get paid less, and less productive people get paid more which of course leads to productive people becoming less productive.  
Apparently this is good.  
Restrictive labor policies that make it difficult for companies to manage their labor force and therefore reduces total employment is somehow seen as a good thing.

Apparently, it's opposite day.

It should be a red flag when you frame your argument around a questionable concept like "income

inequality".

It's amazing the drivel that HBR publishes.

REPLY



▼ **JOIN THE CONVERSATION**

---

**POSTING GUIDELINES**

We hope the conversations that take place on HBR.org will be energetic, constructive, and thought-provoking. To comment, readers must sign in or register. And to ensure the quality of the discussion, our moderating team will review all comments and may edit them for clarity, length, and relevance. Comments that are overly promotional, mean-spirited, or off-topic may be deleted per the moderators' judgment. All postings become the property of Harvard Business Publishing.