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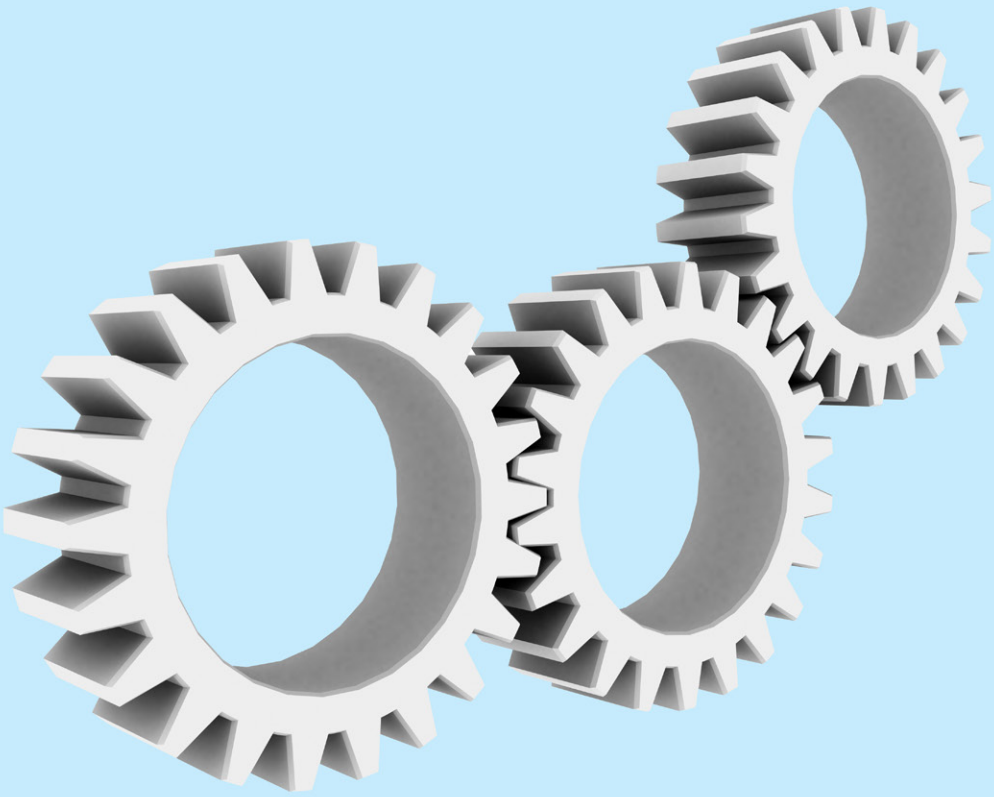
McKinsey Explainers

What is productivity?

Simply put, productivity measures the amount of value created for each hour that is worked in a society.



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Focus up: you probably know that the amount of work you can get done in one day is your rate of productivity. Productivity in economics is pretty much the same as productivity at your desk. But for companies or even countries, measuring productivity is a little more complex than how well you were able to hold a video call over the construction noise from the street or your cat's incessant meowing.

On a country scale, productivity can mean the difference between good and not-so-good standards of living. For a company, productivity can determine whether it can afford to increase wages for its employees or even if it can continue operating. Stagnating or contracting productivity can spell serious trouble ahead for individuals, organizations, and nations alike.

Understanding what economic productivity is and how it works is critical to working toward maintaining and increasing it. Here, we'll take a deep dive into the theory and practice of productivity.

What are the different kinds of productivity?

We've already touched on labor productivity. On a country scale, labor productivity is frequently calculated as a ratio of GDP per total hours worked. So if a country's GDP were $1 trillion and its people worked 20 billion hours to create that value, the country's labor productivity would be $50 per hour. Labor productivity *growth* is crucial to increased wages and standards of living, and it helps increase consumers' purchasing power.

Economists measure other types of productivity, too. Capital productivity is a measure of how well physical capital—such as real estate, equipment, and inventory—is used to generate output such as goods and services. (Capital productivity and labor productivity are frequently considered together as an indicator of a country's overall standard of living.) And total factor productivity is the portion of growth in output not explained by growth in labor or capital. You could call this type of productivity "innovation-led growth."

Why is productivity growth slowing in advanced countries?

In the United States and Western Europe, labor productivity growth has been declining ever since a boom in the 1960s. The story is a little different in each country. In the United States and Sweden, for example, there was strong productivity growth from the mid-1990s to the early 2000s, followed by the largest decline in productivity growth among countries surveyed (due to financial crisis aftereffects and uncertainty). In Italy and Spain, however, productivity growth was close to zero for years before the financial crisis in 2008, which meant that the severe contraction in the labor market after the crisis actually accelerated productivity growth.

Across the sample of countries in Western Europe and North America, there have been three micro patterns of productivity slowdown. First, for a variety of reasons, the recovery from the 2008 financial crisis has created a job-rich but productivity-weak environment. Next, the few sectors that are experiencing accelerated productivity growth are too small or moving too slowly to shift the overall numbers. Finally, technological development hasn't had the boosting effect on labor productivity that it has in the past. To some analysts, this state of affairs seems like a reappearance of the Solow Paradox of the 1980s, named for economist Robert Solow who observed in 1987 that the gathering momentum of the computer age wasn't reflected in productivity statistics. The original Solow Paradox was resolved in the 1990s when a few sectors—technology, retail, and wholesale—led an acceleration of US productivity growth. It remains to be seen when—or whether—the current productivity paradox will be resolved.

So why is this happening? Some economists think it is a supply-driven issue. In practice, this could mean one of a few things: either that digitization hasn't yet reached its full potential or that the age of great innovation has passed and the low-hanging fruit has already all been picked. Another line of thought is that developed economies are increasingly service-oriented, which by nature have less productivity growth potential (it takes professors, for example, the same amount of time to grade a paper today as

it did in 1966, or nurses the same amount of time to change a bandage). What's more, decades of industrial overcapacity killed the manufacturing growth engine, and no alternative has been found—least of all in the low-productivity activities that make up the service sector.

Other economists believe the productivity paradox is a demand-driven issue, meaning that households have lower propensity to consume due to the financial crises of 2008 and 2010 and ensuing austerity policies. Combined with increasing inequalities, this leads to lower income for households with a higher propensity to consume. This leads to lower aggregate demand, which in turn causes a more stagnant supply because there is less incentive for firms to innovate, invest, and take risks.

To accelerate productivity, business leaders, policy makers, and individuals must commit to the digital transition. They must manage the social and economic changes brought by digitization, including its impact on job displacement.

How can we reconcile slowing productivity growth and rapid technological change?

The point of technology is to help us get things done faster and with less effort. This, in turn, means giving more to consumers for less, which leads to increasing social welfare. So you might assume that increased technological innovation would mean increased productivity. That's exactly what happened in the 1990s, when a revolution in information and communications technology sparked a boom in productivity.

But it hasn't been the case more recently: technology has continued to develop but productivity growth remains sluggish. According to analysis by the McKinsey Global Institute, this disconnect is due to three waves that crashed in the aftermath of the 2008 financial crisis. First was the waning of that 1990s productivity boom, combined with the aftereffects of the financial crisis, including weak demand and uncertainty. The third wave is digitization, which has necessitated a transformation of operating and business models.

The first two waves each dragged down productivity growth by about one percentage point. The third wave promises to boost productivity but comes with adoption barriers, transition costs, and lags associated with the need to reach technological and business readiness. Moving forward, the McKinsey Global Institute predicts growth, most of which will come from emerging digital opportunities. But this growth will require a dual focus on promoting demand growth and digital diffusion, in addition to traditional supply-side approaches. Growth also depends on human capital—meaning people with the right skills and training to put digitalization, AI, and new technologies to work.

What's the relationship between economic growth, labor productivity, and a changing labor market?

Over the past 50 years, the world economy expanded sixfold and average per capita income almost tripled. These incredible advances were powered by rapid population growth—which expanded the number of workers—and a healthy increase in labor productivity.

But looking ahead, this unprecedented economic growth will slow dramatically if productivity doesn't improve. That's because population growth is slowing, which means the labor force is shrinking relative to the overall population. If there are fewer overall workers contributing to the economy, each worker's productivity will have to increase for GDP growth to stay on track. McKinsey Global Institute research on the future of productivity and growth after the COVID-19 crisis, focused on the United States and Europe, found that some firms responded boldly to the pandemic, acting in ways that have the potential to increase productivity in the years ahead. But the economic shock of the pandemic and how companies have responded could exacerbate long-run structural drags on demand. It's notable that about 60 percent of estimated productivity potential comes from companies prioritizing efficiency over output growth—through automation, for instance.

If productivity gains aren't reinvested in growth that drives jobs and incomes, we risk a widening inequality gap. Fast reskilling is key to avoiding this, by helping people whose jobs have been automated quickly move on to another job or career. If that new job is more productive than the last one—which is often the case—that worker is turning a "threat" (the lost job) into an opportunity and a boost in productivity for themselves and the economy.

How has the COVID-19 pandemic affected productivity growth?

Productivity was stagnating prior to the onset of the COVID-19 pandemic. The pandemic, which ushered in the most significant economic disruption since World War II, only exacerbated the productivity slump.

But that means there's more room to grow. Research from the McKinsey Global Institute finds that there is the potential to accelerate annual productivity growth by around one percentage point in the period to 2024. That would be more than double the prepandemic rate of productivity growth. While this potential hasn't been realized, it does exist.

This projected rate of growth could spell exciting changes. Achieving one percentage point of additional productivity growth per year in every country by 2024 could mean an increase in per capita GDP ranging from about $1,500 in Spain to about $3,500 in the United States.

Widespread action—combined with robust demand—could realize this potential. But without appropriate action, rising inequality and unemployment could undermine demand and imperil the possible productivity boost.

The pressures of the pandemic have already inspired some organizations to attack the problem creatively. Faced with the necessity of digitization, one McKinsey survey found that companies digitized many activities 20 to 25 times faster than they had previously thought possible. What's more, the pandemic has inspired companies to become more efficient. Between 42 and 45 percent of respondents to an executive survey reduced their operating expenditure as a share of revenue between December 2019 and December 2020. These indicators point to the potential of a postpandemic productivity increase.

What can companies and policy makers do to boost postpandemic productivity?

When the pandemic hit, businesses and policy makers were creative and bold in responding to unprecedented challenges. Moving forward, they need to be equally audacious in contributing to the recovery. CEOs and individual firms need to be proactive rather than reactive. For example, cutting costs may respond to immediate challenges, but longer-term investments such as new products and services (and, perhaps, increased wages) can better serve the goal of driving sustainable, inclusive growth.

McKinsey research suggests three interlocking priorities for business leaders and governments:

1. *Sustain and grow innovation and other advances that increase productivity.* Corporations can focus on catalyzing change across their entire supply chains and ecosystems. Policy can support these efforts through public procurement focused on innovation, direct research and development investment, and by revising platform and competition rules.

2. *Ensure actions that boost productivity also support employment, median wages, and demand.* Businesses can help boost demand by emphasizing growing revenue rather than just seeking efficiency. They can also reskill and upskill their employees so they can be deployed into more valuable tasks. Policy makers can support demand with fiscal stimulus and wage-setting norms.

3. *Increase investment to the right places.* Long-running investment gaps related to sustainability, infrastructure, and affordable

housing need to be closed. Business can support this by making environmental, social, and governance (ESG) issues central to their decision-making processes. And governments can support such investments by setting rules for carbon emissions and housing markets, and by increasing direct investment to high-priority, high-impact areas such as infrastructure and skill building.

How can investments in intangibles affect productivity growth?

First, what are intangibles? Intangibles are assets that underpin the knowledge economy. These are things like intellectual property (IP), research, technology and software, and human capital. As investments in intangibles rise, accelerated by the pandemic, the economy becomes increasingly dematerialized. This has ushered in a new stage in the history of capitalism—based on learning, knowledge, and intellectual capital.

Intangibles are at the very root of productivity growth, and as they gain prominence in the knowledge and digital economies, they matter for productivity more and more. This suggests that economies may trigger growth in productivity—and, indeed, long-term economic growth—by increasing investment in intangibles.

How can a focus on productivity growth help countries diversify their economies?

Countries dependent on one sector or resource are more susceptible to economic instability. In the case of Saudi Arabia, an oil boom from 2003 to 2013 propelled the national economy to become the world's 19th-largest. But a changing global energy market and national demographics means that Saudi Arabia must diversify its economy if it hopes to become more sustainable. McKinsey research shows that a productivity-led economic transformation could enable Saudi Arabia to double its GDP and create six million new jobs by 2030.

A $4 trillion investment in eight sectors—metals and mining, petrochemicals, manufacturing, retail and wholesale trade, tourism and hospitality, healthcare, finance, and construction—was estimated to have the potential to generate more than 60 percent of this growth opportunity.

For a more in-depth exploration of these topics, see McKinsey's Employment and Growth collection. Learn more about the McKinsey Global Institute—and check out job opportunities with McKinsey Global Institute if you're interested in working at McKinsey.

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