ARE THE BENEFITS FROM NEW TECHNOLOGY VISIBLE IN YOUR P&L?

By Dr. Bernd Elser
After years of investing in new technologies such as automation, robotics and other digital capabilities, many companies—especially in asset-intensive industries like chemicals, steel or cement—now find themselves facing a paradox: while they’ve made significant visible investments in new technologies in recent years, they’ve seen no visible improvements in productivity as a result.

In terms of the level of investment, the figures tell their own story. Between 2008 and 2018, companies in asset-intensive industries spent between 6 and 7 percent of their sales revenues on new capital investments—and for many of these years, they were investing between 0.2 and 1.1 percent of sales in new digital technologies and automation. The result? Our Technology Vision 2018 for the chemical industry\(^1\) shows that 53 percent of chemical companies with revenues between US$1bn and US$10bn spent more than US$100m each on new digital technologies between 2016 and 2018.

WHERE ARE THE PRODUCTIVITY GAINS?

A key goal of this investment was productivity improvements. It’s well-known that digital technologies such as business process automation, robotics and mechanical automation help to reduce manual effort, create more transparency around performance and enable better decisions. All of these impacts should contribute to higher productivity—certainly in excess of the productivity gains of 1 percent that one would normally expect as a result of continuous improvement efforts.

However, as Figure 1 illustrates, labor productivity on an aggregate level for a sample grouping of chemical and natural resources companies (including mining, metals, forest products, and building materials) has shown little to no improvement over the past 10 years.
A closer look at the findings reveals some significant insights:

• Most companies do not even exhibit productivity improvements on a par with the 1 percent a year that would ordinarily be expected to result from continuous improvement programs. Indeed, 47 percent of companies show a decline in revenues per FTE, 28 percent show an improvement of less than 1 percent per year, and only 25 percent show an increase in labor productivity of more than 1 percent per year.

• Only 25 percent of companies with above-average Capex achieve labor productivity gains of more than 1 percent. This means that higher capital expenditures on property, plant, and equipment—typically with more digital technologies and automation—do not appear to be resulting in higher labor productivity gains.

• North American companies seem to perform slightly better than European and Japanese companies.

Figure 1: Labor productivity of a sample grouping of chemical and natural resources companies

![CAGR 2008-2019 Rev/FTE](chart.png)
COMMON BARRIERS TO HIGHER PRODUCTIVITY...

Zeroing in on the reasons for the generally poor productivity performance, there is a long list of potential root causes, often company-specific. However, our research and project experience point to a set of common themes. These include:

• A lack of understanding and transparency around exactly how new technologies can reduce the workload, and which resources are freed up at a role and position level by digitizing manual activities.

• Insufficient change in daily ways of working, often paired with insufficient adoption of new digital and automation technologies in daily routines; the result—put simply—is that employees continue to work as they are used to doing, despite the availability of new functionalities and automation.

• Vague and/or conceptual business cases that do not detail the benefits in an actionable way or specify the performance indicators and targets required to measure success.

• Last—but not least—a lack of rigor in capturing the value of new technologies, as productivity improvements at anything less than a full headcount (e.g. for a 0.5 FTE) are not tracked, and freed-up time and resources find “new things to do” with astonishing speed.
...CALL FOR A GREATER MANAGEMENT FOCUS

With these barriers identified, and the economic cycle now passing its peak, the imperative for companies is clear and urgent: now is the time to capture the productivity gains, headcount reductions and asset productivity improvements from investments in new technologies.

Currently, many companies are seeking productivity improvements by resorting to traditional measures such as curbing discrete spend and travel costs and stretching accounts payables beyond the previous standard terms. However, the impacts of such measures are often short-term and unsustainable—and using them resembles a “light the candle” approach aimed at weathering the downturn while hoping for the cycle to pick up soon.

Steps such as implementing productivity gains at the partial headcount level, extracting value from daily routine and non-routine shop floor operations, reducing demand levels, and taking a consistent and comprehensive view of automation functionality and its impacts on actual work are not easy tasks. Often, the small value potential of each individual initiative means it tends to fall under the radar when it comes to getting management attention.

But, in this case, the total of all these small value opportunities adds up to a big figure. Accenture research shows that full and effective deployment of new digital technologies can yield an additional 12 percent EBIT margin. And we estimate that just by realizing the full benefits of investments already made and technology already deployed, companies can capture an additional 1 to 2 percent EBIT margin.
WHAT GOOD LOOKS LIKE

How can companies achieve this uplift? We recommend five steps:

• Establish the size of the value potential by analyzing investments in new technologies and automation during the past five years and comparing the expected productivity gains with those actually achieved.

• Set up a task force to assess the maturity of the organization’s automation and digital technology, define the adoption rate, and identify productivity gaps function-by-function, plant-by-plant, etc.

• Question and challenge demand levels in the company by applying a zero-based approach.

• Where needed, provide resources to help increase technology adoption through targeted training, helping to change ways of working and support planned reductions in headcount and resources.

• Implement the appropriate measures needed to capture the productivity potential of the technology deployed across the business.

The message is clear. In an ideal world, technology investments drive strong rises in productivity. Today, in asset-intensive industries, that link has been broken. It’s time to rebuild it—and make the benefits visible in the P&L.
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