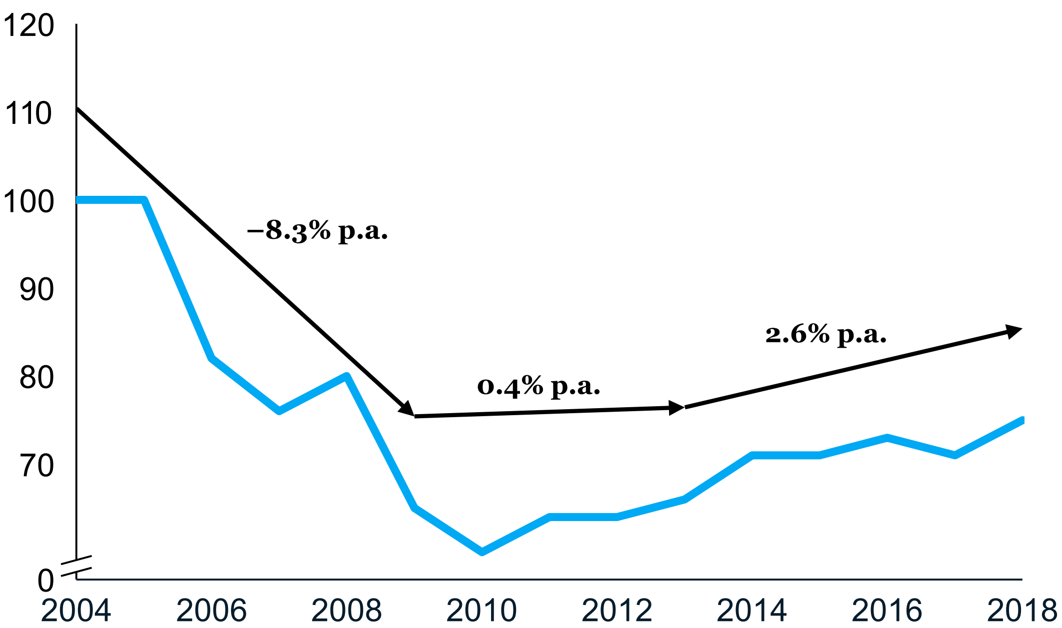
Mining Productivity Index (MPI) by McKinsey shows that global mining productivity has reversed course with a gradual increase in productivity since 2013

After a significant decline in productivity between 2004 and 2009, the trend was relatively flat for about 4 years. In recent years, however, several indicators of global mining sector performance have shown an upward trend.

Yet, despite recent improvements, productivity is still some 25% lower than the starting point in the mid-2000s. Hence it is crucial for mining companies to track the main drivers of their assets' productivity and focus on initiatives which will guarantee sustainable productivity increase over the long term.

MPI is a cross-commodity index designed to give insights into the industry's main productivity drivers: how much total material (ore and waste) is being moved by using what level of resources. It thus not only minimizes the influence of grades, strip ratio, and mining commodity prices but also takes into account the rising cost of mine supplies, such as fuel.

Mining Productivity[1] Index
2004 = 100

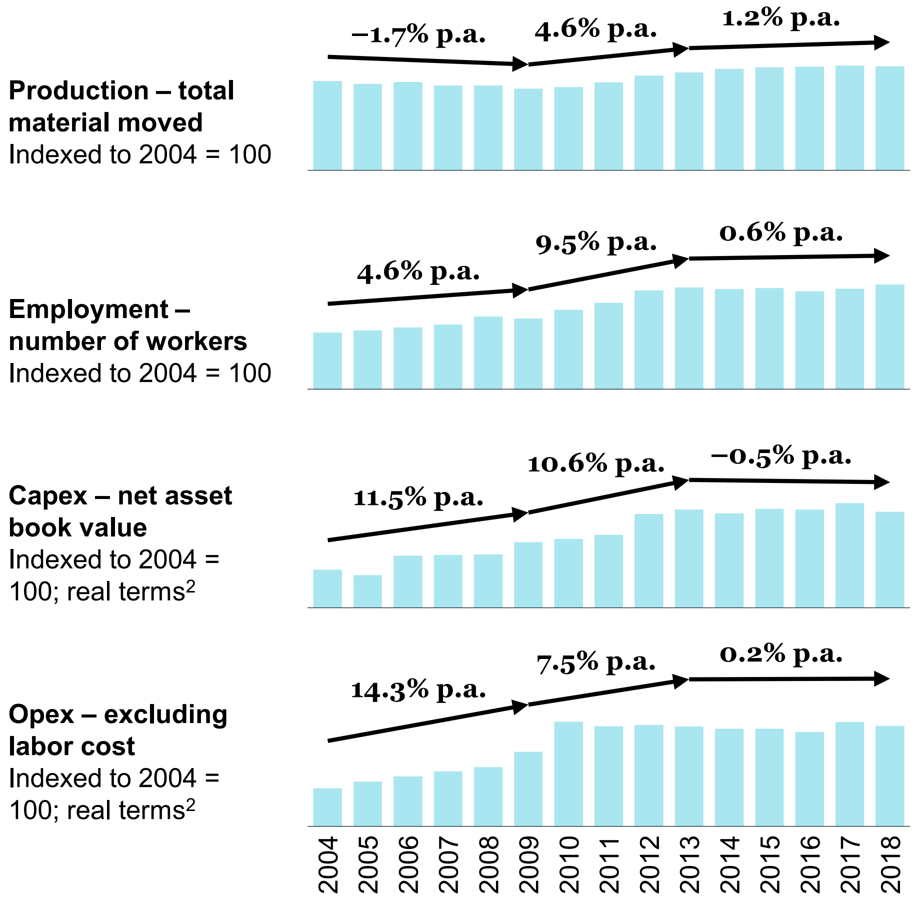


Between 2004 and 2009, productivity declined as a result of significant increases in capex and opex that were not reflected in production growth.

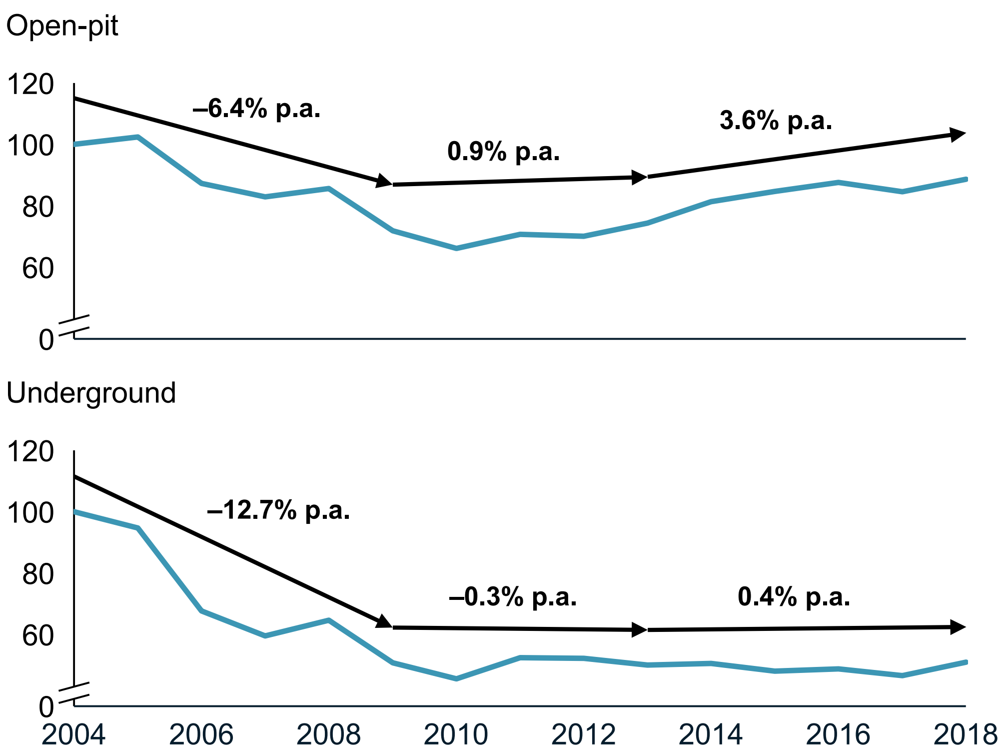
Between 2009 and 2013, productivity flattened, with cost increases mirrored in production growth.

Since 2013, mines have steadily increased productivity by keeping spend(capex and opex) under control.

Mining Productivity[1] Index drivers

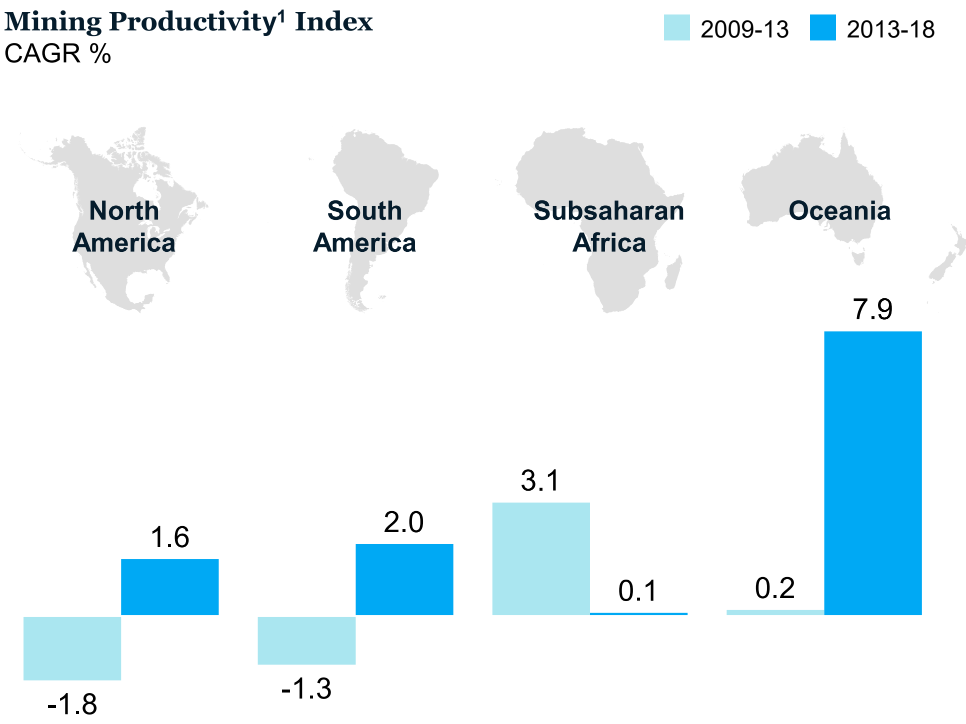


Mining Productivity[1] Index
by mining method, 2004 = 100



Underground mining operations lag open-pit mining operations in terms of productivity.

Mining Productivity[1] Index
CAGR %



Across major geographies, Oceania (which includes Australia) stands out for significant improvements in mining productivity between 2013–18. This trend is mainly driven by significant decrease in capex and opex with increased production.

Going forward, we expect this region to continue to be at the forefront of adopting new technologies and autonomous solutions.

1. Historical values updated to incorporate revisions made by companies in previously reported data
2. Capex and opex adjusted for mine cost inflation. Capex includes book value of property plant and equipment

Source: MineLens analysis based on company reports and MineSpans database

For more information on MineLens go to https://www.mckinsey.com/industries/metals-and-mining/how-we-help-clients/minelens/overview
or email us at minelens@mckinsey.com