

## Summary of Paper: [Data Analytics and Operational Efficiency](#)

### **What is this study about?**

This study examines whether adopting data analytics (DA)—from basic DA that summarize past performance to advanced DA that predict future outcomes—improves how efficiently companies operate. The authors analyzed a large sample of U.S. public companies from 2004 to 2018, comparing firms that adopted DA with similar firms that did not. They measured efficiency relative to each industry’s “best performers” to see if DA adoption leads to measurable operational gains.

### **What are the major findings of the study?**

Companies that adopt DA become about 3.24% more operationally efficient the following year, and the improvement lasts for at least two years. Profitability (return on assets) increases by about 0.6 percentage points, and asset turnover improves by 3.5%—equating to roughly \$138 million more profit and \$709 million more revenue on average. These benefits occur without increasing capital expenditures or cost of goods sold, and often with lower employee or marketing costs. Both basic and advanced DA produce similar efficiency gains, and the benefits are strongest for firms operating in complex or uncertain business environments.

### **Why is the study important?**

The findings provide credible, large-scale evidence that DA adoption delivers tangible performance improvements, not just theoretical promise. For controllers, CFOs, and auditors, it offers measurable benchmarks to justify investments in analytics and to link DA initiatives directly to accounting metrics such as ROA and asset turnover.

### **What is the impact on professional practice and society at large?**

Accounting professionals can use these insights to help organizations target high-impact DA applications—such as pricing, forecasting, or inventory management—while maintaining cost control. Auditors and regulators can also consider DA maturity as a factor in evaluating operational efficiency and risk. Broadly, these improvements support smarter resource use, higher productivity, and potentially more competitive pricing for consumers.