

**The Contribution of Cloud to
Economic Growth
Focus on Oman**

September 2023

TELECOM ADVISORY SERVICES LLC

ABOUT THE AUTHORS

Raul Katz – PhD in Political Science and Management Science, MS in Communications Technology and Policy, *Massachusetts Institute of Technology* (United States), Maîtrise and Licence in Communication Sciences, *University of Paris* (France), Maîtrise in Political Science, *University of Paris-Sorbonne* (France). Dr. Katz worked at Booz Allen & Hamilton for twenty years, as a Lead Partner in the Telecommunications Practice in the Americas and member of the firm's Leadership Team. After retiring from Booz Allen, he founded Telecom Advisory Services LLC in April of 2006. In addition to president of Telecom Advisory Services, Dr. Katz is Director of Business Strategy Research at the Columbia Institute for Tele-Information at Columbia Business School (New York) and Visiting Professor at the Graduate Program in the Telecommunications and Technology Management of the University of San Andres (Argentina), where he teaches courses on strategy for digital industries.

Juan Jung – PhD and MA in Economics, University of Barcelona (Spain), BA in Economics, University of the Republic (Uruguay). Dr. Jung is a Senior Economist at Telecom Advisory Services, specialized in the telecommunications and digital industries. His experience spans economic impact and regulatory assessment in the telecommunications sector. Before joining Telecom Advisory Services, Juan was Director of the Center of Telecommunication Studies of Latin America (cet.la) and Director of Public Policy at the Inter-American Association of Telecommunications Enterprises (ASIET). Dr. Jung is a Professor of Economics at the School of Management of the Comillas Pontifical University (Madrid), where he teaches courses in macroeconomics and the digital economy. He has published articles in several academic journals including Telecommunications Policy, Information Economics and Policy, Journal of Regulatory Economics and Journal of Regional Science.

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This report was sponsored by Amazon Web Services. All of the study's content, including its conclusions, are the independent outcome of the analysis conducted solely by the authors and Telecom Advisory Services.

Impact of Public Cloud Adoption in Oman

Organization level

Efficiency gains: increased outputs with the same inputs for organizations adopting cloud.



Increased agility



Faster innovation

Country level

Spillover effects: economic growth resulting from the aggregate efficiency gains of all organizations adopting public cloud.



Cost savings

Spillover effects

Most of the economic impact of cloud adoption is driven by spillover effects. The **remainder (4%)** is driven by organizations spending in cloud services.

96%

GDP growth impact of 1% adoption of cloud



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This brief study highlights the contribution of cloud adoption to economic growth in the Sultanate of Oman. The paper draws from broader research from Telecom Advisory Services on the impact of cloud adoption in the Middle East and North Africa (MENA) Region.

We define cloud computing as the on-demand delivery of IT resources via the internet with pay-as-you-go pricing. This means that, instead of buying, owning, and maintaining their own data centers and servers on premise, organizations remotely access computing power, storage, databases, and other services on an as-needed basis.

Economic research provides vast evidence of the efficiency gains cloud enables at the firm-level through increased agility, cost savings, and faster innovation. Some studies extrapolate efficiency gains at firm or industry level to estimate the aggregate impact of cloud on national productivity. However, no research thus far quantifies the causal relationship between cloud adoption and economic growth, as measured by the Gross Domestic Product (GDP). In other terms, how much GDP growth does 1% of cloud adoption yield?

To answer this question, we developed a macro-economic model using a state-of-the-art econometric approach and the latest publicly available data. Our model estimates GDP growth based on public cloud adoption in a worldwide sample of countries over 2014-2021. We calculate cloud impact as the sum of cloud spending of organizations and the efficiency gains enabled by cloud adoption throughout the entire economy, or so-called “spillover effects”. Our model does not account for the construction effect of cloud infrastructure, i.e., the ripple effect of investment across sectors of the economy to build cloud infrastructure. We model the impact of access to cloud, regardless of whether cloud infrastructure is present in country or not.

We estimate that in 2021 alone, cloud adoption in Oman added 0.76% to the GDP, amounting to USD 651million of economic value. More than 96% of this impact comes from spillover effects on the economy, while the remainder 4%) is driven by cloud spending from Oman public and private organizations.

In terms of spillovers, we find that an increase of 1% in cloud adoption by Oman organizations will yield an average GDP increase of 0.07%, in line with the MENA average at 0.07%, but behind the regional leader UAE at 0.21%.

Our research confirms that the economic impact of cloud is guided by a “return to scale” effect: cloud economic impact grows with the penetration of cloud. When cloud penetration is low, the economic impact of 1% cloud penetration is minimal. When cloud penetration reaches a critical level, cloud starts having proportionally more impact on the economy. The return to scale for cloud impact is consistent with prior research on the economic impact of digitization and broadband.

Twenty four percent of organizations in Oman adopted cloud computing in 2021, versus 49% in Western Europe and North America. Oman therefore has the potential to improve cloud penetration. By doing so, the Sultanate will benefit from increasing returns to scale and unlock USD 13.7 billion of additional economic value over the next decade (2023-2033), representing 0.98% of Oman’s cumulative GDP. Oman has ambitious plans to diversify its economy through digitization. However, unlocking the potential of cloud will require aggressive policy reforms to make public cloud available for all.