

# Is Multicloud the Future? Desirability of Compatibility in Cloud Computing Market

Do cloud providers with varying market dominance offer compatibility in multicloud platforms, and how does this affect pricing, demand, profits, and customer welfare?

This study by Subodha Kumar and his colleagues, published in *Management Science*, examines the strategic decisions of cloud providers regarding compatibility in the growing multicloud market. Cloud computing is expanding rapidly, with many organizations adopting multicloud strategies to reduce network latency by leveraging multiple cloud providers' geographically distributed data centers. However, challenges arise due to incompatibility between different cloud platforms, leading to the need for multicloud management platforms that introduce additional costs.

The authors develop a game-theoretic model involving two competing cloud providers, analyzing their compatibility decisions, pricing strategies, and the resulting effects on buyers and overall competition. The study reveals that compatibility emerges in equilibrium only when compatibility costs are sufficiently low. Both providers raise prices when compatibility is offered, even the one not bearing the compatibility cost, due to reduced competitive pressure. The provider with greater market dominance consistently attracts higher demand when compatibility is established, while the smaller provider may experience reduced demand. Despite that, both providers benefit from higher profits, illustrating a free-riding effect where the smaller provider gains without incurring compatibility costs.

From the buyers' perspective, compatibility can improve welfare by eliminating third-party platform costs. However, if compatibility and incompatibility costs are not balanced favorably, increased provider prices may offset these benefits, reducing buyer welfare. The study provides practical insights for cloud providers on when to invest in compatibility and how to set prices effectively. Policymakers are urged to consider frameworks, such as cost-sharing, to encourage compatibility while protecting customer interests.

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## MAJOR TAKEAWAYS:

- Compatibility leads to higher prices from both providers due to lowered competition, benefiting providers but potentially harming customers.
- The dominant cloud provider always gains more demand with compatibility, while smaller providers risk losing demand.
- Compatibility increases customer welfare only if incompatibility costs are high or both incompatibility and compatibility costs are low.

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## WHO NEEDS TO KNOW:

- Cloud Providers
- Cloud Customers
- Government Regulators

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