

Governing economic growth in the cloud

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Gross domestic product (GDP) can be boosted by cloud computing, the system in which remote computers on the Internet are used to store, manage and process data rather than the users' local machines. A report to be published in the *International Journal of Technology, Policy and Management* suggests that governments should collaborate to boost the adoption of cloud computing internationally.

Marco Iansiti of Harvard Business School and Gregory Richards of Cambridge-based Keystone Strategy, LLC, have found that cloud computing is likely to extend economic growth by increasing the efficiency of information technology in developed economies and could foster growth in those economies where IT penetration is not yet fully mature.

"Cloud computing is a further evolution and integration of server, internet and [personal computing](#) technology. It is a paradigm that pushes the three driving forces of power, accessibility and economy of scale beyond present constraints," the researchers say. They point out that during the coming decade cloud computing will give individuals and enterprises access to a vast [processing power](#) at a low cost that has not been possible before. The team has now developed a model to link IT [capital investment](#) to [economic growth](#) and applied their model to 45 countries.

In the US, researchers project that IT capital stock will increase from \$2.3 trillion in 2010 to \$3.76 trillion in 2020, 64% growth. If the impact of IT on GDP remains the same as in the recent years, that growth will

translate into additional 0.83% of GDP growth every year. As a benchmark, [Federal Reserve](#) Board puts yearly GDP growth between 2.5 to 2.8% for the period. This implies that the productivity growth enabled by cloud computing will contribute almost one third of total US GDP growth in the coming decade.

For developing countries, researchers expect even larger gains, because in these countries the adoption of IT there is less mature: the factor share of IT capital in these countries is only 3%, as opposed to 11.7% in the developed one.

"Our findings should have bearing on policy discussions as governments across the world (including both the U.S. and the EU) consider and implement policies concerning the regulation of cloud computing. These regulations and decisions span a vast array of issues that, as we demonstrated, can have enormous impact on a country's ability to grow and remain competitive," the team concludes.

More information: "A study of economic impact of cloud computing" in *Int. J. Technology, Policy and Management*, 2012, 12, 344-372

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