Economic dynamic between the two leading software delivery models

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Summary: Cloud computing software has brought many changes to the business landscape and currently, the implementation of such a service is common. New research sheds light on the growing competition between two widely used software models – Software-as-a-Service (SaaS), and Modified off-the- Shelf (MOTS) software.

Cloud computing software has brought many changes to the business landscape and currently, the implementation of such a service is common. New research from Simon Business School at the University of Rochester sheds light on the growing competition between two widely used software models -Software-as-a-Service (SaaS), and Modified off-the- Shelf (MOTS) software.

"The key factor that drives competitive business strategies in this highly aggressive market is the provider's pricing scheme," says Abraham Seidmann, Xerox Professor of Computers and Information Systems and Operations Management from Simon Business School.

SaaS is available online on-demand, which allows businesses to increase production with fewer people. This scalability reduces investment on technology infrastructure, as well as easily maintaining access to important information with little to no upfront spending. SaaS is used in a number of common business areas with organizations, such as Workday which offers cloud-based enterprise-level software solutions for human resources and financial management, QuickBooks offering cloud-based accounting solutions and DialogsCMS delivering enterprise content management.

The typical in-house MOTS system provide some API's (application program interface) with access to the source code of the underlying software so it can be customized and better integrated to the business. Cerner Corporation is an example of a health care technology vendor that develops customized Electronic Medical Records (EMR) to create a "custom fit" between the software and the needs of the medical institution. This vendor recognizes the need for customization and enhanced functionality, while a leading competitor, such as EPIC seems to be far more limited in that respect.

On the other hand, most SaaS systems provide limited customization options because they are operating in a multitenancy environment. Multiple customers share the same application, running on the same operating system, hardware, and data-storage mechanism. This is how SaaS attains economies of scale, but as a result, users might incur significant lack-of-fit and integration costs.

According to Seidmann, "Paying more while not getting your exact business integration needs is called "lack-of-fit" cost. When lack-of-fit costs decrease -- when new industry standards are adopted, for example -- SaaS systems need to reduce prices to gain market share. However, when lack-of-fit costs are expected to increase, MOTS software will be more competitive because it's easier to modify the source code to meet specific functional needs."

In their paper, "Analyzing Software as a Service (SaaS) with Per-Transaction Charges," Seidmann and his co-author Dan Ma, Associate Professor Information Systems from Singapore Management University, built a game theory model to explore competitive pricing strategies of SaaS and MOTS platforms on a per-transaction basis to determine where and how each service modality gives end-users more value for their money.

The co-authors identified three different qualities to measure the pricing strategies between competitors: how SaaS providers serve multiple clients; the impact of the software's lifespan; and the users' capacity-management problems. Based on their analysis, the researchers offer three top strategic recommendations:

• SaaS providers should adopt a higher value, but a lower price strategy • SaaS users should see economies of scale with steadily reduced SaaS prices • MOTS providers instead should focus on enhancing product value with richer features and full-functionality and integration ease. This will boost its perceived value and hold its market power in certain segments.

Now that the cloud computing software trend seems unstoppable in many markets, major players in the competitive on-demand software game need to adapt to the changing times and offer both SaaS and MOTS options. The trend is already evident for companies, such as SAP, Microsoft and Oracle who feel the pressure by newcomers to the cloud space and hence they also offer both versions -- hoping to convert a one-time sale into a perpetual income stream.