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## The Truth About Cloud Economics

BY DRUE REEVES AND DARYL PLUMMER



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The financial reasons for the huge growth of cloud services seem crystal clear: cloud computing simply allows us to pay for what we need only when we need it, right?

But the truth is, companies adopting cloud computing often miss the risk and depth of change needed to embrace a cloud economics model as they embrace cloud services. It turns out that the financial model for cloud computing has far more nuances for both a company and its cloud services provider than many people understand up front.

So what is the financial model for cloud computing? Let's start by saying it's a combination of how people make money in the cloud and the risks associated with adopting new payment styles. Many people assume it's all about moving to a "pay-as-you-go" (PAYG) model and while this is certainly a big piece of it, it also involves operating versus capital expenses, subscriptions to services, and customers paying for outcomes (not technology). The good news is that these models are already familiar to most businesses.

Companies routinely spend money on items vital to the business. They also trade operating expenses for subscriptions and services necessary for business operations, but not directly related to the business. This includes those that would otherwise be too expensive to own and operate (think electricity). They expense nonessential items to someone else who specializes in offering these items as a service.

Cloud computing is no different. Why should a toy or cosmetics company own and operate multiple data centers? It's much easier and economically sound to pay for a service for a short time period and then stop paying for it when you're finished with it, rather than wasting money on something another company can do better, faster and cheaper. But this can present issues for both the consumer of the cloud service as well as the provider.

For companies, cloud computing's new economic model stands in stark contrast to the traditional economic model of IT where we buy technology from a vendor as a capital investment and continue to invest in maintaining and servicing it over time. Traditionally, much of the money allocated to technology has been locked away in capital expense allocations used for buying physical goods. However, cloud services are just that, a service, and require reallocating money to operating expense budgets. This can be a big change when your company must still pay to maintain existing infrastructure. It may even mean that new lines of expenditure must be created if cloud services don't replace existing services. (And you don't need us to tell you how hard it is to create new lines of expenditure.)

The reward for this potentially painful transition to operating expense is that the business gains flexibility and the ability to buy the services they need when they need them. But if you're a CFO, you'll have to decide whether you like consistent or variable expenditures. Operating expenses

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can be difficult to predict and control because service subscriptions can come from anywhere at any time. Ask yourself if you have a predictable cloud requisition/governance strategy that makes future service acquisitions easy.

For cloud services providers, the PAYG model's flexibility lets customers scale their services up or down based on their needs. If the consumer can easily add or subtract resources and pay for cloud services in small increments, the provider has no guarantee of future business. Therefore, to reduce this risk, the provider must dictate service terms and conditions in its favor. But here's the problem: if the consumer assumes most of the risk, then he will never host a critical application with a cloud service provider. That would limit cloud computing's market growth to the set of noncritical applications or to small-to-midsize businesses that would rather use cloud services than build a \$500 million data center in the U.S.

On the other hand, if cloud providers assume all the risk, then in most cloud environments (with multiple consumers), the amount of liability within a provider's service could be greater than the value of the company (which we all know is no way to run a business). And if the service provider cannot afford the insurance premiums necessary to cover the liability without raising prices to the level that the service becomes too expensive to consume ... well, you get the picture.

So, to combat this kind of risk, cloud providers will enter into what are called "enterprise agreements," where the two parties can define the parameters of the relationship based on mutual risk sharing. Essentially, this ensures that each party has a vested interest in the financial success of the other party. There's risk, but there's also reward for better service.

In the end, providers that deliver better service and better guarantees will ask for — and get — more money. Consumers, on the other hand, will get the flexibility of "pay-as-you-go." As long as they can figure out a way to pay for it.

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## Sponsor's Perspective

### **Interview with Atul Sood, Vice President for Advanced Technologies, Wipro**

#### **We know that the cloud has been great for start-ups. But how are established enterprises adopting the cloud?**

To answer this question, let's look back in time and reflect on a critical aspect related to high transaction costs being one of the reasons for the existence of large organizations as postulated by Nobel Prize winning economist, Coase. But when the transaction costs decrease or are removed, you would find large organizations being under attack from smaller, nimbler and more agile start-ups. So, we begin to see the rise of start-ups that set out to become bigger and better.

The established companies on the other hand made note, but they struggled because of the sunk costs in IT systems which, once served them well, but proved to be an impediment to growth in a connected world. On the other hand, business leaders within large organizations saw opportunities through the rise of new-age technologies, but were held back due to locked-down set-ups, processes, and engagement models that had been built by their company's IT. In fact, the frustrated executive could not understand why the IT team would take three months to help launch a new product, when it could be done easily through the 'always available' IT systems through public cloud environment made available with the swipe of a credit card. And, this healthy tension between business and IT began to change things within the company. This pressure from the businesses and an understanding that IT needs to respond much faster to the market; to the external environment; and service the customer in a much faster way heralded the adoption of new-age technologies within large enterprises.

So, whether you are a start-up or an established company, the economics of cloud makes sense. Technology has played a big role as a disintermediary of businesses and we have seen examples where businesses have been totally redefined by new-age technologies like cloud.

#### **How has the cloud helped companies preserve cash for a stronger balance sheet?**

In a post-2008 world, companies have been holding onto cash and committing to new projects or to asset refresh only after much deliberation. To give you a data point, the time for refresh for an IT asset would run to three to five years in the late nineties. But after 2008, companies are holding on for five to eight years to refresh. More importantly, start-ups are now formidable opponents who use Pay As You Go (PAYG) IT from cloud service providers.

So what does it all mean? Businesses on one hand are under extreme pressure to innovate but they do not want to go down the old route. They are looking at technologies like cloud where a business division leader can swipe a credit card and get some of the best IT environments without up-front investment. So, you have a 'pay and consume' based cloud model which is defined not only by technology and its benefits, but also by the economics around it.

We now see complex workloads migrating to the cloud, as the cloud model is maturing even on the pricing front. This feeds more innovation, and more specifically around industry solutions. So, today, solutions for a bank could be different from a utilities company or an insurance provider. This in turn

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allows solution providers to come up with unique business models that serve the needs of an industry. For instance, in India, Telecom service providers, working with cloud providers, developed a model for timely onboarding of customers as opposed to spending millions of dollars to set-up and run the infrastructure. In the process, new partnerships were forged between the consumer and provider with new business models. My sense is that we are heading to an age where the 'art-of-possible' will define the intensity of partnerships.

### **What should companies do in order to take advantage of the cloud?**

First, you have to look what is core and non-core to your company; and, not just in today's context but say five years from now. Why? Because, what companies define as core might be completely non-core as we go along. Remember, we agreed that technology can be a great disintermediary. So, companies need to re-evaluate their models to identify what they want to hold on to, from a competitive advantage standpoint, and — leverage the forces of advanced technologies like social, cloud, mobility and analytics to make their organizations more agile, more dynamic and more responsive. A key aspect here is to look business process downwards to applications and then infrastructure. If you do not optimize your business processes, there is a high probability that you would fall into what Robert Solow calls productivity paradox. This is typical of a scenario where technology does not live up to its stated benefits because archaic processes still define the usage of technology. Post this; you should cut over to an agile, dynamic and infinite scalable IT. The icing — you consume on a PAYG model!