Cloud Market – Analysis of Potentials and Challenges for Service Providers

Daniel Penzel
University of Vienna, daniel.penzel@gmx.at

Natalia Kryvinska
University of Vienna; Comenius University in Bratislava, natalia.kryvinska@univie.ac.at

Christine Strauss
University of Vienna, christine.strauss@univie.ac.at

Follow this and additional works at: http://aisel.aisnet.org/sigbd2017

Recommended Citation
http://aisel.aisnet.org/sigbd2017/4
Cloud Market – Analysis of Potentials and Challenges for Service Providers

Daniel Penzel¹, Natalia Kryvinska¹-², Christine Strauss¹
¹Department of e-Business, Faculty of Business, Economics and Statistics, University of Vienna, Oskar-Morgenstern-Platz 1, 1090 Vienna, Austria
²Department of Information Systems, Faculty of Management, Comenius University in Bratislava, Odbojárov 10, 82005 Bratislava 25, Slovakia
daniel.penzel@gmx.at, natalia.kryvinska@univie.ac.at,
christine.strauss@univie.ac.at

Cloud Providers (Global and Niche) for Collaborative Enterprises

Cloud providers – like any other market actor – may follow in general two alternative ideal typical strategies to become a successful player on a market (i) low prices or (ii) making their product more valuable/unique than others. For this reason our analysis is two-folded: we describe in the first category global players in cloud computing, the second category focuses on successful niche providers.

Global players in cloud computing markets are well-known from their other operations and their business segments: Amazon, the world’s largest online retailer, Microsoft, the leader in operating systems for personal computers, and Google, the largest search engine operator, are the dominating players in cloud industry. Big enterprises have to create a powerful computing infrastructure to handle temporary peaks of demand of their operations. As usually demand is lower, idle capacities can be offered to customers at time without building additional structures. Global players do not only have the possibility to build large data centers and run server-farms to offer them as a service. In fact, they have the unique advantage to being able to offer their own unused infrastructure to their customers without any investment in new infrastructure. According to Synergy Research Group (2017), Amazon generated the biggest revenue in the cloud market regardless of the distribution model of services (cf. Figure 1).

Figure 1. Global Players Revenue (Synergy Research Group 2017).

Global players in cloud computing focus on Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PaaS) models and Private Cloud Hosting. Amazon is by far the leader in those segments generating a higher revenue than the biggest five competitors combined. The cloud computing market is estimated to grow by
Although, in general “Niche markets are an attractive opportunity available to small businesses forced to compete against the scale economics that large competitors are able to achieve” (Thilmany 2008) the market in cloud computing shows specific conditions. Competing with global players in cloud providing is impossible for most challengers. Those enterprises developed different models to deliver additional service to their customers without being in direct competition for the customers attracted by global players. In the best-case inimitable strategy or service can boost an enterprise’s market position, fill a gap and obstruct it to competitors. At the same time niches present growing maturity of products. Cloud providers need to develop a service adjusted to their strengths to stay competitive, because the market for standard products gets saturated or is already occupied (Nielsen 2012). According to Nielsen (2012) security remains the most promising topic in cloud computing. A major threat to niche providers is the declining cost for cloud storage. Even if the service of niche providers offers different packages and products to its customers other products become attractive alternatives due to price decline. As niche providers have no direct influence on price developments, they need to create unique services and make them even more valuable to customers to attract new customers in the future and foster customer loyalty. Staying competitive in a niche market claims for premium products combined with a service package that fits the type of cloud service.

Platforms and Services for Service Providers

This Section contributes through presenting what cloud providers are already offering to their customers and by analyzing the potential of cloud providers. Table 1 aggregates the most important facts about cloud providers for further analysis and presents only the most contributing offerings.

Table 1. Data on Global Players’ Service Offerings.

<table>
<thead>
<tr>
<th>Focus</th>
<th>Amazon</th>
<th>Google</th>
<th>Microsoft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Type</td>
<td>Compute, Storage</td>
<td>Web Application</td>
<td>Web/Non-Web Application</td>
</tr>
<tr>
<td>Service Offering (Extract of the most important offerings)</td>
<td>Compute, Networking, Storage &amp; content, Delivery, Databases, Analytics, App Services, Deployment &amp; management, Mobile services, Applications, AWS marketplace software</td>
<td>App engine, Google applications, Compute engine, Cloud storage, Cloud SQL, Cloud datastore, Big query, Prediction API, Translate API, Cloud endpoints, Cloud dns, Cloud pub/sub, Cloud deployment</td>
<td>Media, Media services, SQL database, Storage, Virtual machines, Websites, Automation, Back up, Media services, Mobile services, Authentication, Storage, Traffic management</td>
</tr>
<tr>
<td>Customer Type</td>
<td>Start-up and SME, Big and Global Player</td>
<td>Start-up and SME</td>
<td>Start-up and SME’s Big and Global Player</td>
</tr>
<tr>
<td>Magic Quadrant</td>
<td>Leader IaaS, Challenger PaaS</td>
<td>Visionary IaaS, Challenger PaaS</td>
<td>Leader IaaS, Leader PaaS</td>
</tr>
</tbody>
</table>


We analyze three niche players, which are already established in cloud computing niche-offerings or which are on their way, i.e. Salesforce presents an enterprise, which can be seen as both, a global player and a niche player. Because of its character and its difference from the other global players in cloud services proving, it is presented as a niche player. Table 2 illustrates the aggregated data on niche players.

Table 2. Data on Niche Players.
Salesforce | Rackspace | VMware
---|---|---
Focus | PaaS, SaaS | IaaS | IaaS
Service Type | Software, Web applications, Customer relationship, Support, Enterprise resource management | Compute, Storage, Customer relationship, Customization | Compute, Storage, Customer relationship
Service Offering | Sales cloud, Service cloud, Exacttarget, Marketing cloud, Salesforce1 platform, Salesforce communities, Data.com, Pardot, Salesforce chatter, Work.com, Desk.com, Customer service | Servers & sites, Databases, Big Data platform, Files, Block storage, Back up, Monitoring, Queues, Load balancers, Managed hosting, servers, storage and collocation, Rack connect | Data center virtualization & cloud infrastructure, Data center & cloud management, Infrastructure-as-a-Service, Enterprise mobility management, Personal desktop, Applications and data platform, Free services
Customer Type | Start-up and SME, Big and Global Player | Start-up and SME | Start-up and SME, Big and Global Player
Magic Quadrant | Leader PaaS | Niche Player IaaS | Niche Player IaaS


Business Models

The framework focuses on the business model explanation of Teece (2010). Rather than describing complete business models of providers, we show selected criteria to outline how providers operate in cloud computing markets. Tables 3 and 4 display business models of global and niche players in cloud services proving.

Table 3. Selected Criteria of Business Model of Global Players.

<table>
<thead>
<tr>
<th>Who</th>
<th>Amazon</th>
<th>Google</th>
<th>Microsoft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who</td>
<td>Whole bandwidth of cloud computing</td>
<td>Mostly small to medium adopters</td>
<td>Concentration: Fortune 500</td>
</tr>
<tr>
<td>What</td>
<td>IaaS, PaaS</td>
<td>IaaS, PaaS, SaaS</td>
<td>IaaS, PaaS, SaaS</td>
</tr>
<tr>
<td>How</td>
<td>Standardized products, Additional tools, Use of customer base to push services, Price</td>
<td>Grab a niche, Differentiation, Direct sales, Support investments, Third party offerings</td>
<td>Standardized products, Price</td>
</tr>
</tbody>
</table>


Table 4. Selected Criteria of Business Model of Niche Players.

<table>
<thead>
<tr>
<th>Who</th>
<th>Salesforce</th>
<th>Rackspace</th>
<th>VMware</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who</td>
<td>Whole bandwidth of cloud computing, Focus on customers in the healthcare sector</td>
<td>Small to medium adopters, Customers: willing to pay for service</td>
<td>Whole bandwidth of cloud computing, Customers committed to the enterprise</td>
</tr>
<tr>
<td>What</td>
<td>PaaS,</td>
<td>IaaS,</td>
<td>IaaS</td>
</tr>
</tbody>
</table>
Cloud for Collaborative Smart Enterprise

<table>
<thead>
<tr>
<th>How</th>
<th>SaaS</th>
<th>Turn from hosting to cloud services</th>
<th>Additional value through service, Strong brand impact, Support at virtualization, CRM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Enterprise resource mgmt., Collaborative applications, Huge portfolio of services, CRM on-demand,</td>
<td>Managed cloud, Support, Integration of services, Cooperation w/ customers, CRM</td>
<td></td>
</tr>
</tbody>
</table>


Diversified customer models explore the business models of global players, as well as niche players. Most of the players try to serve the whole market. Only Google and Rackspace focus on a certain range of customers. In the service offerings spectrum, there is some differentiation visible. While the global players try to serve every deployment model, the niche players focus on a certain deployment model to enlarge their niches. Amazon and Salesforce have different strategies. Amazon does not serve the Software-as-a-Service market, while Salesforce offers services and does not provide infrastructure (Buyya 2009, Gartner 2014b, IDC 2014). The global players, except of Google are operating with standardized products to keep cost low, while niche players differentiate their services, as they cannot compete with the price rivalry of the global players. Google wants to defuse the price competition, and is focusing on niche markets, too (Babcock 2014, Chatterjee 2014, Forbes 2013, Forbes 2014, Gartner 2014b, IDC 2014, Mirandi 2013, Padashetty & Kishore 2011, Parnell 2014). All in all, the business models depict a typical profile. Global players are competing through standardization and price, while niche players try to differentiate their products to develop a niche, where they are able to compete.

Cloud Service and Unique Selling Proposition

While global players force growth strategies, niche players need to develop a unique selling proposition in form of specific value-adding services for the cloud customer. Thus, Salesforce profits from its immense portfolio of services for customers and enterprise relationships (Gartner 2014b), and Rackspace offers managed services to create a customer relationship (Parnell 2014). VMware is an established player in virtualization trying to convince its virtualization customers of its cloud services (Babcock 2012). The niche players are the best operating companies in a specialized segment of cloud services. Thus, it is hard for a niche provider to keep up with the pace of innovation a global player is able to set (Gartner 2014a).

Global players do not have a unique selling proposition either. Amazon has been dominating the market since the very beginning, and is still leader, while Google and Microsoft caught up (Diganan 2013, Babcock 2013a). Global players try to keep costs and prices low and operate at low margins, which increases competitive constraints. Although Google creates a business sector outside the global player’s price competition by adapting to what niche players do, this approach will not create a unique selling proposition (Mirandi 2013, Gartner 2014a, Padashetty & Kishore 2011).

To conclude, the cloud market is all about competition as there is no unique selling proposition, but different niches, some of them well established (cf. e.g. Mladenow et al. 2012a, Mladenow et al. 2015a, Mladenow 2015b, ). Global players perform a low-price strategy, while the niche players develop their niches. Both, global and niche players, are under constant competitive pressure in the rapidly developing cloud computing industry. By now, cloud computing is a viable, attractive alternative to other hosting options; although cloud computing seems to be able to realize its advantages it does not exploit its unique attributes to the full extent due to inner-market structures and mechanisms. Smart and flexible enterprises performing collaborative tasks form a highly attractive target group for cloud services. Collaboration within company boundaries (temporal, long-term), collaboration across company boundaries (temporal, long-term), crowd activities, co-creation, collaborative supply chains etc. are increasingly applied business concepts that require ample and flexible resources, in terms of storage, applications, and services. Security and safety, liability, legal norms, and sustainability are important matters to be settled from a customers’ perspective. Collaborative smart enterprises represent an interesting target group for both, global and niche players, in the cloud market.
References


