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Cloud Market – Analysis of Potentials and Challenges for Service Providers

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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).

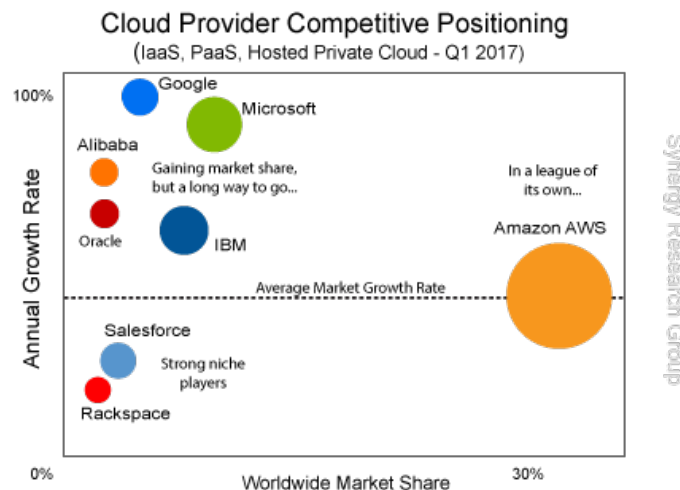


Figure 1. Global Players Revenue (Synergy Research Group 2017).

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

40%, and Amazon AWS holds about one third of the worldwide market share (Synergy Research Group 2017).

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.

	Amazon	Google	Microsoft
Focus	IaaS, PaaS	IaaS, PaaS, SaaS	IaaS, PaaS, SaaS
Service Type	Compute, Storage	Web Application	Web/Non-Web Application
Service Offering (Extract of the most important offerings)	Compute, Networking, Storage & content, Delivery, Databases, Analytics, App Services, Deployment & management, Mobile services, Applications, AWS marketplace software	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	Media, Media services, SQL database, Storage, Virtual machines, Websites, Automation, Back up, Media services, Mobile services, Authentication, Storage, Traffic management
Customer Type	Start-up and SME Big and Global Player	Start-up and SME	Start-up and SME's Big and Global Player
Magic Quadrant	Leader IaaS	Visionary IaaS, Challenger PaaS	Leader IaaS, Leader PaaS

(Sources: Amazon Web Services, 2014a, Amazon Web Services 2014b, Amazon Web Services 2014c, Amazon Web Services 2014e, Babcock 2013, Barron’s 2013, Bass 2013, Buyya 2009, Dignan 2013, Gartner 2014a, Gartner 2014b, Google 2017a, Google 2017b, Google 2017c, Google 2017d, IDC 2014, Marinescu 2013, Microsoft 2014c, Microsoft 2014d, Microsoft 2014e, Microsoft 2014f, Mirandi 2013, Tung 2014, Yahoo Finance 2014a)

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 (Extract of the most important offerings)	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

(Sources: Babcock, 2012, Chatterjee 2014, Gartner 2014a, Gartner 2014b, Miller 2013, Rackspace 2014c, Rackspace 2014d, Rackspace 2014e, Rahn 2014, Salesforce 2014a, Salesforce 2014b, Salesforce 2014c, VMware 2014a, VMware 2014b, VMware 2014c, VMware 2014d, Yahoo Finance 2014b, Yahoo Finance 2014c)

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.

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

(Sources: Amazon Web Services 2014c, Buyya 2009, Dignan 2013, Gartner 2014a, Gartner 2014b, Google 2017b, IDC 2014, Microsoft 2014e, Mirandi 2013, Padashetty & Kishore 2011, Sanders 2014, Tung 2013)

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

	Salesforce	Rackspace	VMWare
Who	Whole bandwidth of cloud computing, Focus on customers in the healthcare sector	Small to medium adopters, Customers: willing to pay for service	Whole bandwidth of cloud computing, Customers committed to the enterprise
What	PaaS,	IaaS,	IaaS

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

(Sources: Babcock 2012, Babcock 2014, Chatterjee 2014, Forbes 2013, Gartner 2014a, Gartner 2014b, IDC 2014, Miller 2013, Mladenow et al. 2012b, Parnell 2014, Rackspace 2014e, Salesforce 2014b, Sanders 2014, VMWare 2014c, Yahoo Finance 2014c)

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 (Dignan 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.

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