Potential Beneficiaries Of Cloud Accounting Technology: Small Or Large Companies?

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Abstract: *The article addresses the issue of Cloud Computing concept from the perspective of its implications on the business environment. In this respect we have analyzed the changes brought by the new technology which come to connect the discontinuities between the IT solutions adopted by small and medium organizations and those adopted by large corporations. The article analyzes the benefits and limitations of cloud both in terms of small companies and in terms of more developed entities. Whatever the size and type of organization but especially for SMEs Cloud provides a competitive advantage by providing access to affordable, reliable and flexible IT solutions that allows them to operate more efficiently among their competitors in the market.*

Key words: cloud, small companies, corporations, benefits, challenges

Introduction

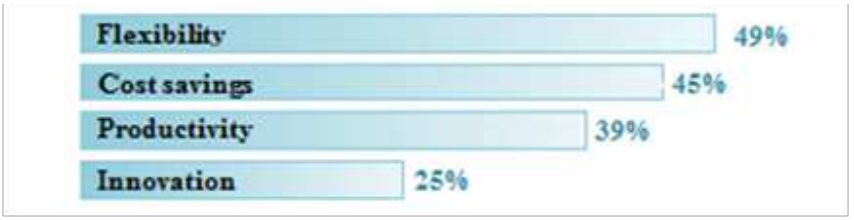
The importance of technology for the economic development is widely recognized considering the impact it can have on the success, survival or failure of business activities of the companies, particularly in an environment of intense and global competition. Technology often provides saving solutions in downward economic cycles because it allows the creation of more effective business models and ecosystems. Paradoxically,

sometimes creates a level playing field but there are also times when engenders the creation of an "unfair" advantage for some countries or companies. One such phenomenon is the Cloud that sets in motion the interest and investment in many parts of the world. The future belongs to those who will truly understand the implications of the new technology, will control risks and adopt an innovative vision to create a new order.

Literature review

According to a study undertaken by Vanson Bourne for Microsoft with the contribution of 2199 managers and entrepreneurs from 21 European countries including Romania, 55% of the respondents consider that information technology is a key factor for the success of their business. One of two entrepreneurs consider that cloud resources will become the new way of normality and the main named advantages are:

Figure 1: Cloud technology benefits (according to the Vanson Bourne study results



As there is concluded in the above mentioned study, we also consider that the cost reduction through exploitation of Cloud solutions is one of the top benefits made possible by the Cloud. However a proper attention should be paid to other significant benefits such as work efficiency/productivity and mobility. Cloud solutions could be regarded as a promoter of employee mobility through full availability given the territorial spread, optimization of time, the possibility of accessing data in and out of the workspace.

Currently there are many studies that bring to the fore the many benefits of the cloud technology in the business environment as well as its limitations. Provided the current economic background, cloud solutions represent a competitive differentiator for companies of all sizes. In recent years of crisis, entrepreneurs focused on finding new areas of profit. If some of them have reinvented their business, others have turned to different categories of customers or have reduced the number of services / products offered and focused only on the cash they could bring to the company. Regardless of the plan followed the general trend is to adapt the business to the new technological framework in recognition of the positive effects of the changes engendered by the Cloud solutions.

As stated by Marius Georgescu, Cloud Lead, Microsoft Romania business solutions based on Cloud Computing minifies the capital cost and substantially decreases the operational expenses and in this way entrepreneurs have access to the best technology at an affordable price through a model „pay-as-you-go".

Although we recognize the importance and nature of Cloud technology benefits, we intend to approach this concept in terms of companies' size: who are the real beneficiaries of Cloud technology and who is applied to, small organizations or corporations?

What small companies have to gain?

Cloud concept has a quite low interest within large companies who own the infrastructure, local or international data centers and IT professionals but it represents a topic of significant interest for small companies, more swift-handed, that need solutions to help them to better organize the business and ultimately increase their results.

Small companies have to settle with modest IT budgets in order to be able to meet the demands of their business and to be able to use efficient IT systems. Many of them cannot afford to support multiple data centers to assure the protection against possible disasters and business continuity. The biggest challenge is finding enough resources to drive generation of revenue. Such companies have to compromise in terms of technological modernization, architectural decisions and investments in infrastructure. In the current economic background the year to year trend encourages "to do more with less money" and therefore the embraced solutions are just "good enough" because there are no resources to develop applications to engender the expected results.

Following our research we consider that Cloud technology reduces the gap between SMEs and large organizations. Unlike traditional IT systems, Cloud systems require low investment in terms of equipment and licenses. If in the past small and medium companies did not afford expensive IT systems like customer relationship management ("CRM") or enterprise resource planning systems ("ERP") now are able to run their internal processes and operations using the same IT systems employed by their more developed competitors.

Through Cloud Computing SMEs have an immediate advantage to benefit of a qualitative infrastructure without the need to purchase, deploy and manage it. In this way are released resources that can be focused on business innovation needs. Moreover these companies will be able to use multiple data centers located in different parts of the world which meet the requirements of data recovery in case of disaster and business continuity.

One of the main changes brought by data migration into the cloud is represented by the payment method which is subscription-based, depending on consumption. Due to the affordable startup costs, small organizations are able to manage in more efficiently manner its available funds and thus have the ability to launch products and services on market in a shorter timeframe.

Also Cloud technology meets the needs of small organizations in respect of productivity which is substantially improved by the availability of Cloud resources. As long as there is an Internet connection employees can easily work from anywhere in the world. This fact will lead in time to an increase in efficiency, business cost reduction and will facilitate the collaboration within the company in a timely manner.

In terms of data security, it is among the first concerns both for small and especially for more developed companies that seem to hesitate to embrace the possibility of complete migration into the Cloud. However professional service providers have implemented various layers of security to ensure data privacy and to maintain the reliability and validity of the information. Nevertheless there should be considered the fact that the protection of critical data depends largely on the ability of employees to protect their personal access information.

Big corporations are turning to cloud

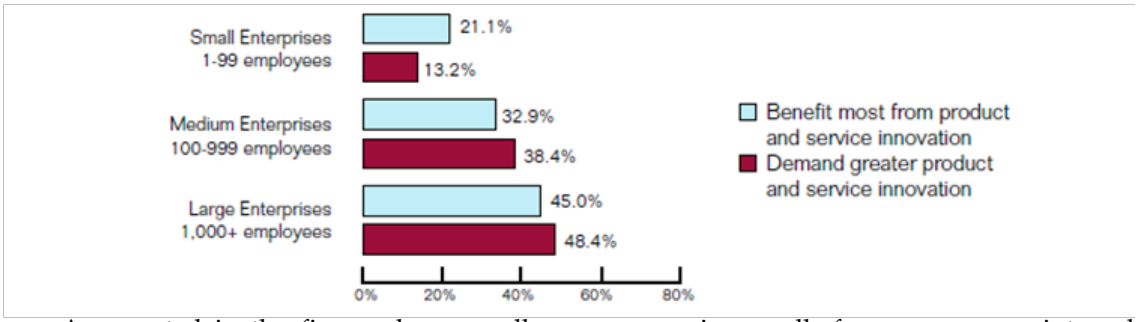
resources because they help to improve the operations flexibility and targets setting. If developed entities are making remarkable progress in Cloud, small companies are also capable of such progress using the same economic and production infrastructure. A prime example of an application for SMEs benefit is e-mail which is widely available. Companies that make the transition are able to manage a large number of users and on-line storage paying only for what they are consuming.

For a small business the process of outsourcing the IT resources into the Cloud reduces the need for specialist skills and allows management to focus on the most important aspects of a business. It may have a slightly higher cost than in-house IT services but are usually compensated since they allow a small company to adopt a large entity's approach in resolving the problems they face.

A study that has been undertaken by Spiceworks reveals the fact that Cloud services are currently used by 48% of small and medium companies increasing from 28% as it was recorded in the first half of 2011.

Cloud Computing technology provides innovating opportunities for companies of various types and sizes. Obviously small and medium companies opt for adopting cloud resources in order to avoid difficulties and costs of deploying an IT infrastructure to support their business and respond to their customer needs. Corporations can also benefit from such resources through an opportunity to experience new technologies without having to invest in the purchase and implementation process. In the second half of 2012 Information Systems Audit and Control Association (ISACA) conducted a study regarding Cloud Computing market maturity and innovation attended by 252 users of Cloud resources. Regarding the penetration of Cloud technology into a potential market the survey respondents consider that large companies (more than 1,000 employees) have a higher demand for innovative products and services as compared to small businesses.

Figure 2: Cloud spread on market segments based on its benefits and innovation demand (source: ISACA, "Cloud Computing Market Maturity Study Results", 2012)



As asserted in the figure above small companies do not have a high interest in the means of using Cloud as a measure for change in the way technology is deployed and therefore it is not apprehended as a strategic tool. We believe that this happens because companies usually focus more on an internal perspective than an outsourced approach. As far as concerns the internal prospect of Cloud it represents a mechanism through which new technologies can be experienced and provides users improved services to increase

staff efficiency and effectiveness. Goals set in an external approach such as launch of new products on the market or assuring a top rating are less considered.

Cloud implications for small and medium companies can bring as well limitations that must be considered and analyzed in terms of the company's ability to prevent them or find solutions in this regard. Undoubtedly the security issue remains one of the main concerns when taking into consideration the migration to this new technology. Besides this, other aspects that can cause difficulties in adopting Cloud solutions should be discussed. One of the matters is Internet connection. Cloud makes the SMEs business to be dependent on a reliable connection to the Internet. This can result in a performance risk due to lack of Internet speed, reliability of the network or data transfer. Also there may be a problem due to the fact that the company is too dependent on the Cloud service provider. Other problems set within the legal framework since there is a need of establishing regulations in what concerns the national limits and conditions for data transfer.

What big companies have to gain?

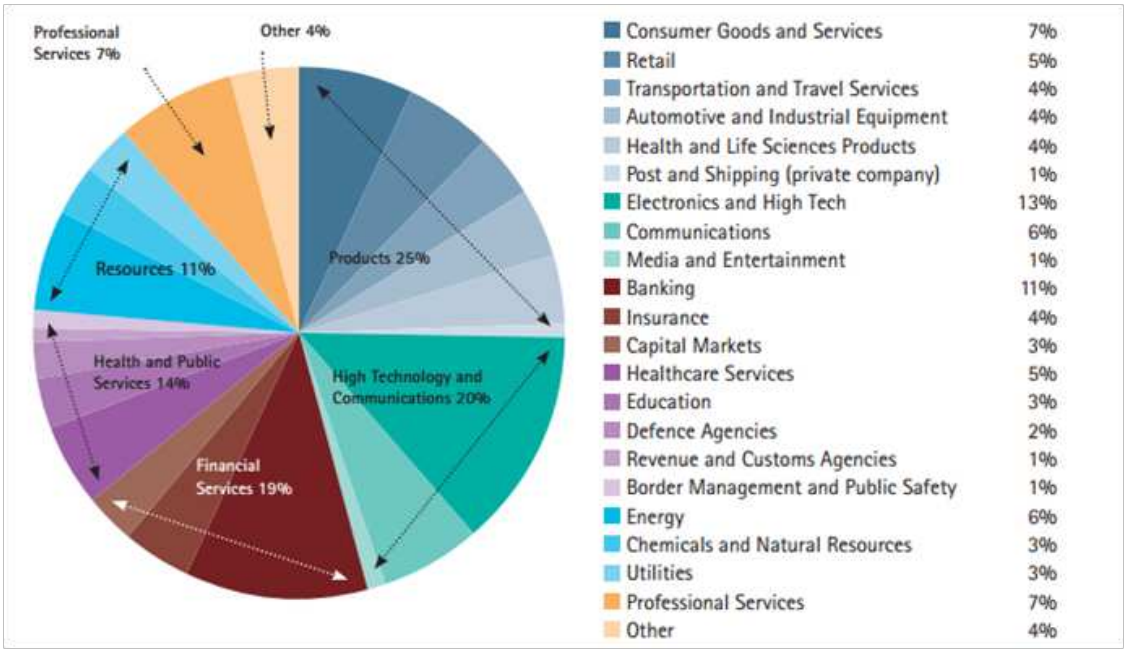
On the other hand, large companies that have substantial IT budgets do not face the difficulties encountered by small and medium companies. Many of these organizations are waiting and looking from the sidelines how this technology matures but consider that it is too risky to join. Corporations that adopt Cloud Computing will gain competitive advantage.

A study undertaken by Jeanne G. Harris and Allan E. Alter for Accenture reveals that top executives of developed companies realize how Cloud services can provide new ways to compete but also feel threatened by new potential competitors that may enter on the market. However on the whole leaders of key players in the market recognize the strategic potential of Cloud technology and almost more than half states with confidence that cloud services can ensure a competitive advantage. Further we have presented part of the Accenture study results regarding executives thoughts in what concerns the possible changes brought by the Cloud.

Figure 3: Responses to possible Cloud outcomes (source: Accenture study regarding the competitive advantage brought by Cloud Computing technology)

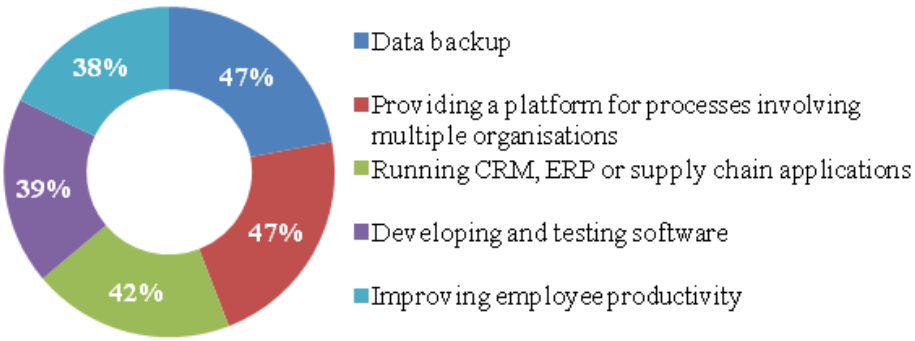
Each industry has its own reasons for adopting Cloud technology. The balance of Cloud deployment by industry is as follows:

Figure 4: Spread of Cloud by industries (source: Accenture study regarding the competitive advantage brought by Cloud Computing technology)



As shown in the figure above high technology and communication industry detain a large share in the use of Cloud. A percentage of 94% of organizations in the industry are using or experimenting some form of cloud, especially private clouds. These companies show an interest above average in using these resources. IT companies are often burdened by the provision of highly developed IT infrastructure and this has led the sector to be among the first to find solutions to reduce IT maintenance costs. These companies exploit the volatile nature of Cloud technology finding use in several ways:

Figure 5: Cloud services in high technology and communication industry



Also, the finance sector is among the industries with a fast pace in the process of adopting Cloud technology. Bankers and brokers easily understood that these services can lead to a substantial increase in revenue by launching new financial products and services. Firms with a financial background use Cloud also for data analysis (72%). Managers in this area can not deny the potential of this technology to improve their operations. A percent of 75% states that these resources can be the foundation for an efficient and standardized business. More than 70% declare that cloud services put in motion processes that otherwise would not be cost-effective or feasible.

Another area interested in Cloud is that of health and public services. Nearly 83% of the organizations in this industry are currently using Cloud services. Government entities hold huge volumes of data to be processed and analyzed starting from economic forecasts and moving up to crime prevention and collection of taxes. The prime ways of using Cloud are data backup (47%), data analysis (41%) and research and development (38%). However this is also the sector with the biggest concerns regarding security and privacy of data. A percentage of 78% of those who have executive responsibilities are worried or very worried about this aspect.

On the other hand, manufacturing firms, retailers, consumers, manufacturers of industrial goods are not upholders of a rapid adoption of Cloud technology but behold it as a perspective of future innovation that will become a basic need of the business. Some ways of using cloud systems include the availability of a working platform which ease the connection with other organizations (43%) and running CRM, ERP or supply applications (41%). In a ratio of 4 out of 10 manufacturing companies recognize as a result of adopting Cloud technology the improvement of the decision making process in the next 5 years. It is likely to use the cloud to run websites that involve social media and mobile applications[1] , 40% of the companies planing to use them in the next 18 months.

Among the companies with the lowest probability of using Cloud technology are included those that provide utilities services, energy, chemical and natural resources which allocate a small portion of the budget for IT infrastructure spending. However to the extent to which IT platforms are used there is an opening to the Cloud migration in order to create a flexible and scalable IT infrastructure. Also Cloud services are used to manage a large volume of data generated in the normal course of operations. The top benefits resulting from the use of Cloud in this sector are avoiding IT maintenance costs (73%) and the development of new or improved products in a shorter time (69%).

As we have showed above in what regards large companies the benefits of Cloud technology are many and varied stretching over a wide range of business sectors. Besides these advantages we want to bring into discussion the implication of Cloud over energy costs and the possibility of future orientation towards a "Green IT". A report released by the Carbon Disclosure Project (CDP) in 2011 showed how virtualization of services may lead to substantial savings in energy costs for large corporations while avoiding the release of millions of tons of greenhouse gases.

[1] Olteanu Cosmin, „New Ways of Developing Public Institutions Web Sites in Context of Using Social Plugins and Mobile Devices", "Manager" nr. XVI, p.90-97, Bucharest University Publishing House, 2012, ISSN: 1453-0503

Cloud computing can help save 12.3 billion a year by 2020. This translates into 85.7 million metric tons of carbon emissions that could be avoided annually if these corporations increase their spending from 10% to 69% for IT resources as is revealed in a report prepared by Verdantix on behalf of CDP and sponsored by AT & A, which included 11 companies with revenues of $ 1 billion and that have used Cloud Computing for at least 2 years. Further we have presented the predicted model regarding the energy savings as it is highlighted in Verdantix study.

Figure 6: Energy savings 2011-2020

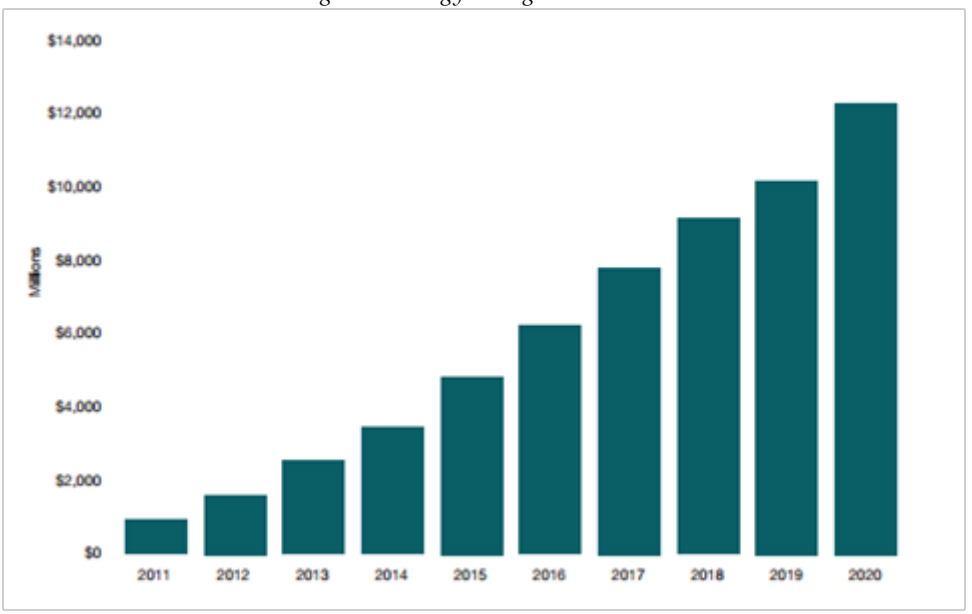
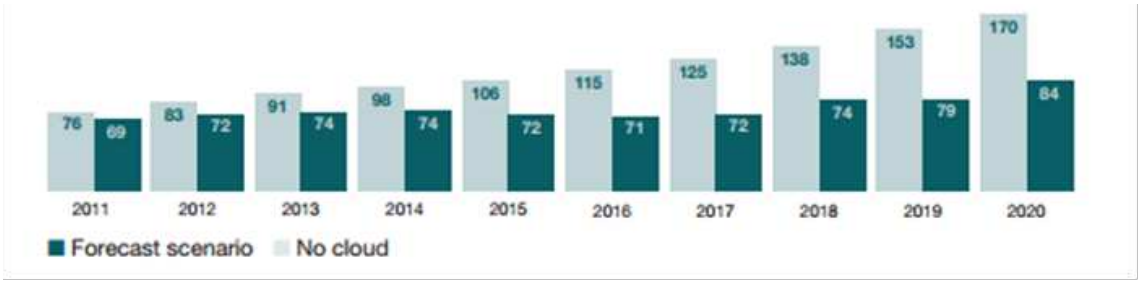


Figure 7: Forecast scenario: increase of CO2 gases compared with non-adoption of Cloud technology



Regardless of company size and IT budget, Cloud Computing offers a number of advantages that cannot be ignored. However, given the facts mentioned above, at the moment small and medium companies are key targets of Cloud technology since it is unlikely that they have the monetary resources to make investments in a complex infrastructure unlike corporations that are owners of substantial resources and IT assets.

At the opposite there are also disadvantages brought along by Cloud technology which are basically the same as those mentioned in the case of the small and medium

companies. In addition to this we consider that has to be added the risk of losing valuable IT skills. As a result of IT support outsourcing companies can lose valuable skills and also may face resistance from the IT department towards organizational changes.

Further we have presented a summary of the main drivers and challenges of Cloud technology and the implication on both SMEs and large corporations.

Figure 6: Drivers and challenges of Cloud Computing technology and its implications based on company size

Drivers	Implication scale	
	SMSs	Large corporations
Pay as you go		
Agility, flexibility and elasticity		
Ease of implementation		
Lower upfront costs		
Lower operating costs		
Scalability		
Focus on core competencies		
Access to advanced technology		
Easier integration with Cloud services		
Improved system availability and disaster		
Competitive advantage		
Staff mobility		

Challenges	Implication scale	
	SMSs	Large corporations
Privacy and security		
Reliability and availability		
Cultural resistance/loss of IT competencies		
Regulatory ambiguity		
Transition and execution risk		
Performance risks		
Customization and integration limitations		

After putting in balance both advantages and disadvantages of Cloud Computing we conclude that companies should embrace the new technology and deploy its data into the Cloud as the many benefits could significantly change the business towards a better, more efficient economic approach. However the limitations mentioned above may be overcome through a proper strategy and responsibility of companies executives.

Conclusions

Undoubtedly, the emergence of Cloud organizations finds themselves at a crossroad in terms of technological options. Adopting

Cloud solutions can provide companies with an opportunity to transform their business and gain competitive advantage. Organizations can focus on core competencies by transferring responsibility for IT management to Cloud services providers.

In terms of company size the implications of Cloud Computing technology are reflected both in the big corporations that look to the Cloud through an external perspective based on strategy and innovation and small and medium companies that adopt an internal perspective concerning the increase in the staff efficiency and effectiveness. Moreover, Cloud provides to small and medium companies a significant take-off by benefiting with a low cost and effort of the same sophisticated technology used by their more developed competitors.

However, regardless of the size of the companies Cloud migration also requires a strategy planning because as well it involves limitations regarding data security, maintaining the privacy of information, disaster recovery. Also, it is felt the need for a legal framework to clarify the possible situations that can occur while transferring data into the Cloud in what concerns data rights and information security.

Considering all these aspects, on the whole the scalable and flexible nature of cloud is a guarantee for organizations not only for the change in the way they manage IT resources but also for the transformation of businesses. Cloud is not just a phase, but a reality that has just begun to realize its potential.

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