Public Policies for Providing Cloud Computing Services to SMEs of Latin America

Mohd Nayyer Rahman
Aligarh Muslim University, India

Badar Alam Iqbal
Aligarh Muslim University, India

INTRODUCTION

SMEs are an integral part of the Latin American Economic Region as they represent 99% of all the businesses and account for around 67% employment (LACFORUM, 2013). Thus, SMEs are the backbone of the Latin American economic region: a region characterised by high aspirations of the people towards trade and development. Since times immemorial governments are trying to boost the performance of SMEs due to their power of generating domestic employment. In the present world of technologically advanced operations, there is huge potential in SMEs to contribute towards the development of the region. Challenges are posed by the MNCs in the same region or the ones entering the region. MNCs are characterised by the use and employment of technologically sophisticated method of manufacturing and operations. Apart from this MNCs are also interested in R & D activities and widely invest in R & D department for improving efficiency in order to gain economies of scale. They benefit from the use of IT enabled services to increase the efficiency of the business. For managing knowledge, MNCs widely use cloud computing services provided by specialised companies. Cloud computing has been used as a tool by which ITES can be utilised by firms and it can help in better economical and operational decision making. SMEs of the Latin American economic region too aim for increasing efficiency and optimising the use of ITES. Cloud computing will empower the SMEs of Latin America to compete with the MNCs. Cloud computing as a modern concept under felicitation of business by adding value to the business and operations achieving cost efficiency in the business. If SMEs of the Latin American economic region are provided cloud computing services through policy initiatives, it would not only add value to the SMEs businesses but also will increase the sustainability of the economic region. Cloud Computing is an opportunity to utilise shared resources for optimising business operations in the technologically driven global economic environment. Typically, cloud computing services include access to databases for the businesses, access to software that is important for decision making and contribution to knowledge and information sharing. Cloud Computing aims to reduce the amount of complexity, minimise costs, and enhance organisational agility (Ghaffari et al, 2014). Cloud Computing decreases the obstacles to conducting information process intensive activities. Indeed, people do not need to maintain their own technology infrastructure as they transfer the burden of system management and data protection to the cloud computing service provider (Jeager et al, 2008). Thus, the study will focus on the issues related to the formulation of public policies for providing cloud computing services for SMEs of Latin America.

BACKGROUND/CONCEPTUAL FRAMEWORK

Cloud Computing

It involves the use of appropriate hardware and software along with networks that allow centralised data storage and online access to the same. It also includes free or restricted (depending on the political and economic environment of a country) access to computer services and resources. Its aim is to achieve economies of scale and coherence by sharing knowledge resources. The term cloud is used as a metaphor for a setup both tangible and intangible that is a collection of tools and resources related to IT-enabled services. With cloud computing services, a business can optimise both its operations and decisions as more easy and fast sharing of knowledge is possible. Cloud Computing is a set of services that provide infrastructure resources using internet media and data storage on a third party server.

Cloud Computing comprises of three services:

1. **Software-as-a-Service (SaaS):** Under this, particular service software is provided online for the consumption of the end user. It stands in opposition to the purchase of the software and then regular updates by the client businesses. The prominent software under this category are applications like Word Processing, CRM (Customer Relationship Management), ERP (Enterprise Resource Planning) etc. This is a matured model and through it, businesses can achieve economies of scale. Commercial vendors include Yahoo mail, Gmail, Hotmail, TurboTax Online, Facebook, Twitter, Microsoft Office Live, Google Apps, Cisco WebEx conferencing etc.

2. **Platform-as-a-Service (PaaS):** Under this service, software development kits and tools are provided on platforms. The tools include Java, NET, Python, Ruby on Rails. Prominent commercial vendors include Microsoft Azure Services, Amazon Web Services (AWS), Salesforce, Google App Engine Platform, IBM Cloudburst, Amazon's relational database services, Rackspace Cloud Sites etc.

3. **Infrastructure-as-a-Service (IaaS):** This refers to devices such as storage devices, servers, virtual computers, network transfers etc. which are physically located in one central place which is known as data centre but they can be accessed and used over the internet from anywhere using the login authentication systems.

Within organisations there are different cloud deployment models such as:

1. **Public Cloud:** Easily and economically available from a third party provider via

Figure 1. Service model of cloud computing
Source: Prepared by author
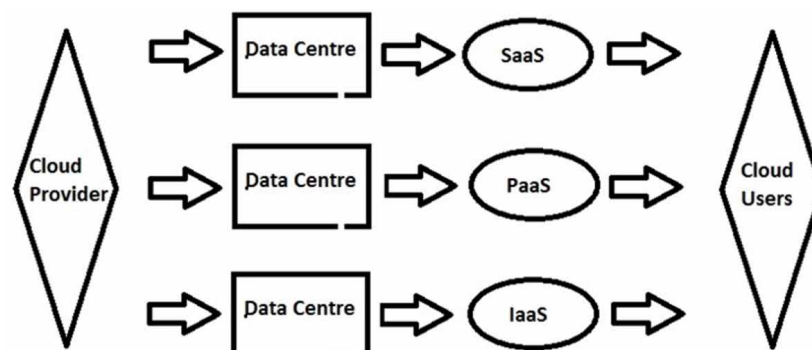
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