IOSR Journal of Engineering (IOSRJEN) **www.iosrjen.org**
ISSN (e): 2250-3021, ISSN (p): 2278-8719
Vol. 05, Issue 08 (August. 2015), ||V1|| PP 54-57

A Review of Information Systems Outsourcing in Africa

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Abstract: **-** Outsourcing is a management practice which largely dominates today's global economy. It is often defined as the "transfer of an organization business function to an external vendor". Currently, an increasing number of organizations are outsourcing part or their entire IT portfolio. The main reasons firms choose to outsource is the need to focus on their core business and to reduce costs. This paper analyzes the state of information systems outsourcing in some African countries, focusing on challenges they are facing along with strength and advantages that will help them overcome those challenges.

Keywords: **-** *Outsourcing, information systems, Africa, developing countries, ICT.*

I. INTRODUCTION

Information Systems Outsourcing (ISO) has been a major strategic management issue for decades. It has now become a common strategy in the information systems (IS) and information technology (IT) fields. Outsourcing has been defined as the process of hiring another organization to perform a service or to make a product for a client firm. At the beginning, in the 1960s, outsourcing was driven by the cost of hardware (facility and operation management), then in the 1970s, the outsourcing problem shifted to the expenses of software development (contract programming). In 1980s, the main outsourcing driver was the lack of IS personnel and a high demand of IS applications (In house). From the 1990s, the main concern was to support vertical integration (on site facilities management and complete outsourcing) and the rapid changing and complex technology (partial outsourcing) [1].

Outside Africa, countries such as India and Ireland have been experiencing a constant growth of IT-related industries. Other countries such as China, the Philippines, Russia, Hungary, Taiwan and Mexico entered the market, and in some cases adapted business models established by India [2].

We are currently witnessing a fast growth of IS outsourcing market in Africa due to various factors such as an increased awareness of the benefits of developing the IS outsourcing sector among African firms, the recent phenomenon of globalization, the commitment of many African governments to develop their ICT sectors, a strong desire to access the latest technologies due to rapid changes in information technology (cloud computing, web services, mobile computing,…), and especially the 2008 global economic crisis coupled with the current slowdown of growth in developed countries which brought the need to look for cheaper markets . Firms engaging in IS outsourcing are mainly trying to reduce costs and at the same time increase productivity.

African firms are realizing that to survive in today's ever competitive global economic environment, they need to be more competitive globally, and one of the best ways to do that is through improving their ICT sector. Countries that are investing heavily in the ICT sector are witnessing a rapid growth of their economies (South Africa, Nigeria, Egypt, Ethiopia, Kenya, Rwanda…).

Developed countries have been outsourcing their IT services to emerging countries for years. Until recently, the main destinations were India and China, but now new markets are opening, and Africa is doing everything not to miss this golden opportunity. Countries like Ethiopia, Kenya and South Africa are already on the right track. One US based IT company, eVentive has successfully established offices in Ethiopia, and is already developing cost effective solutions for many large US firms in the area of software development. The services often outsourced to developing countries includes non-core IT functions and call center operations. The current challenge for Africa is to position itself as an attractive outsourcing destination.

II. LITERATURE REVIEW

There have been much research on IS/IT outsourcing, and one of the most prominent work in this area was done by Lacity et al. in 2009 [3]. In this paper, the authors analyzed the IT outsourcing literature of the last two decades, they found that research studies of ITO practice in the early 1990s focused on the determinants of IT outsourcing, IT outsourcing strategy, and mitigating IT outsourcing risks; and from mid-1990s to the late 2000s, research interest shifted to best practices and clients-supplier capabilities. They observed that recent studies are focusing more on offshore outsourcing, business process outsourcing (BPO), and that there is a resurgence of application service provision (ASP).

She-I Chang et al. [4] analyzed the process of IS/IT outsourcing provider selection for SMEs in Taiwan. Waema, T. M. [5] stated that the most important starting point for information and communication technology to play a role in socio-economic development is having a national ICT policy.
Yoder et al. [6] presented a model for assessing the technological, political, organizational, economic, legal, educational, and cultural factors related to outsourcing. This analytical tool can help to examine current concerns and anticipate future trends related to globalization and information technology.
Dhar, S. [2] identified the main risk factors and best practices in global IT outsourcing, along with the challenges and benefits of IT outsourcing. The paper states that in the last decade there has been an increase in offshore outsourcing driven by the e-business revolution and a worldwide demand for IT skills.

III. CURRENT STATE OF INFORMATION SYSTEMS OUTSOURCING IN AFRICA

In an article published by The Economist, the author MAMADOU NDIAYE states that "technology companies have their eye on Africa" and that "IBM is leading the way" [15]. In many African countries, until recently, IT infrastructure was almost inexistent or insufficient. Many political leaders were yet to grasp the role of IT in development and the need for up to date and modern IT infrastructure and IT skills.
However, some countries like Ethiopia, Kenya, Rwanda, South Africa, Egypt, Morocco, and Nigeria have heavily invested in IT [16]. According to reports from the Ethiopian government, the IT sector contributes currently to about 11% of total country GDP. Kenya plans to raise IT share of its GDP from 5% to 35% according to the ministry of Information and Communication [4].

Mobile phone and internet penetration in Africa have grown from less than 10% in 2003 to 60% in 2012. According to [15], "In July 2011, IBM won a ten-year, $1.5 billion contract to provide Bharti Airtel, an Indian mobile-phone company, with information-technology services in 16 African countries. Since mid-2011 it has set up shops in Angola, Mauritius and Tanzania, as well as Senegal. In all, it boasts a presence in more than 20 of Africa's 54 countries. IBM has opened a research lab in Nairobi, one of only 12 in the world". Other companies like Google, Microsoft, Orange (a French mobile operator), Baidu (a Chinese search engine giant) are also marking their presence on the continent. The rush to dominate Africa IT industry resembles in a way at that of dominating its natural resources industry.

Africa's connectivity to the rest of the world is growing at a rapid pace thanks to a number of ongoing undersea fiber-optic cables projects, many of them already completed. This connectivity, combined with the availability of cheap labor makes Africa one of the most promising future IS outsourcing destinations. With the current advanced state of information and communication technology, it is very normal and advantageous for firms to focus on their core competencies and outsource their non-core functions. African countries are making efforts to explore this new found potential. In June 2013, a conference focusing on the creation of an integrated East African ICT market was held in Nairobi, and on 3rd September 2013, an East Africa Outsourcing Summit was held in the same city under the theme of "Bringing the World to East Africa".

IV. DETERMINANTS AND FACTORS OF INFORMATION SYSTEMS OUTSOURCING IN AFRICA

IS outsourcing in Africa can be viewed from two perspectives: the client and provider perspective. Currently the client perspective is still dominant, but we are witnessing a growing trend of the provider perspective. The reasons for this unequal distribution are mainly the lack of needed IT skills and adequate IT infrastructure.

In the context of global economic crisis, the fact that most African countries are experiencing rapid GDP growth while most developed countries' economies are stagnant or experiencing negative growth cannot leave IT investors indifferent. Another factor in favor of outsourcing IT services to Africa is its demographic; more than half of African population is composed by youth, which ensures the availability of enough labor for years to come, and it's worth mentioning that labor in Africa is still among the cheapest in the world.
There is a growing trend of skilled people from the African diaspora returning to their home countries where they create startup companies, mostly in the IT field. The Ushaidi project is an example of such companies, and there are many more on the continent [7, 8]. Fiber optic cables are being laid in many African countries, bringing down the cost of connection while greatly improving the broadband speed. Mobile banking (e.g. M-Pesa) has brought about needs for several IT services like software development, information security, reliable connectivity, data analysis, data centers to name a few.

V. CHALLENGES AND RISKS ASSOCIATED WITH INFORMATION SYSTEMS OUTSOURCING IN AFRICA

The main challenge associated with IS outsourcing to Africa remains the availability of enough, adequate, and qualified skilled people. This issue is being seriously addressed by educational institutions and

governments in many African countries. An example is the current introduction of a PhD program of Management Information System in Ethiopia. Many African universities are emphasizing more than ever on introducing IT programs in their curricula to produce highly qualified IT skilled students. It is now evident that Ethiopia is becoming a role model in this area. According to eVentive CEO Yemiru Chanyalew, there are many highly qualified IT graduates in Ethiopia, and despite the fact that many of them have two or three degrees, they are still unemployed. He makes a very interesting remark that hiring these graduates can be up to eight times cheaper than in the US.

Another challenge is the absence of proper regulation in the area of outsourcing in general, and IS outsourcing in particular. In the past, most African countries' government focused on natural resources for their development, leaving the IT sector lacking adequate, adapted and up to date regulations. African governments are urged to put in place proper legislation and regulations to encourage foreign companies to outsource to Africa. Measures such as adopting laws for data protection and information security are an example of such legislation.

A third challenge is the lack of proper coordination between governments and the private sector. Some African countries have understood that economic growth and development cannot only come from selling raw natural resources, and have made a lot of reform and investments in the IT sector (e.g. Rwanda, Ethiopia, and Kenya). In those countries, the private sector has received support from the government, and that contributed to a thriving IS outsourcing industry.

A fourth challenge is the management of the outsourcing relationship. Some clients have high requirements for privacy of their data, and therefore they require that the company they outsource their services to must have an office or representation in their country so that in case of conflict they may be able to bring them to court.

The last challenge is related to the availability of modern IT infrastructure. A few years ago, these were inexistent or insufficient, but now most government have made it a priority and the situation has improved tremendously to the extent that a country like Rwanda is already implementing 4G networks while even most developed countries still don't have access to it.

VI. RECOMMENDATIONS

It has been proved that the world cannot ignore Africa when it comes to deciding the future of IS outsourcing, but the road to success still has many bumps which many African governments are now busy trying to resolve.

According to [14], there are three crucial factors of success in managing the outsourcing relationship; they include information sharing, trust and commitment building, and incentive alignment.

In order to be more attractive to clients of IS outsourcing, African countries need to continue improving the quality of their ICT infrastructure, produce more skilled people, and continue to tap on Africa's traditional advantages, namely a multi-languages environment coupled with a very welcoming culture to attract more clients from developed countries. There is no doubt that Africa will become a big player in tomorrow's IS/IT outsourcing industry.

VII. ACKNOWLEDGEMENTS

This research work was supported by National Natural Science Foundation of China under Grant No. 70971020.
This paper is reprinted from proceedings of the International Conference on E-commerce and Information Engineering (ECIE 2014) 2014. Lancaster, PA: DEStech Publications, Inc.

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