Factors That Influence Outsourcing of Information Technology by Private Business Organizations in Kenya

Dr. Gerald Chege¹,
Assistant Professor of Information Systems & Technology,
Ms. Margaret M. Makhugu²
¹United States International University,
²IT Consultant, mmakhungu@yahoo.com;
INTRODUCTION

- Information Systems (IS) outsourcing can be defined as the significant contribution by external providers of physical and/or human resources, associated either with all components or with specific IT infrastructure components in the user's organization (Chamberlin, 2011).

- Such a contribution is confined to a contractual agreement that can entail the assumption of managerial responsibilities linked with the provision of Information Technology (IT) services by the supplier.

- Broadly described, outsourcing of IS activities is the practice of contracting part or all of an organization’s IS activities to an external provider (Computer Economics, 2010).
Outsourcing Information and Communication Technology (ICT) is an option for private firms in Kenya in order to cut costs and focus on their core business.

The problem is that there are major challenges associated with making strategic decisions relating to outsourcing costs, vendor management and quality of provided service.

A study of Kenyan companies to reveal the magnitude of each risk factor and to provide an insight into the lessons learned by companies that have experienced IT outsourcing, and the way they dealt with various risk factors is desirable.

The research problem was to investigate how private firms in Kenya can identify the magnitude and relative significance of the challenges associated with outsourcing of IT and hence make appropriate strategic decisions in order to overcome these challenges.
Specific Research Objectives

The main objective was to determine the factors that influence outsourcing of ICT by private business organizations and how these firms addressed the associated challenges.

The specific research objectives were:

1) To determine to what extent potential cost escalation affected a firm’s decision in outsourcing IT.

2) To determine to what extent service quality affected a firm’s decision in outsourcing IT.

3) To determine to what extent the dependence on the service provider affected a firm’s decision in outsourcing IT.
Importance of the Study

This research is important to several stakeholders:

1) It enables organizations to think about outsourcing IT strategically, understanding the situation in which they operate and taking a considered approach to the future;

2) The study assists decision makers in organizations in Kenya contemplating outsourcing IT as strategic decisions and choices; this will reduce the significance of the risk factors and develop a less risky outsourcing strategy;

3) The study also benefits IT vendors or outsourcing companies. These companies are able to identify the conditions for strategically focused relationship management with potential customers. This provides an effective step in avoiding, or minimizing, many of the risk factors encountered in the study;

4) Researchers and academicians interested in the challenges encountered by organizations in Kenya when outsourcing IT may use the research to form the basis for further research;
Methodology (1)

- This was a descriptive cross-sectional study. The study was based in Kenya and the population was private organizations in Kenya that had large IT installations and would therefore have greater knowledge and experiences with IT outsourcing. Furthermore, because of their significant IT budgets they were deliberate in their decision making when considering outsourcing as an option for their IT investment.

- The sampling frame was the list of all registered companies in Kenya with IT installations of over 100 computers.

- Since no previous data on IT outsourcing or IT installations in Kenya was available, the sampling frame was a combined list of the listed companies at the Nairobi Stock Exchange (NSE) and the lists of the major customers with over 100 computers, of large IT firms in Kenya.
Methodology (2)

- **Sample Size:** There were 48 listed companies at the NSE. Each of the four major IT firms (namely IBM, Dell, HP, Sun and Mecer) had about 12 customers that were private firms with an IT installation of over 100 computers.

- The total sampling frame was therefore 100 firms made up of 48 NSE listed companies, the four major IT companies and their 48 client companies. The sample size was based on the guide for the minimum sample sizes for different population sizes as per Saunders, Lewis and Thornhill (2003). According to Saunders et al, (2003), the adequate sample size for a population of 100 is 80 with a precision of 5% and a confidence level of 95%.

- Since a sample size of 100 firms is small, the total sampling frame was considered therefore making this a census study.
Data Collection Methods

- A data collection tool was developed and organised on the basis of the specific objectives to ensure relevance to the research problem and research data validity. The tool was designed to obtain a comprehensive view of IT outsourcing risk factors in Kenya.
- The tool was validated by use of a pilot test.
- The intention of the study was to target the highest possible level in the IT departments of each organization and was hand delivered or emailed to the respective manager or his/her deputy.
- Responses were emailed back or collected and were provided on a 5-point Likert Scale.
Data Analysis Methods

- SPSS and Microsoft Excel were used as the data analysis tools.
- Inferential and descriptive statistics were utilized. Descriptive statistics were used to summarize data and describe the sample while the inferential statistics enabled the researchers to infer the sample results to the population.
- Data was presented in tabular and graphical form. Categorical data was used to establish the relationship between the independent and dependent variables.
- The response rate achieved was 88%.
A scale of 1 to 5 was used with 1 indicating that the risk least affected their decision and 5 indicating that the risk mainly affected their decision.

The results combined responses of ‘slightly affected’ and ‘not affected’ as a ‘Not Affected’ response;

‘largely affected’ and ‘mainly affected’ was recorded ‘Affected’ response

Those that indicated medium were considered to be ‘neutral’ in their decision
### RESULTS & FINDINGS (2)

#### Type of Outsourcing

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>SUB-CATEGORY</th>
<th>NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of IT</td>
<td>Total Outsourcing</td>
<td>8</td>
<td>9.1%</td>
</tr>
<tr>
<td>Outsourcing the Organization was involved in</td>
<td>Multiple Supplier/Selective Outsourcing</td>
<td>24</td>
<td>27.3%</td>
</tr>
<tr>
<td>Organization was engaged in before the current one</td>
<td>Joint Venture/Strategic Outsourcing</td>
<td>40</td>
<td>45.5%</td>
</tr>
<tr>
<td></td>
<td>Insourcing</td>
<td>16</td>
<td>18.2%</td>
</tr>
<tr>
<td>Type of IT</td>
<td>Total Outsourcing</td>
<td>20</td>
<td>22.7%</td>
</tr>
<tr>
<td>Outsourcing the Organization was involved in</td>
<td>Multiple Supplier/Selective Outsourcing</td>
<td>8</td>
<td>9.1%</td>
</tr>
<tr>
<td>Organization was engaged in before the current one</td>
<td>Joint Venture/Strategic Outsourcing</td>
<td>32</td>
<td>36.4%</td>
</tr>
<tr>
<td></td>
<td>Insourcing</td>
<td>28</td>
<td>31.8%</td>
</tr>
</tbody>
</table>
## Outsourced IT Functions and Period of Outsourcing

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>SUB-CATEGORY</th>
<th>NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Functions that were being outsourced</td>
<td>Data Centre</td>
<td>8</td>
<td>9.1%</td>
</tr>
<tr>
<td></td>
<td>End User Support</td>
<td>24</td>
<td>27.3%</td>
</tr>
<tr>
<td></td>
<td>Hardware Maintenance</td>
<td>20</td>
<td>22.7%</td>
</tr>
<tr>
<td></td>
<td>Desktop Systems</td>
<td>8</td>
<td>9.1%</td>
</tr>
<tr>
<td></td>
<td>E-Business Solutions</td>
<td>24</td>
<td>27.3%</td>
</tr>
<tr>
<td></td>
<td>Staff/User Training</td>
<td>4</td>
<td>4.5%</td>
</tr>
<tr>
<td></td>
<td>Network Operations</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td></td>
<td>Application Development</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td></td>
<td>Application Maintenance</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td></td>
<td>Systems Implementation</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td></td>
<td>Security</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td></td>
<td>Asset Management</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Length of time the organization had been involved in outsourcing the IT functions above</td>
<td>less than 1 year</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td></td>
<td>1-2 years</td>
<td>12</td>
<td>13.6%</td>
</tr>
<tr>
<td></td>
<td>3-4 years</td>
<td>28</td>
<td>31.8%</td>
</tr>
<tr>
<td></td>
<td>5-10 years</td>
<td>36</td>
<td>40.9%</td>
</tr>
<tr>
<td></td>
<td>over 10 years</td>
<td>12</td>
<td>13.6%</td>
</tr>
</tbody>
</table>
Potential Cost Escalation
Service Quality Summary
Service Provide Dependency

The diagram illustrates the dependency of various factors on service provision, categorized into three groups: Not Affected, Neutral, and Affected. The x-axis represents different factors affecting service provision, while the y-axis indicates the percentage of dependency. The factors are as follows:

- Excessive Dependence
- Inadequate Government Laws and Regulations
- Lack of effective ICT capacity
- Inadequate individual Privacy
- Inadequate Security
- Inadequate Corporate Policy on Data Security
- Loss of the Organisation’s Control and Flexibility
- Inadequate Audit and Control Mechanism
Summary Results (1)

- with regard to potential cost escalation, the two main factors that affected the organizations’ decision in outsourcing IT were:
  - post outsourcing costs relating from switching vendors or resuming IT activities internally (31.8%), and
  - transition costs relating to transitioning IT functions to the vendor (22.7%).

With regard to service quality, the three main factors are

- inadequate penalties for non-conformance with the outsourcing contract (50.0%),
- inadequate flexibility in the outsourcing contract (50.0%) and
- inadequate reversibility clauses in the outsourcing contract (50.0%).

With regard to service provider dependency, the three main factors are

- excessive dependence on the service provider (68.2%),
- inadequate Government Laws and Regulation in IS security infringement (63.6%), and
- lack of effective ICT capacity in the organization (63.6%).
Summary Results (2)

A summary of all factors show that the main factors that affect the organizations' decision in outsourcing are:

- excessive dependence on the service provider (68.2%),
- inadequate government laws and regulations in IS security infringement (63.6%),
- lack of effective ICT capacity in the organization (63.6%),
- inadequate penalties for non-conformance with the outsourcing contract (50.0%),
- inadequate flexibility in the outsourcing contract (50.0%),
- inadequate reversibility in the outsourcing contract (50.0%),
- inadequate individual privacy (45.5%), and
- inadequate security of the IS services outsourced (45.5%).

The top three factors relate to service provider dependency and the next three factors relate to service quality.

The fifth and sixth factors also relate to the service provider dependency.
CONCLUSIONS & RECOMMENDATIONS

a) Potential Cost Escalation and Its Effect on a Firm’s Outsourcing Decision:

- The key factors in potential cost escalation that affect a firm’s decision to outsource are:
  - post outsourcing costs relating to switching vendors or resuming IT activities internally and
  - transition costs relating to transitioning IT activities to the vendor.

- However, relative to service provider dependency and service quality, potential cost escalation trails third in affecting decisions on IT outsourcing.

- Recommendations: Organizations should manage potential cost escalation by:
  - Exploring how cloud based outsourcing can enhance business growth and hence help minimize on operational costs.
  - Outsourcing functions that have minimal transition costs such as end user support and hardware maintenance where the running of parallel systems and the possibility of service disruptions are minimal.
  - Organizations should also ensure they have qualified and highly experienced IT managers who can adequately manage the outsourcing contract. To manage costs, organizations should not get into long outsourcing contracts and most have contracts that are renewable annually.
b) Service Quality and Its Effect on a Firm’s Outsourcing Decision:

- With regard to service quality, the key factors that affect a firm’s decision to outsource relate to the service contract. These are
  - inadequate penalties for non-conformance with the outsourcing contract,
  - inadequate flexibility in the outsourcing contract and inadequate reversibility in the outsourcing contract.

- Recommendations - Organizations should address service quality issues by:
  - having service level agreements that clearly define the deliverables and the service levels expected and the related penalties for non-conformance.
  - holding scheduled service reviews during the contract life with clear and documented action plans for any observed lax in performance.
  - Include favorable termination terms in SLA
c) Service Provider Dependency and Its Effect on a Firm’s Outsourcing Decision:

- The dependence on the service provider is the major factor that affects a firm decision in outsourcing IT.
- The two key factors are the excessive dependence on the service provider and information systems security relating to inadequate Government Laws and regulations in IS security infringement;
- inadequate individual privacy; and inadequate security of the IS systems outsourced.
- Recommendations - Organizations should address these factors by engaging in joint ventures or strategic relationships with reputable outsourcing firms as well as engaging in selective outsourcing. Within the contract, terms and conditions relating to IS security can then be defined and non-disclosure confidentiality agreements included.
Recommendations for Further Work

- This study focused on private business companies in Kenya.
- Further research may be carried out on public institutions, parastatals and educational institutions. Such findings would enable comparisons be made with regard to private and public companies.
- A comparison can also be made between commercial institutions and educational institutions. A more detailed and specific research can also be carried out to determine the extent and reasons to which organizations outsource some business functions and not others.
- The research can also look at outsourcing service providers to determine which outsourcing services they offer and reasons and related challenges on why they offer those services and not others.