

The Impact of Nepotism on ICT projects in Developing Countries: A Case Study from the Financial Management System in Nigeria

Abstract

This paper presents empirical information regarding the impact of power relationships on ICT projects in developing countries. The dynamics of corruption is traced in the context of an ICT project for the financial sector in Nigeria. Data collected through the case study methodology suggests that nepotism is a critical issue that adversely affects the designs and implementation of ICT projects in developing countries. The paper contributes to research in IS in developing countries by practically discussing the implications of corruption on project design and implementation. The study concludes with some implication for policy makers advancing an agenda for IS in developing countries.

Introduction

Governments of developing countries have invested tremendously on ICT projects for socio-economic development. Experiences in ICTs implementation in developing countries so far have not been encouraging, with 35 per cent being categorised as total failures - projects were not implemented or were implemented but abandoned - and 50 per cent as partial failures - major goals were not attained or there were undesirable outcomes (Heeks, 2002). These figures are disturbing, especially in developing countries that have limited resources and cannot afford to waste the vast amounts of money typically involved in such projects (Dada, 2006). Among the reasons for the failures of ICTs in developing countries are the frequent mismatches between the current reality and the design of the future system, and the large gap between the cultural, social, physical, economic and various other contexts enjoyed by the system designers and the place in which the system is to be implemented (Heeks, 2002). Case-study analyses of ICT initiatives in developing countries have shown that various factors that allow individuals and communities to access ICT services effectively are neglected. These factors depend upon skills, resources, beliefs, values and motivations of a range of actors involved in the design and implementation of the system (Madon, 2004).

Other issues are conflicts and resistance that emerge due to differences in perception of the systems by supply- and demand-side actors (De, 2005; Bailur, 2006). One issue that has received scant attention despite the growing interest now being paid to it, and which has been a significant contextual condition shaping ICT projects in DC (Sahay and Puri, 2008; Mahmood, 2004), is the issue of corruption and power relationships, which emerges from the groups of people who are responsible for both the delivery and consumption of the services, and its consequences for the development outcome of the system. The reason for this could be its complex nature, which tends not to be discussed explicitly.

Furthermore, empirically it is difficult to gather data, as participants often avoid discussion of this topic, and it is not be discussed in formal discussions and reports (Sahay and Puri, 2008). Hence, it is hard to pin down but still permeates widely and shapes the investments of ICT4D initiatives in developing countries. Within this backdrop, the aim of this paper is to understand the dynamics of power in the context of an ICT projects in a developing country in Africa. Particularly, our empirical focus is on understanding how the processes of nepotism shaped the trajectory of implementation of a financial management system within the financial sector in Nigeria. The rest of the paper is structured as follows. The following section provides literature review on power dynamics in information systems in developing countries. The research method, research setting and the analysis of the case are then presented. The final section concludes the paper.

Literature Review: Power Dynamics in Information Systems in Developing Countries

IS project in developing countries is heterogeneous at the sectoral and community levels and can involve informal and formal actors from both private and public sectors and civil society. The success of these projects usually depends crucially upon social, economic and political relationships between the hosts of the actors (Madon, 2005); these belong either to the demand side (those who will consume the services of the system) or to the supply side (those who fund, design and implement the system) or to both (De, 2005). These relations are complex because each actor has different interests and ambitions and, as a result, all kinds of tensions are articulated in these interactions. Plummer and Cross (2006) argue that corrupt practices emerge from the interactions between the various actors on a range of institutional levels, with different actors often involved in one or more different types of corruption.

The World Bank refers to corruption as “*the abuse of public office for private gain*” (World Bank, 1997, pg. 8). This definition depicts corruption as a behavior which deviates from the normal duties of civil servants (Kpundeh, 1995). Often, donor agencies concur that public officials are corrupt and responsible for the failure of ICT projects in developing countries. However, Sahay and Puri (2008) argue that this perception tends to be narrow and suggest that it is important to consider the network of corrupt practices and expand the narrow views of corruption to encompass the diversity of its structure and forms. From the author’s perspective, corrupt practices in ICT projects in developing countries occur at three levels: firstly, within the initiation and actual design of the specific project; secondly, within the implementation stage of the project; and, lastly, in the usage stage.

Initiation and Design Stage

The design stage of ICT projects involves several actors from both public and private institutions. They include international, regional, national and sub-national agencies. Corrupt practices emerge from the interactions between both public and private actors in this stage. A typical interaction where corruption occurs is during the *selection stage* of the project. Projects with higher capital investments are favoured over those with lower investment alternatives because there are greater levels of potential kickbacks, with the greatest incidence, at the lowest possible risk (Plummer and Cross, 2006). Another situation where corrupt practices can be found in this stage is during the *policy design process*. In developing countries, policy reforms are usually executed in a top-down fashion that puts the public institution at the centre of any agenda aimed at eradicating corruption (Tran, 2010). However, it is these corrupt bureaucrats who are expected to implement these policies in a transparent manner. Sadly, political will rarely emerges from any corrupt system (Tran, 2010). In policy-making stage, the public officials and politicians responsible for IT policies seek to influence the focus of the technology. According to Heeks (1998), if a new system will increase transparency and accountability, powerful actors change the design plan so that vital unaccountable processes are not automated or are not exposed to monitoring by the new system. Such moves by the supply-side actors result in conflicts with and resistance from the demand-side actors, which can further lead to system disuse and abandonment.

Implementation Stage

This stage requires interactions between private and public sectors for the procurement and implementation of the system. According to Plummer and Cross (2006), the procurement and implementation stage is the most publicised face of corruption. In ICT projects, a number of public and private actors are involved, depending on the size and scope of the project. Public actors might include national, state and local government officials and politicians, project managers, procurement managers, IT staff, and a set of private actors who may include suppliers, vendors, contractors and consultants. With large grants and loans, this stage may include the involvement of project sponsors influencing public officials to tailor the specifications of the projects to suit their favourite contractors, as seen in the case of the HIS project in India, where the donor agency influenced the state health secretary to contract the implementation of the system to an American agency that was involved in corruption at the delivery level by claiming payments and not implementing any working systems (Sahay and Puri, 2008). Another type of corruption that occurs at this stage is when supervisors extort bribes from actors responsible for the implementation of the system in order to speed up the approval of payments.

Usage Stage

Here, the corrupt interactions take place between the consumers and public officials, mostly in the form of bribery (Plummer and Cross, 2006). They are usually petty, frequent and systematic, and normally occur at the point of service delivery. In developing countries where there is a high rate of poverty and illiteracy, these conditions provide opportunities for public officials to extract bribes from citizens who are easily manipulated, especially when advised that their land records will be invalid if they do not pay the “*fees*” requested by the officials (De, 2006). Furthermore, citizens also bribe public officials in order to obtain a much needed basic service. Nepotism and bribery is a common practice in IT service delivery where politicians or civil servants favour their political allies or friends. The corrupt practices emerging from the interactions between private and public actors can be due to the weak governance or feeble rule of law existing in developing countries (Shah and Schacter, 2004). Consequently, this results in ICT interventions not achieving their intended outcomes. Hence, this study argues that it is important to conceptualise corruption as a part of a system as it is far more complex than simply viewing it as public officials acting

corruptly, which results in failure of ICT interventions in developing countries. In the following section, the research methodology and methods of data collection is presented.

Methodology

The objective of this paper was to understand the challenges of the design and implementation of IS in developing countries. To address this, research followed a broad interpretive approach. According to Walsham (2006), the interpretive research aims to understand social setting and realities of ICTs in use. A case study design was adopted in this study due to its strength in allowing various methods of data collection (Benbasat et al., 1987). The case study followed an explanatory line (Yin, 2003) with the purpose of evaluating the issues surrounding the implementation of a financial management system in the Nigeria financial sector. Nine face to face were conducted and recorded with various key projects stakeholders (see table 1) in order to ascertain the project design and implementation. Each interview lasted approximately one hour, and was carried out within a month during the research fieldwork between May and June, 2015..

Interviewees were asked probing follow-up questions on new and emerging topics as well as given opportunities to raise any other issues they considered relevant. All the questions were framed based on the insights from the initial literature review which investigated IS projects in developing countries as well as the researchers' practical knowledge of the subject. On the whole, approximately 13 hours from the transcript of the interviews were gathered, organized and analyzed later. Interviews were often accompanied by observation. One of the authors who was involved in the project acted as practitioner researchers who Oates (2006) described as someone who already has a job and decides to put on a researcher's 'hat' to investigate their own work organization. In this study, observation was very important as the authors could observe how the project was designed and the surrounding challenges affecting its implementation. We compiled two pages of observation notes in this study. Furthermore, we analyzed the Nigeria ICT policy and project documents. All data collected were iteratively read and re-read to identify categories from the data. The categories were then organized and linked to the theoretical concepts.

Participants Interviewed	Reasons
Head of ICTs (One)	Explore his views of the project at operational and management levels
Project Contractors (Two)	Explore their views based on the direct involvement in the IS implementation
Project Manager (One)	Explore his views based on the direct involvement in the IS implementation
Technical Associates (Two)	Explore their views based on the direct involvement in the IS implementation
DETN system users (Three)	To get information about their perspective of the system and ascertain impact

Table 1 Participants Interviewed

The Case Study

The public institution is referred to as DETN was established in the 1980s in order to protect depositors and guarantee payment of unsecured funds in the event of failure of insured institutions. In 2011, it initiated a project to implement a financial management system. To fulfil the Nigerian public procurement requirement regulation, it advertised and invited other companies to bid for the project. At the end of bidding process, an indigenous local technology company BSS and its Indian partner IBSS emerge the winners. It formed a public-private partnership with both BSS and IBSS. The objective of the project as conceived by the public institution is to upgrade is existing legacy system by creating that will capture and deposit registers, asset registers, claims and liquidation dividend administration, amongst other functions. At present most of the liquidation activities are carried out manually outside the legacy system and the data is maintained outside the system. Hence, there is a strong need to create a robust system with centralized data to generate necessary information real time. The present software used in public institution has some shortcomings, which warranted the development of a system that would include additional features and correct the problems identified in the existing system. Some of the shortcomings observed were inflexible reporting, obsolete technology and decentralized administration.

A memorandum of understanding was signed off between the DETN and both BSS and IBSS. Funding will be provided by the public institution and the local partner will be responsible for

hardware supply, capacity building and implementation support. Software customization and deployment would be carried out by the international partner. After signing the MOU and receiving the first payment installment, the first effort by the BSS were to organize meetings where the project organogram, Gantt charts, project communication frameworks, risk management mechanisms as well as all necessary documentation would be outlined. Next, project resource on boarding was initiated, the team's hardware requirements, software, tools and working environment was provided to all team members which include top management, the project contractors, the IT department and system users. The project team put aside 10 weeks of intensive focus groups between process representatives and system users in order to understand and gather software users' functional requirements.

BSS were anchoring these sessions and also documenting them for daily onward transmission to the IBSS team located off shore, most of these sessions were also participated by IBSS team via video conference and conference calls. A prototype of the new financial management application were given to the users for a clearer understanding of the proposed system. After the system analysis stage, a comprehensive document outlining the entire business and functional requirements of the proposed system software known as the BRD (Business requirement document) was developed and submitted to the IT manager of DETN for signoff. However, the manager was reluctant to sign off the document. The reason was because he didn't want his department to take any blame in case there were some inconsistencies in the business and functional requirements. Despite this, BSS remain focused organizing an onshore user training aimed at bringing the users up to date with the relevant skill sets required to utilize the software in preparation of the key users joining the off shore developing team in order to guarantee efficient technology transfer. BSS had also started planning a trip for users to India in order to have an experience of the system during the testing stage.

The project hardware arrived at around the same time with the conclusion of the system analysis. A small team was created with the responsibility of hardware installation and testing within the facilities of DETN. During the period of hardware installation, the BSS observed that all the hardware's procured had been opened and tampered with. A letter of complaint was written to the head of the IT department reporting the problem of tampered equipment and possible sabotage.

Given the existing bureaucratic systems of public institutions in developing countries, there were huge delays in the process of investigating the issue. Eventually the issue was investigated since the damages occurred at the facilities of DETN however the outcome of the investigation was that the BSS would take responsibility for the damages since they had not officially handed over the hardware to the public institution. The hardware installation team who were already now in the facilities waiting for two weeks started to become impatient. To tide over this problem, the BSS requested for a replacement of the hardware at their own cost.

Despite the little hiccups the BSS started facing, the IBSS on their side kicked off the building of the financial management system ensuring that the first version code drop was ready by the time the users arrived in India so that they would be able to interface with a functional software. BSS gave the management of the public institution adequate time to prepare and also shortlist key users identified during the onshore training as having the requisite skillsets required to get good value from the off shore activities from interaction with the development team. Unfortunately, the users didn't make the trip as some middle level managers were reluctant to approve their trip. The time for second installment payment was due and no payment was made to BSS. Although there was a request for bribe by some of the DETN officials in order to approve and accelerate payment, but for moral reasons BSS declined to get involved in any corrupt practices.

The middle level managers of the DETN stopped honoring invoices of BSS as such payments were unable to be made also to IBSS thus causing a working conflict between both parties. It thus became clear that the project is plagued with challenges. DETN was even doubting if the software was been developed offshore and even went further to appoint a project consultant from India to confirm if their software development was not a fraud. The grapevine from DETN was that top management was informed that there wasn't any software to show and had been wrongfully advised to not honor the invoices even after DETN appointed project consultants had ascertained that the software was still under construction offshore. However BSS still made attempts to move the project to a logical conclusion by proposing that the IBSS make the first code drop of the developed software in DETN environment which will then be interacted by the users onshore to identify any functional or technical challenges that may need to be resolved, since the users failed to join IBSS development team off shore. BSS hoped that with such a measure the management

of DETN would be convinced of the value of the software and thereby feel obliged to honor long overdue invoices.

Even though the IBSS had complained about their outstanding payments, the BSS had to persuade them to make the first code drop in DETN environment which they did for the users to interact and also made available resources to respond to any issue that will be made during the user acceptance testing. The continue lack of payment to IBSS resulted in the lackluster attitude from them towards the project approvals. The IBSS on several occasions went ahead to unilaterally make all decisions about how much effort was required to complete developmental tasks and proceeded to bill BSS at will without any consideration for the time and materials nature of the contract. This posed a severe risk in that the technical partner could arbitrarily utilize an inordinate number of man months without required approvals and although within the overall project budget, there happen to be taken without recourse to any laid down procedures leaving BSS with excessive liabilities and without delivering a working product. At this junction, instead of the public institution aligning with the local contractor and the international partner by participating in good faith, they were very uncooperative. They complained that the software did not meet their requirements but refused to acknowledge the fact that the inability of their users to make the India trip was the major contributing factor of the problem which wasted an opportunity for the users to identify issues which the international partner would then have promptly resolved earlier.

The DETN management then requested that BSS allow their members direct access to the IBSS. The BSS obliged and made all the necessary arrangements for the meeting. When it was time for the high level delegation to depart for India, a clear instance of sabotage within the organization occurred which led to accusations that BSS was falsifying the true nature of IBSS and that the software deployed wasn't developed by the mentioned international partner, but had been outsourced to a third party which was the reason why the first code drop had multiple functionality issues. This almost resulted in the cancellation of the public agency delegation visit. During the visit of DETN high level delegation to IBSS, it was agreed on requests of DETN for interactions with the technical partner to be direct.

The terms of the relationship were outlined and the roles and responsibilities of parties agreed upon. Unfortunately, while DETN lived up to its obligations, IBSS abandoned the project and did not meet with the delegation as result of their non-payments. Once again, BSS had to make another last attempt at ensuring the project was taken to a logical conclusion. BSS had to initiate legal action before IBSS agreed to release the source codes and give the local contractor access to key members of the development team. By this time, the project had already taken 3 years. The lack of cooperation from DETN and abandonment by IBSS led to the eventual abandonment of the project. Finally DETN also stopped the implementation of the financial management system citing lack of required expertise as the reason for ending the project. BSS is now in a process of initiating legal proceedings against DETN.

Case Analysis and Discussion

As describe in the case study, the implementation of the financial management system for DETN was a failure. DETN ended up stopping the continued implementation of the project. Also IBSS walked out of the project. The above mentioned failure can be referred to a total failure; a project that was never fully implemented or abandoned (Heeks, 2002). The above mentioned failure was achieved as a resulted of the extreme adverse circumstances faced in the project. One major challenge facing the project from the non-remittance of funds to BSS. After releasing 30% of the full payment at the initiation of the project, no other payment as stipulated in the project agreement. Non-payment of dues was another major problem, with 30% being released at the very start, and no further funds as specified in the project agreement were ever made available to BSS. The long overdue non-payment impacted negatively on the progress of the project as since November 2011 neither the IBSS could be paid nor user travel in the field could be supported. Although BSS attempted to borrow some of its money to the project, this has to be stopped because it was unsustainable as no money was coming into their account.

Another key problem was the lack of ownership assumed by the DETN team who seemed to express an attitude to somehow abandon this project since their preferred company was owned by a friend to one of the officials of DETN did not win the bid for the project. The scale of the cost of the project that DETN paid to implement the financial management software provide an idea into “what is in store” for the DETN officials provided the “preferred company” is allocated the

project to implement. It has been argued that commitment on the supply side stakeholders is a necessary determinant of the success of any IS project (Dada, 2006). This also resulted in lack of cooperation from the management of DETN hence contributing to shaping the trajectory of project in terms of the management not supporting the end users to travel to India for training and user acceptance testing and also the lack of will to investigating the damage that has been done for the hardware facilities supplied by the local contractors. This finding can be referred to as institutional jealousy, as identified by Silva (2007), where actors tend to withhold information and neglect cooperation with other actors, which is a key impediment to the design, implementation and use of ICT4D systems. It is argued that this issue has to do with power struggles. It is a power issue, given that each actor does not see any incentive for cooperation.

Thirdly, corruption is not just a state subject but a phenomenon that is encouraged and sustained by stakeholders who have their fingers in “many pies” (Sahay & Puri, 2008). In our case, because of the financial strings one of the top DETN officials was bent on awarding the contract to his brothers company who did not meet the requirements of the bidding. The corruption exchange in these interactions is not monetary but rather a favour which is a non-material factor that is difficult to identify. In Nigeria, contractors usually connive with either politicians or top bureaucrats to win government project on favorable terms. They also work together with bureaucrat to inflate their profit margin once a contract has been approved. Using a complex arrangement, funds budgets for large ICT projects are “skimmed” and distributed by a number of various actors. Contractors often pay either pay a lump-sum amount or a percentage of the contract value to one or more actors within the public institution.

Furthermore, nepotism is still a prominent issue in government contracts in Nigeria. Such practices are somehow considered as normal in Nigeria and those that are unwilling to support or even favor friends, relatives and allies may be considered as a foe and having no place in the society (Akingbade et al., 2010). Reinforcing the above issue eaves little room for transparency and accountability. Projects are started based on mutual benefits, project outcomes are never evaluated, sabotages in project if interest are not met, and project failures are encourage since the preferred contraction are not involved in the project. The presence of nepotism have direct repercussions on the bureaucracy, further contributing to this ambiguity. In Nigeria, nepotism also have sometimes

had effect of skimming out reliable contractors during project bidding processes. In summary, the macro level politics and corruption are deeply and complexly entangled with the micro-level project dynamics, with significant implications. In this paper, we have tried to trace some of these macro-micro linkages. The issue of the financial management system in our case, empirically was seen to be something that invited resistance because the preferred candidate was not given the job for implementing the system.

Conclusion

This paper examined project failure in the design and implementation of IS in developing countries. The relevance of the topic is grasped in the context in which project failure has confronted developing countries. The emerging inter-related key issues suggested that project failure may be contingent on several factors but established based that corruption were among the major causes of project failure in developing countries. As noted earlier, corruption in its very complex nature tends not to be explicitly discussed hence it is difficult to gather data on corruption as a research topic even though it still permeates widely in the context of public sector projects in developing countries. The findings of the study highlight that officials and bureaucrats and other network of actors in developing countries are corrupt and responsible for the failures of ICT projects. For example, there was evidence of nepotism in the study whereby some top management staff of DETN already had a preferred contractor for the project. However, the contractor's failure to secure the project during the open bidding process resulted in some of the affected top management staff sabotaging the efforts of the contractor who won the contract. Thus if interest of powerful individuals are not met in a project, the chances of failure is imminent.

On a cautionary note, the paper had certain limitations which need to be addressed in future. The study was limited in that only a single focused case study was undertaken under severe time limitations; however there is scope for undertaking a longitudinal study on the basis of the current results to provide more insight on implementation issues of the financial management system. Lastly, the findings of this study cannot be generalized due to the choice of research strategy but can give insights by drawing specific implications for actors involved in the implementation of similar projects as well as researchers that plan to investigate similar subjects in different context.

Despite the limitations, the findings of the paper makes a contribution to research of IS in developing countries by presenting important implications and thoughts for future projects undertaking in Nigeria and other developing countries and also providing a richer contextual understanding of a public sector based project.

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