

Adapting global practices locally: a perspective on IT implementation in a developing country context

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Abstract: How can we theorize about the relationship between IT-based global economic activity and socio-economic development within developing countries (DCs)? In this paper, we outline a framework on the interaction between IT-based global trends and IT-enabled restructuring programs in a developing country context. This framework, grounded in an empirical study of information technology (IT) implementation within the Nigerian banking system suggests that implementing IT and organizational change programs in these banks involve a process of locally adapting the technology to fit the contexts of implementation. It is argued that such adaptation is a deliberate process of redefining the program to fit available organizational resources and an unconscious process arising out of the need to protect long-established traditions and rituals within the organization. By attempting to discuss the interaction of global practices and local interests through a discussion of IT-based restructuring of Nigerian banks, this paper aims to contribute to the growing body of literature aiming to understand what globalization actually means for DCs' organizations.

Keywords: IT and organizational change; local adaptations; organizational resources; institutional norms

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1. INTRODUCTION

In recent times, organizations in DCs have been investing quite extensively in IT and are increasingly adopting management techniques such as Business Process Re-engineering (BPR) and Total Quality Management (TQM) with a view to becoming part of the global economy. According to Castells [5], the global economy should lead to greater productivity and efficiency if organizations invest in a comprehensive program of both institutional and organizational change. In line with this view, DCs organizations have been investing extensively in IT and related change management techniques with a view to becoming part of the global economy. However, despite these observed trends, there is still a dearth of studies that examine the experiences of organizations in implementing technologies and associated organizational change techniques and, in particular, how they are able to accommodate and integrate these technologies into their day-to-day operations. In addition, there is an increasing concern amongst academics and practitioners alike about the role of DCs within the emerging global economy and studies are beginning to examine what globalization actually meant for DCs organizations [2,45]. This study therefore attempts to provide an explanation, grounded in empirical research, of the interaction between global practices and local interests. It is hoped that such a study will contribute to the growing body of literature aiming to understand what globalization actually means for DCs. In the next section, we will introduce the theoretical perspectives adopted in this work.

2. INSTITUTIONAL AND RESOURCE-BASED VIEWS

The aim of this paper is to study how Nigerian banks are responding to global pressures of deregulation and liberalization. Therefore, an organization-environment interaction perspective to the study of change was identified as appropriate. The organization-environment interaction perspective focuses on the importance of the environment in the welfare of organizations and its central message is that organizations affect and are affected, to varying degrees, by the environment within which they operate. Central to this argument are the twin issues of choice and determinism [1,10].

While one view argues that organizations, and particularly management, have autonomy in deciding how they deal with their environment, the other perspective believes that much of this choice is constrained by

environmental forces. To exploit changes in the environment, the strategic management school posits that organizations are endowed with different resources, which they can successfully deploy to achieve a change programme. It is these resources, controlled or owned by the firm, [20,25] which enables them to conceive, choose and implement change [3,4]. This is the view of the resource-based approach, which has been strongly associated with the works of Penrose [19] and Wernerfelt [25]. In essence, the ability of an organization to respond to environmental imperatives, or indeed to exploit opportunities in the environment, depends largely on the stock of resources owned or controlled by the firm.

However, this approach to managing has been challenged with the argument that the socio-cultural, political and historical contexts within which decisions are made also influence the nature of such decisions made [17]. Decision-making and organizational behavior are not just based on the level and type of resources that organizations possess but also on some taken-for-granted assumptions about how to do things within the organization, and on widely held beliefs and expectations within the wider environmental context about the appropriate ways of doing things. These widely held beliefs originate from the environment of the organization and find its way into the organization either through political or regulatory demands or through normative prescriptions of professional associations such as management consultants. Therefore, organizational change is seen as conforming to these widely held beliefs and taken-for-granted assumptions within wider institutional context of organizations. This is the argument of the new institutional theory [8].

Applying the institutional theory to the study of IT and organizational change, Tillquist [22] identified four "cultural models" of IT-enabled organizational change programs, which according to the author represents a taken-for-granted framework or a shared assumption through which organizational members and members of a professional community perceive IT-enabled organizational change initiatives. These assumptions represent the taken-for-granted assumption about the appropriate ways of carrying out organizational change programs. The first prescription suggests that organizational change is enabled by computerization (the technology imperative), and the second model suggests that IT-enabled reengineering is an engineering metaphor, which involves the radical redesign of business processes (the organizational imperative). The third model posits that the values and beliefs held by organizational members are equal to the overall organizational goals and beliefs (the economic imperative), while the fourth model suggests that reengineering work is personally rewarding to the employee (the social imperative). According to Tillquist [22] these systems of belief concerning the organization of work informs how IT-enabled

change initiatives are planned and implemented. They become the prescriptions that regulate organizational decisions and actions involved in the planning and implementation of IT-based change and any deviation from these principles or rules are seen as dysfunctional.

Due to increasing empirical evidence that suggests that both institutional and technical-rational factors can, and do operate alongside each other, an increasing number of studies are beginning to regard the two theories as complementary and therefore combining them into a single framework. This is in recognition of the fact that organizational behavior is rarely the product of a single factor. Notable examples in this respect are these works that suggest that the factors that influence organizational actions cannot be adequately explained independently by either of the two theories because of their narrowness in addressing the complex issues involved in IT use in organizations [6,11,16,18]. In the next section, we will consider some of the cultural rules discussed above in the restructuring of Nigerian banks and the consequent implementation of IT and IT-based management techniques.

3. CASE STUDY: IT IMPLEMENTATION IN NIGERIAN BANKS

IT-enabled organizational restructuring of the Nigerian banking system began shortly after the liberalization of the industry in 1986. Although, Nigerian banks had previously been investing in IT, these were very basic accounting packages and transaction processing systems with very little or no attempt at a comprehensive restructuring of organizational processes. Similarly, there were no real attempts at introducing IT-based products and services and customer-facing (front office) technologies. However, with the deregulation of the Nigerian economy and the subsequent liberalization of the industry in 1986, the basis of competition changed within the industry as new and foreign banks with a more technology focus and leaner bank processes started operations within the country.

3.1 Deviation from the technology imperative

Applying Tillquist's conceptualization to the Nigerian case bank management, due to the liberalization of the Nigerian banking industry and influenced by the technology imperative rule of IT-enabled reengineering,

started investing heavily in technology and technology-based products and services. In line with this cultural rule and the taken-for-granted nature of IT to banking [9], these banks started with plans to introduce “state-of-the-art technologies” and “sophisticated technology-based products” into their operations [26].

Similarly, an increasing number of technology-based banking products such as smart cards, home and Internet banking are being introduced into the sector^{xii}. New generation banks such as All States Trust Bank and Diamond bank have pioneered the introduction of card-based payment systems with cards such as the ‘ESCA’ and the ‘Diamond’ cards with the aim of reducing dependence on cash and its attendant problems. Some of the problems relate to the depreciation of the local currency (Naira) and the huge amounts carried around, even for the most basic transactions. Carrying this huge amount of money around is a major security risk for both customers and banks and specifically for banks it represents a huge cost in terms of handling cash^{xiii}. Increasingly banks are also connecting their branches to achieve “networked banking”, where a customer of a branch can transact business in another branch different from where the account was held^{xliii}.

However, despite the increased investment in IT and IT-based banking products and services, we discovered a number of deviations to the ‘technology imperative’ cultural rule in how Nigerian banks implement IT. These deviations occurred as a result of the persistence of local cultures and discrepancies with local work practices and expectations from within the wider societal context.

The first instance of deviation to be discussed involves the decision to downplay the strategic role that IT is expected to play in IT-enabled reengineering. According to the ‘technology imperative’ rule, organizational change is enabled by computerization where the investment in and implementation of computer-based systems are seen as central to any effort at change. However, analysis of the Nigerian situation reveals that local work practices and local ways of life meant that bank restructuring took place, in many branches, without any significant computerization. An example is the decision by most banks not to invest in ATMs despite the acknowledged importance of ATMs to banking [9]. In the words of an IT Director in a new generation bank:

“Giving the importance and popularity of ATMs in the banking world, we discussed the idea of installing ATMs in all our branches nationwide but we had to shelve the original plan of installing outside ATMs given the security fears in the country and the problem of vandalism. So we decided that instead of having

outside ATMs perhaps we should install them inside the banking halls for quick service to customers who do not really need to see a teller. But even this plan had to be reconsidered given the state of our economy and the inflationary pressures on our economy. In addition to this, the highest currency denomination in Nigeria is 50 Naira^{xliv} which, coupled with the inflation, makes it unworthy to install ATMs”

Another major deviation from the technology imperative relates to branch inter-connectivity and networking. Because of differences in the level of business activities that takes place in branches, management decided that it was not going to be cost effective to install computer networks in all branches. Instead, a two-way strategy was adopted in which “strategic branches” were connected using the VSAT technology and all the other branches were connected via a hub system. With the hub system, a networked regional branch acts as a gateway to other branches within the region. According to an IT director:

“Although it is desirable for the bank to have all its branches connected and to be able to access and to determine the financial situation or balance of every branch at a go and at the beginning of everyday, but there are constraints. These constraints are in the areas of resources – do you install expensive systems in marginal branches? Or do you first concentrate on key branches and then expand the scope for the others?”

In this respect, banks’ computerization strategies (especially branch networking) were influenced by the diversity of their branch networks as well as influences from the external environment in the form of the Rural Banking Scheme^{xlv}. The rural banking scheme was also influential in other ways. When banks’ first moved into the rural areas, they enjoyed the hospitality of the local people who offered them the use of office buildings free of charge. Such gesture, overtime, led to a strong bank-community relationship, which banks found difficult to break. Also, because banks were forced to establish branches in rival communities due to government regulations, it became difficult to close or merge branches in these communities given the rivalry that exists between them. If management decides to close down the branch in a particular community, the people of that community will resist going to the branch in the rival community. In the worst case scenario, it could lead to inter-communal clash as the community with a branch may perceive this as a sign of superiority - to the wrath of the other community. According to a senior manager:

“In one of our rural branches, the bank was offered a building free of charge by the community when we were about to open. Initially business was good and the bank enjoyed the good reception of the people. Now things are not so good but we still have to bear it, because when business was good they were good to us. These are the sort of situations that do not really allow you to take decisions as you would like to”.

Therefore, management decided to downplay the strategic role of IT to accommodate the diversity of branches within their network and conformed to expectations from the wider society. According to management, some of these branches are unprofitable and ideally would like to close them down. However, because of the relationship they have had with the people of these communities and to avoid inter-communal strife, they had to keep them open - but with little or no investment in IT.

In sum, these variations came about as a result of management’s rational decision to assess the feasibility of conforming with the cultural models against the resources available to the organizations and the socio-economic demands of the country. Consequently, bank reformation took place without any major investments in IT in certain branches. This pragmatic approach to computerization led to a local model of IT implementation within the Nigerian banking system.

4. DISCUSSION: EXPLAINING LOCAL ADAPTATIONS

Before discussing the implications of these deviations, we re-examine the question of how the interaction of local interests and global practices can be addressed in contemporary times. It is suggested here that the implementation of IT in DCs are influenced by both the resource and institutional contexts of organizations thereby leading to deviations from global ‘cultural rules’ and subsequent modification to suit the context of implementation. In the section below we will discuss how and why such deviations to global cultural rules takes place (Fig. 1).

4.1 Origin: Planning for change

The process of IT implementation starts with an explicit decision by management to implement a program of change. Such programs are introduced into the organization as planned change and they consist of

blueprints or guidelines on which the change initiative will be based. These constitute the **planned change** initiatives or programs. In introducing these initiatives, management may employ the services of external agents such as consultants who would diagnose the organization in terms of its technology needs and suggest possible new approaches to redesigning organizational processes. As well as resulting from the rational efforts of management and consultants, planned change initiatives may also be taken in concert with other decision-makers within the community or environment within which organizations operate. By being part of a wider community discourse, such plans may be in line with widely held beliefs and assumptions of how to do things within the wider community [21]. In contemporary times, the wider community of an organization includes both its ambient society as well as the wider global context.

Global social and cultural pressures influence organizational actions in the form of normative prescriptions spelling out the appropriate ways of doing things. Tillquist [22] refers to such prescriptions as “cultural models” that regulate the activities of organizations. Kaye and Little [12], from the globalization perspective, also talks about “standards” which are regarded as a response to the globalization process and a means of achieving ‘interoperability’ among diverse organizations. Such standards can be used in highlighting technical infrastructure and requirements of organizations, and it could also relate to what constitute ‘appropriate ways of doing business’. These standards or cultural rules are spread by professional practice and within popular management discourse and may also become taken-for-granted rules and prescriptions that govern the practice of organizational change and utilizing IT. In banking, the use of technology such as ATMs has come to be regarded as taken-for-granted such that any bank that wants to compete effectively in contemporary times, must invest heavily in IT and ATMs [9]. The increasing use of IT in banks has shifted the emphasis from branches as the primary means of delivering services to customers. This has led to the closure and/or merging of branches to make way for new methods of delivering banking services. There is a renewed focus on the use of new technology-based delivery mechanisms such as electronic kiosks, Internet banking and phone banking. Influenced by some of these prescriptions management, with the aid of consultants, design the blueprint upon which the organization’s IT initiatives will be based.

4.2 Continuation: Implementing the plan

Once the plans are made, appropriate courses of actions will be decided upon to bring the plans to reality. However, because actions are not totally

under the control of individuals [7,24], they are often influenced by their context. Therefore, the appropriate course of action decided by consultants and management may become subjected to influences from both within the organization and the external environment. At the organizational level, management may need to evaluate the quality and amount of resources at its disposal and assess whether and to what extent existing resources will be sufficient to carry out the plan. If resources are available, management may go ahead with the plan as intended and if not, alternative or additional resources will be sought, perhaps using its reputation or financial leverage to obtain these additional resources. If the resources are unavailable, management may need to shelve part of the plan and how much of the intended plan will be implemented.

In addition to financial and reputational resources, other organizational factors, which may influence the carrying out of the intended plans, are the culture and tradition of doing things within the organization. Certain ways of operating within the organization may have been enshrined into the fabric of the organization. Where new plans for organizing are seen as contrary to this established pattern, management may be unwilling to change from the old ways, which may have served them well. This institutional inertia [8] or cognitive sunk costs [17] may therefore prevent the adoption of the new plans or perhaps may lead to a new configuration of the plan. Therefore, the planned change as contained in the management or consultant blueprint may become modified and becomes the **adapted change**.

4.3 Outcome: Realized implementation

Therefore, realized or **implemented change** emerges out of the deliberate decisions (planned change) made within the organization as well as modifications to the original plans (adapted change). The explanation of local deviations to global IT-enabled change techniques will thus focus on decisions and actions taken to implement the plan and to make it workable in different contexts. In this respect, the outcome of the change exercise could not have been adequately explained by reference only to the guidelines of top management or consultants, but by concentrating on different decisions and actions taken at different stages of the implementation process and at different levels within the organization.

5. IMPLICATIONS

Central to this framework is Mintzberg's strategy typology [14,15], which was adopted and extended to describe the process of IT and organizational change as *planned, adapted and implemented change*. Planned change refers to the intended plans or guidelines of management to adopt global IT-based programs and adapted change refers to the process of adapting these programs to suit the context of implementation. It is argued that such adaptation is both a deliberate process of redefining the program to fit available organizational resources as well as an unconscious process arising out of the need to protect long-established traditions the organization. Realized change, then, is the implemented change which emerges out of the planned guidelines or blueprint of management as well as from the adapted change which takes place either consciously or symbolically through the unquestioned perpetuation of long-established traditions.

A major implication of this study highlights the importance of institutional norms and organizational resources in adapting global practices to fit the local context of implementation. The two contexts influenced the change process by providing the 'resources' upon which arguments for redefining the plan for change are based and second, by providing the 'motives' for habitual actions, where no conscious efforts were needed to implement IT and organizational change. Local implementation of global practices involves an adaptation process where organizational resources and institutional practices are mobilized deliberately and unintentionally to modify global change techniques. Deliberately, organizational members redefine the global cultural models or institutional rules embodied in global practices to fit the organization's resource context and the demands of the immediate outer context. Symbolically, organizational resources and local institutional practices are mobilized when organizational members, acting in the realm of the known, act to sustain organizational routines and traditions, as well as taken-for-granted assumptions about how to do things within the organization or the wider societal context.

The idea that global practices can be adapted locally has implications for how IT-related initiatives are planned and implemented. During the process of planning, it becomes important for management to align strategies or plans to fit with the context of implementation because these strategies are not independent of the context in which they are implemented. While strategic plans are useful guidelines to make coordinated action, between the different divisions of an organization possible, however, some measure of flexibility needs to be incorporated into these plans to allow for local modifications. Implementing global practices in local contexts, therefore, requires paying close attention to local expectations and work practices,

which may be at odds with those encapsulated in global practices. It can be said therefore, that local adaptations ensures that IT is workable and fits in with the needs and demands of the different contexts of implementation.

Another contribution of this study is that we have been able to present a discussion of globalization and its implications from the perspective of Nigerian banks. This is in line with Kiely's [13] 'actually-existing globalization' thesis, which stressed the importance of seeing globalization as an occasion for concrete empirical investigation. As such, this paper has described and discussed the experience of Nigerian banks in implementing IT and associated practices. Other studies can find inspiration from this work, either in terms of its content or the approach taken, to discuss the effects of globalization on other industrial sectors (i.e. manufacturing) from within Nigeria and in other DCs.

6. CONCLUSION

Given the aim of addressing the global/local interaction we applied an organization-environment interaction perspective to the study of IT and organizational change. Such a perspective posits that organizations affect and are affected - to various extents - by the environment within which they operate. Two theories – resource-based approach and institutional theory – were introduced to capture this view. The resource-based view argues that organizational actions are rational and deliberate, while institutional theory posits that organizational actions are essentially habitual and conformist, influenced largely by widely-held beliefs and assumptions which originate from the environment. These two seemingly contrasting views were combined within a contextualist framework to discuss issues involved in IT implementation within the Nigerian banking system.

A limitation of this study concerns the replication of lessons learnt. Although the study attempts to illustrate the implementation of global trends, emphasizing deviations to global cultural rules in Nigerian banks, the uniqueness of the Nigerian context, may make the lessons learned not entirely transferable to other DCs organizations. However, the flexible approach to the contextualist model adopted and the use of theories such as institutional theory and resource-based approach has contributed by providing examples of appropriate models to the study of information systems (IS) in DCs. We find these models appropriate because they are non-specific to particular contexts given that all organizations, irrespective of their settings have resources and established practices, and all organizational sectors and social settings have rules and beliefs that govern daily activities.

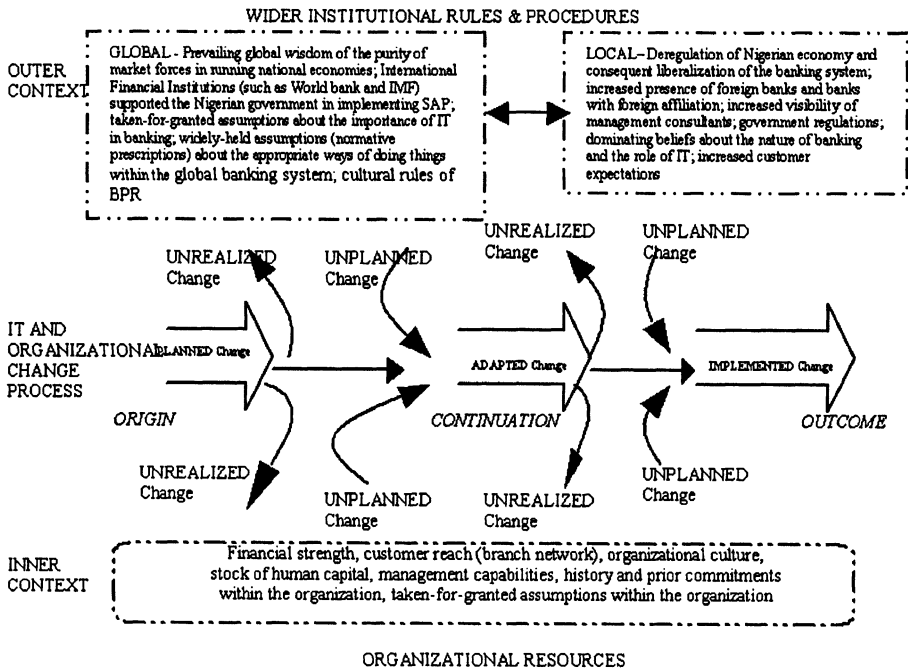


Figure 1: How and why local adaptations occur

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