

ORGANISATIONAL DETERMINANTS INFLUENCING INFORMATION SYSTEMS REIMPLEMENTATION: SOME IMPLICATIONS TO THE DEVELOPING COUNTRIES[#]

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ABSTRACT

This article presents an in-depth study of global Web-based Marketing Decision Support System reimplementation, in a British-based Fast Moving Consumer Goods (FMCG) manufacturer. The paper shows that the success of a system implementation can still be marginal even if the organisation understands the key organisational determinants of success and has influence over them. The paper concludes with a discussion of how implementation planning, user need analysis and communication problems could be overcome and also some implications to the companies in the developing nations.

Keywords: developing countries, innovation process model, marginal implementation

INTRODUCTION

This article presents a study of global Information System (IS) reimplementation in a large British-based Fast Moving Consumer Goods (FMCG) organisation, serving decision-makers across Europe with some implications to the companies in the developing world. Many researchers have asserted that significant improvements in organisational performance can be achieved by resolving the problems of global IS implementation (Linton, 2002). As the level of investment in global IS implementation has increased, so has the needs for understanding the determinants of successful IS implementation.

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Implementing a successful IS is perhaps one of the main obstacles to the increased take-up of IS at a continental or global level (Bradley, 2008). There is however, a large body of research that evaluates the determinants of successful global IS implementation (Averweg & Roldan, 2006; Subramanian, Jiang, & Klein, 2007). These determinants lie in being able to capture the entire implementation *map* of the implementation process. This map can only be captured by not leaving out any of these driving determinants.

Given the significant cost and impact of implementation failure, a considerable amount of research has concentrated upon: defining *implementation* and its inherent problems (Bradley, 2008; Kurupparachchi, Mandal, & Smith, 2002); investigating implementation challenges and providing guidelines to overcome these challenges (Chou, Chen, & Pan, 2006; Gottschalk, 1999; Heckman, 1999; Mirchandani & Lederer, 2008); and to characterise determinants that influence implementation success (Boonstra, 2006; Yoon & Guinmaraes, 1993; Yoon, Guinmaraes & O'Neal, 1995; Jeyaraj & Sabherwal, 2008).

Every IS implementation (global or local) has its own distinctive context in terms of aims, its organisational settings and its environmental determinants. This distinctive context means that there is no unique methodology that can guarantee the implementation success (Jessup & Valacich, 2003; Jeyaraj & Sabherwal, 2008). As a result of these different contexts, the determinants of implementation success (or failed) obtained from previous studies may provide, only a partial picture or a *slice* of the multifarious issues to be managed in global IS implementation (Ang, Sum & Yeo, 2002; Hong & Kim, 2002; Nah & Lau, 2003).

The terminology of IS implementation has been traditionally viewed in the beginning after the system analysis and design effort, and in the ending as the system becomes operational and the outputs are produced (Schultz & Slevin, 1975) while Davies and Olson (1985) stated, "Implementation is a process of preparing the organisation for the new system and introducing this new system in such a way to assure its successful use". For this study, IS implementation refers to the on-going process that includes the entire development of the system, from pre-implementation stage (e.g., planning) to post implementation stage (e.g., audit). This broad definition of implementation will allow the discovery of the determinants (as many as possible) leading to implementation success.

THE PRESENT STATE OF THE LITERATURE

Reviews of previous studies showed that there is a significant array of common organisational determinants for successful IS implementation (Brandes, Lilliecreutz & Brege, 1997; Lee, 2001; Rao, 2004). These determinants are

subject to where and how an IS has been implemented, which can vary according to the characteristics of the organisation. These studies have also indicated that global IS implementation success is geared towards the organisational issues rather than its technical aspects of implementation. These common organisational determinants of success include user needs, user resistance to change and involvement, implementation planning, executive sponsorship, political and management support, and systems development, data management and training (Orzechowski & de Vries, 2007).

User Needs

A large body of global IS project implementation studies have investigated the relationship between user related variables and implementation success (Orzechowski & de Vries, 2007). It is notoriously troublesome for users to conceive and/or express their needs, even when they are given the prospect to do so by assisting in the needs analysis process. Users try to identify items of significance, but the tendency is to focus on issues that have been significant in the past.

User Resistance to Changes and Their Involvements

To people at work, new system means changes and changes can be perceived as disadvantageous. It could causes disruption to the known procedures, further dehumanisation of work processes and the need to acquire new skills. On the other hand, it may also brings a better quality of working life—with many opportunities to become more proficient or to enjoy work more, but the most common reaction is to expect the worst (Bondarouk & Ruel, 2008; Eason, 1988; Hong & Kim, 2002; Jiang, Klein, & Balloun, 1996). In a large implementation project, it is difficult to involve everyone in the strategic decisions but there are many *local* decisions in which everyone can participate (Amoako-Gympah, 2007). It is also important to note that involvement of this kind gives people considerable influence over the decisions that could affect them personally. Perhaps those who have had negative experiences in the past implementation projects, require more *scrutiny* (in terms of eliciting and interpreting their experiences) in the implementation initiative.

Implementation Planning

It refers to the process of translating the strategy into a series of specific project tasks, which upon completion; results the organisation of having a functioning IS (Bondarouk & Ruel, 2008). Most planning tasks are non-routine and multifunctional, often integrating various types and sources of data. Effective implementation planning requires the ability to forecast different growth

scenarios. Boonstra and De Vries (2008) in their studies reported that implementation planning framework is a crucial factor in completing the project on time and within budget. Project managers have to ensure that implementation planning is transparent to all team members (Mirchandani & Lederer, 2008; Newkirk & Lederer, 2006).

Executive Sponsorship, Political and Management Support

A recurring theme in the literature is the significance of executive sponsorship, political and management support (Ang et al., 2002, Kuruppuarachchi et al., 2002; Pinto, 1998). A lack of executive sponsorship has been seen in many contexts to be the most common cause of implementation failure. The sponsor has to be sufficiently senior within the organisation so that fundamental decisions about the implementation can be taken and he can become an active promoter of the system amongst his peers. The sponsor should also have the authority to support and influence the range of potential users. Such a role may be too onerous for the one person, though the one person may still play a crucial role in engendering support from an array of senior managers. Securing of such senior management support is crucial for IS implementation. Winning senior management support is often mentioned as a critical prerequisite for initiating the implementation (Bingi, Sharma, & Godla, 1999; Marble, 2002).

System Development, Data Management and Training

There are still misunderstandings of the concept of systems development, despite the wealth of research devoted to improve the existing systems development techniques. The great hopes of new approaches and tools to drive improvements in systems development have not been fully realised (Bingi et al., 1999). As most organisations start with a partially developed, and in most instances, a highly fragmented database, the issue is one of adapting embedded practices. Multipurpose databases (shared) generally contain a variety of features and the objectives are to satisfy the information needs of several departments. Thus, the embedded nature of existing databases means that any developments must be integrative; the coordination between different departments being one of the most labour intensive and time consuming tasks. On the other hand, system training in this context refers to the provision of hardware and software skills adequate to enable effective interaction with the system under consideration. Senior managers can allocate an onsite specialist to address end-users queries during the training process (Schillewaert, Ahearne, Frambach, & Moenaert, 2005).

These common organisational determinants of success are strongly correspond to the process model suggested by the Wolek's Innovation Process Model (Wolek, 1975). Unlike the factors studies, the process studies facilitate us to understand

what and how IS are implemented. Wolek's Innovation Process Model is a structured innovation process model consists of three distinct phases that can be fully applied to understand the changes or reimplementation initiative: *preparing for changes, assessing the value of innovation; and integrating the innovations/changes into the organisation* (Figure 1). In general, this three-stage model has a wide range of applications in IS implementation (and reimplementation) and is especially important for IS implementers for two main reasons: (i) it corresponds to the accepted normative systems development lifecycle (SDLC) through the adoption of stages and (ii) is based upon a systems approach to organisations. The model was chosen as it provides a broad framework that can set boundaries for determinants to tackle, out of the vast array of determinants that impinge upon the implementation process.

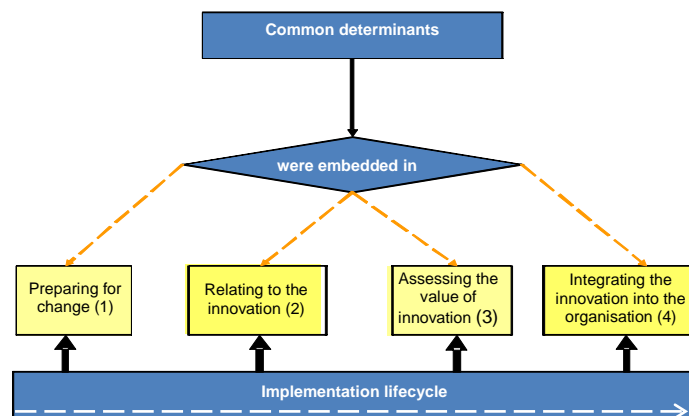


Figure 1. The proposed research framework.

RESEARCH APPROACH

The selection of case study research approach was driven by the exploratory nature of the study. In addition, the literature examining the frailty of the present approaches of global IS implementation research revealed a focus upon the measurement of individual determinants of success, and not upon an evaluation of the inter-related challenges faced throughout the implementation process, was another key reason for the selection of the approach (Heckman, 1999).

The sampling approach employed in selecting the informants was based upon Glaser and Strauss's concept of theoretical sampling (Rowley, 2002; Gummesson, 1991). Theoretical sampling for us mean as we develop our model and understanding of the implementation process, we would seek out core issues that either validate the development of our model or illuminate areas of

uncertainties. The individuals who can help to decide these issues cannot be pre-determined and be selected in a probabilistic manner. They have to be selected based on judgement that they are qualified to teach emergent model. In addition, a key challenge in constructing an acceptable case research approach is to ensure that the key questions of study were pertinent to the selected unit of analysis (Easterby-Smith et al., 2002; Yin, 1994). In this study, this meant that some prior recognition of the different roles of informants can be seen as a unit of analysis. With the establishment of such roles, questions and probes had to reflect their experiences. Such a priori stance did not rule the likelihood of fresh discoveries, it did however, act as a reminder of how analysis is embedded in the choice of respondents and the questions posed to them. With the establishment of such roles, questions and probes had to reflect their experiences. These circumstances perfectly led to the use of a non-probabilistic qualitative-based sampling approach.

Three prime data collection instruments were employed concurrently, face-to-face interviews, non-participatory direct observations and archives in the form of secondary data. These three methods were mutually supportive (Easterby-Smith et al., 2002). First, in-depth interviews were the most significant source of data in this study. Three face-to-face interviews were conducted as it provided three prime advantages:

- i. They allowed *control* over the questions;
- ii. They allowed informants time to reflect and thus furnish the historical data needed; and
- iii. The time allocated allowed the informants to describe their experience and share their insights in their own language.

The logic and the flow of idea that lay behind their actions could be understood. As a result, rapport has been built with the informants (a considerable level of empathy was developed). A guide proposed by Patton (1980) was used as guidance for conducting the exercise. The informants were asked about distinct facts and their opinions on a number of topics. They were also asked to propose their insights into certain events or occurrences. All interviews were tape-recorded and the relevant portion of the tape was transcribed in full.

Second, non-participatory direct observations were used to supplement the in-depth interviews (helping to shape the questions), not only to examine the same phenomena but also to enrich understanding. It allowed the *underlying* dimensions of the research to emerge. It also contributed to greater confidence in the data analysis, thus the generalisability of results. Finally, the use of archives and documents were to collaborate and augment evidence from other sources.

Internally generated archives and documents are also helpful in providing other specific details to corroborate data from other sources.

Validity

"Internal generalisability" is clearly a key issue for qualitative case studies. The descriptive, interpretative and theoretical validity of the conclusions are all depend upon their internal generalisability to the case as a whole. For this study, the concern over internal validity may be extended to the broader problem of making inferences (i.e., during the face-to-face interviews). To regard the study as valid, feedback was used. Feeding back findings to informants is considered as, "phenomenological validity" (Bronfenbrenner, 1976). It requires the informants to comment on the findings or on the case as a whole. However, the delicate issue is that of introducing bias (i.e., researcher's bias). Feeding back findings in the course of a research may change informants' behaviour (they are no longer comfortable discussing the issues in the next visit). As a result, it was decided to lessen the hazard by conducting the feeding back by talking only to other informants.

"External generalisability" (Maxwell, 1994) is not a crucial issue for qualitative case studies. As Maxwell (1994) noted, "Indeed, the value of a qualitative study may depend on its lack of external generalisability, in the sense of being representative of a larger population...". This test deals with the problem of knowing whether a study's findings are generalisable beyond the immediate case study. For some researchers, this problem has been a major barrier in doing case studies. Critics typically state that single case offers a poor basis for generalising (Bronfenbrenner, 1976). However, such critics are implicitly contrasting the situation to survey research, in which a "sample" (if selected correctly) is readily generalises to a larger universe. This analogy to samples is incorrect when dealing with case study research. This is because survey research relies on statistical generalisation, whereas case studies rely on analytical generalisation.

Two main threats to the validity of qualitative conclusions are the selection of data that fit researcher's existing theory and preconceptions and the selection of data that "stand out" to the researcher (Miles & Huberman, 1994). However, it is clearly impossible to deal with these problems by eliminating the researcher's theories, and preconceptions. It is the researcher's responsibility to explain how he deals with possible biases in this study. The influence of the researcher on the organisations or individual studies, known as reactivity, is a second threat that is often raised on qualitative research. In most quantitative studies, the approach is trying to control the effect of the researcher (is appropriate to a variance theory perspective, in which the goal is to prevent researcher's variability from being an unwanted cause of variability in the outcome variables). However, it is clearly

impossible to deal with these problems by eliminating the actual influence of the researcher. The aim in qualitative research is not to eliminate this but to understand it and to use it productively. This is because reactivity in interviews is a powerful and inescapable influence, what the informant says is always a function of the interviewer (more undesirable consequences could be prevented by avoiding leading questions). What is significant is to understand how the researcher influences what the informant says and how this affects the validity of the inferences that can be drawn from the interview.

CASE DESCRIPTION: XYZ COMPANY

The company is the second largest chocolate confectionery manufacturer in the UK (Mintel, 2009). It was formed in January 2002 with confectionery and pet care products as its core businesses. Table 1 further illustrates the estimated brand shares of the UK chocolate confectionery market. XYZ Company has grown well and the growth was driven by a number of successful brand launches and re-launches which maintained their sales levels in difficult market conditions.

Table 1
The estimated brand share of the chocolate confectionery market is here

Brand	2003		2005		2007		% Change 2003–2007
	GBP in Million	%	GBP in Million	%	GBP in Million	%	
Cadbury Dairy Milk	275	8.2	318	10.1	345	10.3	25.4
Company XYZ Brand 1	129	3.8	138	4.4	146	4.3	13.3
Company XYZ Brand 2	113	3.4	127	4	132	3.9	16.9
Company XYZ Brand 3	104	3.1	97	3.1	99	2.9	–4.7
Cadbury Flake	49	1.5	70	2.2	77	2.3	57.2
Nestle Kitkat	83	2.5	70	2.2	80	2.4	–3.3
Nestle Aero	56	1.7	64	2	67	2.0	18.4
Company XYZ Brand 4	57	1.7	51	1.6	52	1.6	–8.1
Cadbury Buttons	50	1.5	50	1.6	50	1.5	1.8
Nestle Milky Bar	60	1.8	50	1.6	52	1.6	–13.2
Others	2,222	66.1	1,927	61.1	2,040	60.6	–8.2

Source: Mintel (March, 2009)

Note: Data may not equal to the totals due to rounding.

The Customer Understanding Portal (CUP) is a global Web-based Intranet Marketing Decision Support System (DSS). The system served more than 35 marketing teams across Europe, offering customised views of market intelligence data. The ideas behind this implementation initiative were first introduced by the Customer Understanding Department during the early 2000s.

The proposed system was believed to enable the recycling of all the marketing data, for example, market research data conducted by external market research agencies. An approach pioneered by the Consumer Understanding Department to avoid spending on seemingly redundant market data. For instance, before moving into a new market (or prior to developing a new product), the marketing teams have to investigate and determine the strengths and weaknesses of a particular section of the market that they would like to penetrate (for this reason, the company would usually spend up to £3 million). As a result, there was a crucial need to lessen the risk of the capital outlay.

Moreover, there were a number of separate databases throughout the organisation (across the continents) for each marketing group. These databases were not standardised and regulated, and were reliant on "independent" administrators for the publication of the documents. These separate systems, with their independent administration needs resulted in considerable overhead costs. The vision was to have a one-stop recyclable internally-generated market intelligence database and the CUP was expected to improve the accuracy of the decisions through better control over data and cost.

Another reason for the development of CUP was that if an employee changed his role to another team, he has to learn about the characteristics of a new database in order to access the information he required (a steeper learning curve than if a standard template was adopted). It was recognised that the set-up of a single database would be beneficial in reducing data loss, avoiding duplication of resources, and ensuring continuous access to a developing knowledge base.

The CUP project was a joint project with Information Services International (ISI), XYZ's sister company that looked after all XYZ information systems projects (i.e., ISI acted as an internal vendor to XYZ, played a significant role in facilitating the implementation of the system across the organisation). The CUP project was supposed to benefit from ISI's experience in the design, development and implementation of similar applications and ISI's main role was to ensure that the new application was compatible with other information systems in place within XYZ. Unfortunately XYZ's Customer Understanding Portal has not been widely employed by the end-users (after the implementation). As noted by one of the system developers, *What they'll say is, I can't find the document. Would you find them and send it to me? That is not what we [system developers] want people to be doing. We want people to explore and use the system.* Through the proposed research framework, seven core determinants of IS implementation success have been encapsulated from the case analysis.

Implementation Planning

Prior to the CUP implementation, there was no proper planning structure in existence. It was a one-man vision, developed by the person who used to lead the Consumer Understanding Department. There was no discussion conducted with the end-users. As a consequence, end-user requirement specifications were not conducted. As noted by one of the system developers, *He basically put it down on a piece of paper and delivered it to the technical people to create it ...so what he did was he drew an end-user requirement of what he thought the requirements were and gave it to ISI to create the Website.* The end-users were ignored (no opportunity to be involved), causing resentment towards the system. As noted again by one of the system developers, *It did not fit the user requirements simply because no requirement analysis was done.*

The project leader left the organisation before the system was launched, leaving no recognised process for the dissemination of information amongst the marketing teams. As a result, for some period, the CUP was generally recognised as a non-useful system by most of the end-users. In particular, this view was held by end-users of a low technical background. They argued that they did not know what the organisation expected from them. The reimplementation scenario started when the Customer Understanding Department senior management started to realise their mistakes and decided to reengineer the entire implementation processes, i.e., facilitating the communication with end-users and clarify their requirements. As noted by the one of the senior managers, *I went to her [Head of Department] and talked to her. Look, the CUP isn't working and people are really unhappy. The manager sat down and said to me, What do you think the problem is? and my answer was, Some of the fundamental steps you need to go through we were not done. We need to do it properly.* There were some attempts to ask the end-users to be more involved. For instance, the progress made with the CUP to the marketing groups was announced through their monthly teleconference, broadcasted across Europe. The aim was to re-promote the system and to facilitate a greater involvement from the end-users.

Senior Management Support and System Champions

Prior to the implementation, senior managers were made aware of the initiative during the feasibility stage through the full report on the scope of the project. With the assistance of the project manager, senior management support was secured and this in return suggested the support of the other teams within the organisations who would be required to aid in the implementation. Nonetheless, the ability and benefits of CUP were not realised by a large number of senior managers prior to the implementation. Although senior managers were supportive, in committing the required financial resources to the initiative;

pressures from them alone were not enough to boost the lack of awareness amongst the end-users. The post implementation scenario began with the resubmission of the proposal to senior management. A sum of £25000 was secured, as a start-up fund for end-users requirement analysis (i.e., there was no budget for the inadequacy issues faced). This time, the aim of the analysis was to weave the system with the end user's day-to-day job. Through this analysis, the design team was also hoping to establish a clearer development direction for the system. The re-implementation era began with the new development team, working together with their end-users for example; they had driven the reimplementation of the system by championing many series of presentations and meetings. Attention was focused at the joint effort with senior managers and end-users (e.g., marketing team members). As the system started to redevelop, more end-users were *sold* on its ability and benefits. The team acted as interface between both senior managers and end-users in vigorously supporting the implementation initiative.

User's Awareness, Involvement and Resistance to Change

During the initial stage of the implementation, there was only limited user involvement except from the project leader, and over the period, the degree of user's resistance was high. The responses were varied and their involvements were minimal and not participative in nature. There was a general perception in the company that there was a lack of user acceptance. Their involvements were self-initiated and spontaneous. After a stalling period, end-users finally indicated that they preferred their own databases rather than the CUP. Most of the potential users indicated that they had no intention of using the system at all (as they were not aware of the system and not actively involved in the implementation).

There was also end-user resistance but as the implementation activities proceeded, resistance was slowly being overcome by users themselves. The department has learned that one of the strongest communication channels was the "word-of-mouth". As one of the system developers has noted, *This viral method of communication had the additional benefit of giving a positive endorsement for the project.* The department had also realised that it was crucial to keep the end users updated and familiar with the project progress, and to ensure that they felt that the system was truly designed to meet their specific needs rather than to demonstrate the technical expertise of ISI system developers.

User's Requirement Analysis and Training

Before the CUP implementation, an incomplete requirements assessment had led to a misinterpretation of the system's ability and benefits. Productive interaction between system developers and users did not take place and users were alienated,

leading to strong personal resistance. As one of the system developers noted, *Although he spent a lot of time and effort into defining what he thought it should be he did not get input from anywhere else except from his head.* Sometimes, the Consumer Understanding Department system developers had to keep "patching-up" the system because ISI system developers did not adequately understand the requirements of users' applications (they were likely to merely perpetuate existing procedures in an automated form, rather than taking advantage of new capabilities in data acquisition, display or analysis). Because of this prolonged frustration, the Consumer Understanding Department system developers decided to revisit the entire system development process and redevelop the system. The process began with an end-user survey. The aim was to have some ideas/responses from the end-users.

In terms of end-user training, there was no formal in-house training session offered before the CUP implementation due to the non-systematic approach employed in developing the system. The compilation of training materials was organised by ISI to ease the implementation process as well as for future users' references. However, the reimplementation stage had started with a strong follow-up training, offered to the end-users across the marketing groups (i.e., more training will be provided).

Vendor Support

ISI as a sister company of XYZ Company, offering global IS support services (i.e., designing, developing, implementing and maintaining) to any IS projects for XYZ Company. They were appointed as XYZ was not allowed to manage the services themselves, including any decision to outsource the initiative to a team of their choice. As an internal IT vendor to XYZ Company, they had developed many IS projects for the company. Nonetheless, the support provided by ISI to CUP was not adequate and the implementation of the system was not as successful as it could have been. There were too limited development days per year allocated by ISI in developing the CUP project (there were no other dedicated resources). ISI's attitude seemed to be one of a sole economic orientation and seemed to spend much time in defending their individual organisational stance. As noted by one of the system developers, *You need to pay us. You need to pay us if you want us to re-project this.* Because of the close organisational relationship between these two companies, the negotiation was difficult, as the support offered by ISI was not as expected.

Data Issues, Size and Organisational Layout

Prior to the implementation of the CUP, there were many disparate databases (e.g., integrated or shared) which were stored in various formats. Although

labour-intensive and time-consuming, the tasks of gathering, converting and standardising data were crucial to the success of the CUP. In many cases however, the data was not properly structured (i.e., because of their separate practices, there was more than one source of data). These various sources of data led CUP to severe database management problems. The multiple sources of data were available in various incompatible formats (although some of the data sets could be converted, it could not be converted in a short space of time allocated for implementation). There were also problems in terms of data integration and standardisation. As a result, end-users could not easily retrieve the needed data. This prolonged frustration caused strong resentment and reluctance amongst end-users. Another hurdle faced during the implementation was the scale of the operation within the organisation. In this case, the size of the company was very large and over the time many bureaucratic processes have become embedded. What could be seen as relatively simple processes ended up being far more troublesome (e.g., maintenance activities). Table 2 summarises the essential implementation activities that had occurred throughout the three-implementation stages.

DISCUSSIONS

Many institutions are investing heavily in implementations of core information systems. However, manifold of organisational determinants come into play in determining the success (or failure) of an IS implementation: the technology chosen, processes affected by the implementation, the organisation's readiness, and user involvement with the implementation, to name just a few. The CUP implementation was an arduous process that was a heavy draw on company's resources in a number of challenging ways. But this was a price that the company was prepared to pay to maintain and develop their excellent market performance. The implementation was a one-man vision, headed and developed by a project manager. He/she assumed that he knew the requirements of the users and he can save resources needed for user requirements specification task. The *idea* of the CUP and its true potential was not properly advocated to senior managers and dormant end-users, and the system was kept alive only on a solitary basis by confronting the 'implementation' threats. There was no proper planning structure in existence and no meaningful discussions were conducted with the development team. The project manager managed the implementation by working only with the sister company, ISI, taking on a huge and onerous task. She then left the company before the system was launched, leaving no standard and recognised process documents for the marketing teams.

Table 2
Summary of the common determinants leading to IS reimplementation

	Key determinants	First implementation	Re-implementation
Implementation planning		No plan was established in implementing the system.	The Consumer Understanding Department system developers made some effort to revisit the entire implementation processes.
		The Consumer Understanding Department system developers kept on "patching-up" the marginal system.	
		One-man show "big bang" approach.	Phase-to-phase introduction strategy has been employed in re-implementing the project.
		Insufficient senior management awareness. System benefits were realised only by a small number of senior managers, enough to secure the funding for the project.	Senior management support was marginal except for monetary assistance.
		Some funding was made available by senior management (£25,000.00) to refinance the project.	
System champions		One-man show approach. Project leader did not sell the idea to his development team members.	The Consumer Understanding Department system developers were involved in re-lobbying the project.
		He was unable to perform the activities required on his own in implementing the system. He was also unable to contest the implementation threats posed by the end-users.	
Vendor support		Several introductory applications were set-up by ISI. However, the level of provided was inadequate.	The level of support provided by ISI was not "felt".

(continued)

Communication

Table 2 (continued)

Key determinants	First implementation	Re-implementation
Data issues	<p>The multiple sources of data sets that were available in various formats have caused severe data management problems.</p> <p>These data problems were handled internally by the Consumer Understanding Department system developers.</p>	<p>End-users were re-invited to be involved in the reimplementation process. They were told how they would strongly fit into the process and what would be expected of them.</p>
Resistance to change	<p>Resistance was strong from those end-users that were unfamiliar with the system.</p>	<p>Users themselves, through the support provided by CUP system developers were gradually overcoming the resistance.</p>
User's requirement analysis and training	<p>No user requirement analysis had led to the misidentification of the system requirements.</p> <p>End-users were not trained due to lack of budget.</p> <p>The Consumer Understanding Department relied solely upon ISI for the training to take place</p>	<p>CUP system developers continued to make more dialogues and observations on the system.</p> <p>The Consumer Understanding Department system developers have agreed to provide continuous training on the system. Proper recompilation of training materials was also organised for future references.</p>

Communication

It is unfortunate that the project manager left half way through the implementation process, and it would be most naïve to state that project managers should not be allowed to go. The assumption should however be made that they can leave. With them is the tacit knowledge of the implementation process. The relationship with ISI nonetheless held many potential advantages as they had performed well in the past, so there was little evidence to argue that the arrangement with a sister's organisation should be challenged. With better project leadership and a more explicit statement of intent, the relationship with ISI could have been much better. In addition, ISI system developers did not sufficiently understand the requirements of the users. They were more than likely to perpetuate existing procedures in an automated form, rather than taking advantage of new capabilities in data acquisition, display or analysis. This was perceived by the users as deficient and no proper application prototype was developed prior to the application launching date.

There was no pilot test done at XYZ Company to facilitate the implementation process. This caused strong end-user resentment and a reluctance to engage in the switching process. Holding a key trial before embarking upon full-scale implementation would have provided a valuable exercise to prepare thoroughly for implementation before it was in the throes of full-scale change (i.e., it is vital to realise that a prototype in a pilot-test is not an end product and it can be arduous for system developers to discard after several months of hard work) and being part of a pilot-test can help to overcome end-users negative feelings, making them feel that they *own* the system, and that they are active participants in its creation and growth. Ultimately, it was felt that the support provided by ISI was not adequate and the implementation of the system was not as successful as supposed. Because of these circumstances and the prolonged aggravation felt by so many parties, the Consumer Understanding Department senior managers decided to revisit the entire system development process and re-implement the system.

The attitude encountered in this case was a clear example of a need for a reimplementation which was due to under-estimation of the need for a proper implementation planning, user need analysis and users engagement. The case study has illustrated the importance of building end-users engagements in order to effectively switch systems. Based upon this case study, one could suggest that IS is worth being re-implemented and key players (e.g., senior managers and end-users) in the organisation should articulate their intentions with respect to the context of implementation process as much as possible prior to effectively plan the implementation process and facilitate the action to enact the project. Successful IS implementation process at a continental/global scale involves a highly organised series of process design and management as it tends to be much more evolutionary and iterative in nature.

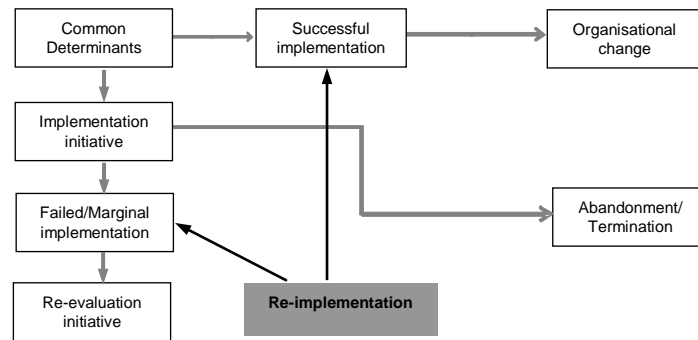


Figure 2. The reimplementation loop.

SOME IMPLICATIONS OF THE STUDY TO DEVELOPING COUNTRIES

Many British companies are making great strides through the technological abilities of IS implementation and reimplementation. Press releases have indicated that many British-based multi-national corporations (MNCs) have moved to the Far Eastern markets for some significant new business development programmes (e.g., Malaysia) by acquiring local retail chains, have started to gain tremendous popularity. These British giants have the ability to develop their own IS and deploy their own subsidiaries data. Malaysian-based companies have to prepare themselves to compete with these giants through the development of successful information systems implementation/reimplementation processes.

In observing these organisations, we have been struck by the applicability of the idea that some champions are required for system implementation/reimplementation success to be achieved. In particular, these champions can be a significant organisational determinant of system implementation/reimplementation outcome. Their significant roles should not be neglected by the companies in the developing countries in their attempt to implement/reimplement. Champions will be nonetheless much more effective if they received satisfactory support from the senior management. Senior management support is pivotal in system implementation/reimplementation process, not just in providing adequate funds but also in facilitating all the activities within the process. A change agent is usually needed as catalyst for the system implementation/reimplementation process to take place. It may be some experienced senior managers. However, in many developing countries, this change agent would most likely be an outside consultant, given the lack of qualified personnel within the companies. This change agent should work with the senior management of the organisation to establish the framework for the

implementation/reimplementation. Seeking help from an experienced and qualified outside consultant is a logical way to fill the change agent role.

This proposed research framework that was developed based upon Wolek's (1975) work has been able to set the boundaries of the organisational determinants to be tackled, out of the vast array of determinants that have strongly impinged upon the implementation process. The primary strength of this framework is that it explicitly encapsulates the problems of institutionalising a new continental/global information system (in which an evaluation of organisational determinants can be embedded as an initial point to launch the enquiry). The practitioners should find this framework constructive as it has enabled the *surfacing* of subjective elements in the implementation process. The framework also suggests that before the implementation or reimplementation of an information system at continental/global level, key stakeholders such as system developers should make use of the framework as a guide to facilitate them to be more explicit and obvious about their expectations of the implementation process.

CONCLUSION

This research began with the intention on describing an in-depth case study of global IS implementation in a large British-based Fast Moving Consumer Goods (FMCG) organisation. The implementation was of a Customer Understanding Portal (CUP), a global Web-based Marketing DSS. The initial attempt to implement CUP failed at both organisational and individual levels. However, given the eventual potential that the system, all stakeholders persevered to overcome the defects through going back to basic principles in re-implementing the system. The ultimate behaviour of end-users was a clear illustration of a marginal global IS implementation, i.e., thriving but can have been a lot more successful. The study also revealed that the CUP implementation process has started without an explicit framework to plan the implementation. As a result, the key task of end-users' need analysis was marginally performed. This was one of the most crucial implementation tasks that proved to be a very agonising lesson. Though it may seem obvious that user needs analysis should have been performed, achieving this was another matter.

Many of the issues discussed above can have been resolved by having a more transparent and balanced relationship with a vendor. A supporting vendor may be expensive, but the implementation expertise and the experienced vendor, could lead to a substantial cost reduction to the whole implementation process. However, it was assumed that the vendor (a sister company), who had previously supported other implementation projects, would commit to a high level of

support. This hardly occurred and troubles arose because the vendor could not meet any agreed-upon specifications. This research reflects a minor step in the effort to derive a better understanding of IS implementation (reimplementation) practices in the manufacturing industry at a continental/global level. The framework developed can be of value to the specified domain in general, as a basis for further investigation. Considerable opportunity exists for other organizations and domain to expand on, and otherwise improve these initial efforts to incorporate increasing theoretical complexity of global IS implementation (reimplementation) process.

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