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### Conference or Workshop Item

How to cite:

Mia, Mohammed Badruddozza and Ramage, Magnus (2011). IT project management in developing countries: approaches and factors affecting success in the microfinance sector of Bangladesh. In: 6th International Research Workshop on IT Project Management (IRWITPM), 4 Dec 2011, Shanghai, China.

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Version: Accepted Manuscript

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# **IT Project Management in Developing Countries: approaches and factors affecting success in the microfinance sector of Bangladesh**

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## **ABSTRACT**

The usage of IT and the capacity of managing IT projects in developing countries are significantly far behind from that of developed countries. Realizing the benefits of using IT, developing countries have tried using it in different sectors but with a high failure rate. The microfinance sector in Bangladesh covers almost one-third of the households of the country through hundreds of microfinance organizations, but has a poor history of unsuccessful IT projects in the majority of cases. This paper describes approaches to IT project management in the microfinance sector of Bangladesh, and looks into the factors that make the projects unsuccessful.

## **Keywords**

IT project management, microfinance, developing countries

## **INTRODUCTION**

Project management is a relatively new branch of management study and practice, and therefore the processes and procedures of project management in developing countries have not been practiced for long as other areas of management (Abbasi and Al-Mharmah, 2000; Stuckenbruck and Zomorrodian, 1987). Information technology (IT) project management in developing countries is a rather more recent phenomenon, as the use of IT in developing countries is far behind that in developed countries, due to differences in economic, social and political contexts.

Microfinance is a large sector of Bangladesh that has been growing continuously since the mid-1970s. The microfinance operation is highly information intensive by nature, and IT can help microfinance organizations and the sector as a whole in many ways. Although IT projects started somewhat earlier in microfinance than other sectors of the country, there are still not many instances of successful IT projects.

This paper describes an account of IT project management scenarios in microfinance sector of Bangladesh and looks into the factors that hamper project success of this development sector of the developing country. It derives from the first author's personal experience in IT management in a microfinance organization in Bangladesh, and from his ongoing PhD research on ICT-based information systems in microfinance organizations using multiple-case study with interpretive epistemological stance.

## **THEORETICAL PERSPECTIVE**

The definition of a project that profoundly identifies and differs it from other branches of management studies is that projects have a definite start and end, consist of different lifecycle stages, develop progressively and pursue deliverables or objectives (Gray and Larson, 2008; Maylor, 2005; Project-Management-Institute-Inc., 2004). IT projects also possess the features of this definition, irrespective of whether they occur in developed or developing countries. The assessment of project success and failure has long been discussed in the field of project management. Different methods and indicators have been used in research and in practice in this field for decades.

A classic view of assessing the success and failure of the projects has been the '*Iron Triangle*' where the interdependent factors - *costs*, *time* and *quality* make the basis of assessing the project success (Hartman, 2000; Atkinson, 1999; Cooke Davies, 1990). Whilst keeping these three 'iron pillars' as basic measures of assessment, other factors such as methodology, skills and project context are worth considering in assessing project activities and their overall success (Teece et al., 1997; Zahra and George, 2002).

Early work by Pinto and Slevin (1988) found ten key factors for project success, regardless of project types. During that time the impact of project managers' competency was not valued as much as an input criterion in measuring project success. However, later studies have shown the importance of the project managers' competency in assessing project success, irrespective of project types and in both developed and developing countries (Bernroider and Ivanov, 2011; Muller and Turner, 2010; Turner and Muller, 2005; Westerveld, 2003). Indeed, Bernroider and Ivanov (2011) showed that the leadership competency profiles are the dominating factors for project success, using the ten dimensional project success criteria developed by Turner and Muller (2005), in turn based on the Project Excellence Model of Westerveld (2003).

With a growing trend of using stakeholders' satisfaction as an output criterion in assessing project success, Bernroider and Ivanov (2011) also emphasise this criterion in identifying a successful project, which is embedded in the *quality* dimension of Iron Triangle of measuring project success. If the project does not satisfy its stakeholders then *costs* and

*time* become immaterial. In the case of assessing IT projects of the microfinance sector in developing countries, the stakeholders' satisfaction criteria need to be emphasised during the assessment process, although not ignoring the costs and time dimensions of the project. By the nature of the projects, the quality of satisfying stakeholders is of paramount concern in IT projects, especially when the projects are in the financial sector, as is the case for microfinance.

With the time-bound nature of project activities, it is sensible to assess the progress of projects in logical intervals in order to make it more likely that the projects will be successful (Bernroider and Ivanov, 2011; Stewart, 2008). By their nature, IT projects have similar sensitivity like other technology centric projects. Managing harmful factors through assessing project status in a timely manner is crucial for the success of IT projects.

The economic, social, cultural and political contexts of developing countries differ significantly from that of developed countries (Abbasi and Al-Mharmah, 2000; Stuckenbruck and Zomorrodian, 1987). With the differences of these contextual issues, the human resources of microcredit organisations exhibit diverse backgrounds that could have an impact on project success or failure. Wang et al (2006) shows that user diversity has positive influences on organizational technology learning but has negative influences on IT project performance.

## **THE MICROFINANCE SECTOR**

Microfinance is a development programme that provides small amounts of money to unprivileged people who are living in poverty without access to formal financial services. Its aim is that those receiving this money would use it in income generating activities and create self-employment that would help them come out from poverty. Since the development of the present form of microfinance in the mid-1970s, the programme has increased its coverage in Bangladesh (its birth place) and in other countries of developing world. In view of the contribution of microfinance, the United Nations proclaimed the year 2005 as the International Year of Microcredit, and the Nobel Peace Prize for 2006 was awarded to the pioneer of the present form of microfinance (Prof Muhammad Yunus) and his organization (Grameen Bank) through which he started implementation of the programme.

With acceleration in the 1990s, the present coverage of microfinance in Bangladesh is nearly one-third of the total households of the country, with several hundred microfinance organizations throughout the country (CDF, 2009; Ahmed, 2004). The Bangladesh Microfinance Statistics (CDF, 2009) show that 745 organizations are providing financial services to about 36 million borrowers from 17,407 branch offices in a highly distributed manner, by over 240,000 microfinance employees throughout the country. The report noted that the real number of organization could be more than this. The size of the organizations range from small, with less than 30 employees, to giant, having more than 30,000 employees. Some organizations work beyond the boundary of the country as well.

## **HISTORICAL PERSPECTIVE AND PRESENT PROFILE OF IT USE**

The IT project management in microfinance started relatively long before than most of the other sectors of the country (Mia, 2006). In 1985 the Founder President of Proshika, one of the largest microfinance organizations of Bangladesh returned from an international conference in Europe and told the forty monitors and accountants of the microfinance programme that they need not continue with their regular duties. He told them that he would give a machine called a computer to do those 'donkey jobs', and that the staff would be doing more creative jobs for the organization. Microfinance staff became afraid of losing their jobs, but the head of the organization told them to rest assured and started the use of computers in microfinance, through opening a new IT management department in 1986.

This was the first use of computers to support microfinance in Bangladesh - until that period no development organizations had used computers in the country. A similar phenomenon emerged at the same time in BRAC, the largest microfinance organization of the world, and slightly later in Grameen Bank. In BRAC, formal counseling workshops were needed for the frightened staff members when computers were introduced in the organization.

Although the use of IT in the microfinance sector of Bangladesh began long ago as a developing country, the profile of IT use is still very poor, mainly because of different types of difficulties in IT project management. Not more than ten organizations are using IT-based information systems although the majority of the organizations have been working for more than twenty years deploying considerable volume of financial and human resources. The information systems of most of the organizations are manual. With a need of mandatory reporting compliance, the partner organizations of PKSF (the apex financing body) have been providing monthly monitoring reports to PKSF, using PKSF-provided spreadsheet formats since early 1990s. However, all the microfinance organizations use computers at their head offices for word processing and more recently, for accessing the Internet, not for the information systems of microfinance.

## **THE APPROACHES OF IT PROJECT MANAGEMENT**

In the microfinance sector of Bangladesh, four broad approaches of IT project management can be observed:

### **Managing IT Projects by the Organization**

The microfinance organization itself manages its IT projects without taking direct help from outsiders. In this approach the organization itself develops software in-house usually through opening a new department. People in this department also take care of the activities of system testing, implementation, hardware and network installation and maintenance. Both Proshika and Grameen Bank followed this approach. In the case of Grameen Bank, rather than opening an internal new department it has given all the IT project management responsibility to a sister concern named Grameen Communications,

for cost control and to keep IT management entity separate from the microfinance operational entity for confidentiality and security reasons. ASA, another large microfinance organization has recently launched its own IT project for the total computerization of its large information systems solely by its own internal IT project management. This approach enables faster development and support, and more easily matches the IT-based systems with business processes, but prevents learning and adaptation of good practices of others. This approach needs forward-looking and strong leadership.

### **Managing IT Projects by the Organization and an IT Firm**

There are microfinance organizations who manage their IT projects in a combined management approach involving external IT firms with their own IT team. Instances of this approach in the microfinance of Bangladesh are rare, but BRAC is a good example of this approach. BRAC operates the largest microfinance programme in the world, giving most of the IT project management responsibilities to an external IT company. This company developed information systems for BRAC and implemented them in all branch offices of BRAC throughout the country. A team within the microfinance programme works with the external IT company, to link between BRAC and the company. However, BRAC is currently taking the management of IT back from the external company in a gradual manner. Interestingly, BRAC started managing IT projects by itself at the beginning of IT use in the mid-80s, went for outsourcing in the late 90s, and now again is in the process of taking back to its own management. All these transitions have their own justifications and reasons in the context of the country.

### **Managing IT Projects by an IT Firm**

A recent trend of total IT project management by external IT firms has been emerging in the microfinance sector. Seeing the benefits of using IT for microfinance, an increasing number of microfinance organizations are showing interest of using IT for their operations. At the same time, given the large market in the microfinance sector and after a long process of capacity building, a few Bangladeshi IT firms have gained the capacity to develop information systems for microfinance. Some smaller-sized microfinance organizations have started using IT with this approach of IT project management. This is a very new trend of IT project management in this sector and its positive and negative aspects are not yet clear. With this approach a rapid growth of IT use in the sector is likely that did not occur with the other approaches. However, some instances of mishaps have been observed like non-matches of the system with the business process and inability to provide instant support by the external firms.

### **Managing IT Projects by the Apex Funding Body**

There was an initiative to manage IT projects by PKSF, the apex funding body of the microfinance sector in Bangladesh. This project started in 2002 with the aim of developing and implementing an IT-based information system for its partner organizations. PKSF started this project observing the lack of capability of its partners to develop their own

systems. However, the apex funding body was likewise unsuccessful and abandoned in 2007, but for different reasons, including the inability to streamline the dissimilar business process of different partners, lack of adequate project planning, and the appointment of members within the project for political reasons rather than their abilities.

### **FACTORS THAT HAMPER IT PROJECT INITIATION AND SUCCESS**

Factors that hamper IT projects to initiate and manage in the microfinance sector of Bangladesh are as below. The first three of these occur in the pre-project stage, while the fourth occurs in the project development and implementation stage.

#### **Leadership gap**

Apart from a few instances, the proper leadership of IT project management is not in place in the sector. Leaders of the organizations are mostly from microfinance or development management backgrounds. Playing a leadership role for IT project management is somewhat difficult for them because of the different background, interest and competency profiles (Bernroider and Ivanov, 2011; Muller and Turner, 2010). And except from a few very large organizations, staff in the senior and mid levels management do not have the potential for IT project management, and possibly do not even have the capacity to oversee managers of IT projects. Some senior managers of Grameen Bank, BRAC, ASA and Proshika led in initiating IT projects and assigning different people to lead IT projects with strong background support. In all other cases the leadership competency gap is one of the main reasons for the lack of IT project initiatives in this sector.

#### **Five fears**

Five types of fears prevail in the microfinance sector that hinder IT project initiatives:

##### *Fears of incapability of replacing manual systems with IT-based systems*

Information systems for microfinance are distributed, complex, sensitive and non-standardized, run by semi-literate staff members for themselves and for the illiterate borrowers' community in underdeveloped rural and slum settings (Iyengar and Singh, 2010). Organizations fear about their capability to replace their manual information systems with IT-based systems in this organizational context.

##### *Fears of incapability of maintaining the IT-based systems*

Microfinance is a volatile programme by its nature. There are frequent changes in programme policy and operational levels, to which the information systems need to comply (Iyengar and Singh, 2010). Microfinance programme operations take place in a distributed manner, mostly in rural areas far from the head office. Hardware maintenance is difficult in remote operational areas. Most of the organizations think that it would be impossible or very difficult for them to manage this maintenance-intensive software and remotely located hardware, and thus stay with their manual systems.

*Fears of incapability of existing staff to use IT-based systems*

The majority of microfinance staff members have very poor educational backgrounds. In most cases they are recruited from the local area with very low wages. These staff members are not familiar with IT-based systems. Senior managers think that their existing staff will not be able to work with the IT-based systems, and even that it will be difficult to work with them during the development phase of the system (Wang et al, 2006). They also fear that if they try to replace these staff members with more educated and IT-familiar ones, then it would have a negative effect to their profitability, at least in the short term.

*Fears of incapability of the IT people of the country*

With a few exceptions people in the IT industry of Bangladesh do not have experience of working in large and complex IT projects. This scarcity of IT people having proven experience on complex and large IT projects makes the decision makers of microfinance organizations fearful of launching IT projects for their organizations, as they see examples of failure in IT projects within the country.

*Fears of transparency*

Microfinance organizations are monitored and regulated by PKSF and the Bangladesh government's MRA (Microcredit Regulatory Authority) on a regular basis. A significant number of microfinance organizations do not want these apex bodies to see all the financial and operational aspects of their organizations. They think that if their information systems become digital then they would not be able to hide information from the monitoring bodies. They rather prefer to sacrifice the benefits of computerized systems in order to remain non-transparent to external monitoring bodies with manual systems.

**Unwillingness of investment**

By nature microfinance organizations are very cautious about expending money for their microfinance operations and try to innovate processes that help lower the costs of operations. This cost saving tendency is a common phenomenon in microfinance organizations. Issue of sustainability or profitability for the organizations may make them cautious about the expenditure. Because of this attitude, organizations do not wish to invest money in IT projects. They even think that instead of expending money for IT projects they would receive a greater return if it were invested in microfinance.

**Project development and implementation stages**

Factors that hamper IT projects at the development and implementation stages:

*Irrelevant education of IT project managers*

Peterson et al (2007) describe the mismatch between the educational background of project managers and the nature of projects in developing countries. A similar phenomenon is observed in the IT project management in microfinance sector of Bangladesh. In many



cases IT project managers with very low or no background of IT education are appointed, which hampers the success of projects in many ways. Their irrelevant education and way of working also hampers the work of other project staff having technological education. It has also impact on higher levels of drop out, and it becomes difficult for the projects to meet the *costs, time* and *quality* at a satisfactory level.

#### *Lack of planning*

Projects likely to suffer throughout the phases if do not follow proper planning. It is a common phenomenon in IT project management in the microfinance sector of Bangladesh that projects start without proper planning. This also leads to a tendency of skipping essential steps of project management in all phases of the project. Project management without proper planning results in failure or so-called 'unsatisfactory successes' of projects in this sector.

#### *Unwillingness to use tools and techniques*

IT project managers are reluctant to use the scientific tools and techniques of technology project management. They try to proceed with the project using traditional management thinking. This attitude or inability of using the proper tools and techniques hampers timely completion of projects with expected quality.

#### *Knowledge gaps*

In most cases, people who have worked a long time in microfinance are less aware of IT, and people within the IT industry have poor knowledge about the complexity of microfinance business process. This knowledge gap hampers IT projects during development and implementation. Enabling these two very different groups of people to work together seems difficult especially when strong leadership is not in place.

#### *Implementation difficulties*

IT projects, especially information systems projects, are difficult to implement in remote areas of a developing country. Three major contextual problems badly hamper the implementation of IT projects of the sector: less-educated and IT-fearing staff members, non-existent or interrupted electricity, and weak or non-existent Internet bandwidth. For example, BRAC started computerization of its information systems in 1986 but still about 10% of branch offices do not have computers because of these contextual problems.

#### *Political problems*

Although Stuckenbruck and Zomorrodian (1987) long ago described the political problems that hamper project management in developing countries, these problems still exist, perhaps in slightly different forms. In particular, IT projects in microfinance having links with the government are very much affected with illogical interruptions, and with politically-backed incompetent and corrupt people.

## CONCLUSION

The microfinance sector is a relatively large and mature sector of Bangladesh. Microfinance is an information-intensive, complex and distributed economic development programme, where technology use through implementing IT projects could play a very positive role in achieving the objectives of the programme. Despite having been present within the sector for a considerable time, the advancement of IT use is noticeably poor because of the factors that hamper IT projects to be successful in a developing country. It is to be hoped that if policy makers and project managers became aware of the factors described in this paper, the likelihood of project success would be higher.

## REFERENCES

- Abbasi, G.Y. and Al-Mharmah, H. A. (2000), Project management practice by the public sector in a developing country, *International Journal of Project Management*, vol. 18, no. 2, pp. 105-109.
- Ahmed, S and Hakim, M.A (2004) *Attacking Poverty with Microcredit*, The University Press, Dhaka.
- Atkinson, R. (1999), Project management: cost, time and quality, two best guesses and a phenomenon, its time to accept other success criteria, *International Journal of Project Management*, vol. 17, no. 6, pp. 337-342.
- Bernroider, E.W.N. and Ivanov, M. (2011), IT project management control and the Control Objectives for IT and related Technology (CobiT) framework, *International Journal of Project Management*, vol. 29, no. 3, pp. 325-336.
- Cooke-Davies, T. (2002), The 'real' success factors on projects, *International Journal of Project Management*, vol. 20, no. 3, pp. 185-190.
- Credit and Development Forum (2009), *Bangladesh Microfinance Statistics*, Dhaka.
- Gray, C.F., Larson, E.W. (2008), *Project management - the managerial process*, 4 ed. McGraw-Hill Irwin, London.
- Iyengar, K.P., Quadri, N.A. and Singh, V. K. (2010) "Information Technology and Microfinance Institutions: Challenges and Lessons Learned", *Journal of Electronic Commerce in Organizations*, vol. 8, no. 2, pp. 1-11.
- Maylor, H. (2005), *Project Management*, vol. 3. Prentice Hall, London.
- Mia, M.B. (2005), ICT in Microfinance: A Bangladesh Perspective, *Federation for Development Cooperation*, Working Paper, Brisbane, Australia.
- Muller, R. and Turner, R. (2010), Leadership competency profiles of successful project managers, *International Journal of Project Management*, vol. 28, no. 5, pp. 437-448.
- Peterson, C. et al (2007), Software Project Management for Developing Countries, Working paper series, ICT Group, Faculty of Engineering, University of Technology, Sydney, Australia.
- Pinto, J.K., Slevin, D.P. (1988), Project success: definitions and measurement techniques. *Project Management Journal*, vol. 19, pp. 67-73.
- Project-Management-Institute-Inc. (2004), *A Guide to the Project Management Body of Knowledge: Pmbook Guide*, 3 ed. Project Management Institute Inc., Pennsylvania, USA.

- Sönke Hartmann, S. and Kolisch, R (2000), Experimental evaluation of state-of-the-art heuristics for the resource-constrained project scheduling problem, *European Journal of Operational Research*, vol. 127, no. 2, pp. 394-407.
- Stewart, R.A. (2008), A framework for the life cycle management of information technology projects: ProjectIT, *International Journal of Project Management*, vol. 26, no. 2, pp. 203-212.
- Stuckenbruck, L.C. and Zomorrodian, A. (1987), Project Management: the promise for developing countries, Butterworth and Co (Publishers) Ltd., vol. 5, no. 3, pp. 167-175.
- Teece, D.J., Pisano, G., Shuen, A. (1997), Dynamic capabilities and strategic Management, *Strategic Management Journal*, vol. 18, no. 7, pp. 509-533.
- Turner, J.R., Muller, R. (2005), The project manager's leadership style as a success factor on projects: a literature review, *Project Management Journal*, vol. 36, pp. 49-61.
- Wang, E.T.C. et al (2006), User diversity impact on project performance in an environment with organizational technology learning and management review processes, *International Journal of Project Management*, vol. 24, no. 5, pp. 405-411.
- Westerveld, E. (2003), The Project Excellence Model: linking success criteria and critical success factors, *International Journal of Project Management*, vol. 21 no. 6, pp. 411-418.
- Zahra, S.A., George, G. (2002), Absorptive capacity: a review, reconceptualization, and extension, *Academy of Management Review*, vol. 27, no. 2, no. 185-203.