

A study on critical success factors on building IT based flat organization: A case study of Mellat Bank

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ABSTRACT

A flat organization is a firm that has an organizational structure with few or no levels of middle management between employee and executives. The idea is to take advantage of well-trained workers when they are more directly involved in the decision making process, rather than closely supervised by various layers of management. This paper presents an empirical investigation to determine critical success factors on building information technology (IT) based flat organization in a case study of banking industry. Using principal component analysis, the study applies factor analysis for two internal and external factors. In terms of internal factors, there are three factors including Processes and the electronic decision making, Teaching and Electronic Learning and Work in IT. In addition, the study has detected four factors including Electronic Supply, IT structure, Appropriate IT usage and Electronic Communication.

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1. Introduction

Strategy planning plays an important role on development of business organizations and it is important to apply reliable long-term plans to reach organizational objectives. There are literally different strategies where people could simply switch from one to another one. One of the key strategies to have successful firm is to make necessary changes on firm to have flat organization (Porter & Siegel, 1965; Garzo Jr. & Yanouzas, 1969; Goh, 1998). According to Ghiselli and Siegel (1972), the structure of a firm is associated with the nature of the distribution of the units and positions within it, and to the nature of the relationships among those units and positions. A flat organization is a firm that has an organizational structure with few or no levels of middle management between employee and executives. The idea is to take advantage of well-trained workers when they are more directly involved in the decision making process, rather than closely supervised by various layers of management. A flat firm model promotes employee involvement through a

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decentralized decision-making process. By assessing the level of responsibility of baseline employees and removing layers of middle management, comments and feedback reach all personnel involved in decisions very quickly. There are literally many studies associated with flat organizations.

Seppälä (2004), for instance, investigated the roles and job characteristics of supervisors and other white-collar staff connected with production in eight manufacturing and printing firms that had applied the principles of a lean organization and advanced IT in the 1990s. In their study, they interviewed 212 employees including production managers and employees from various organizational levels and phases of the production process. They reported that the number of first line supervisors had decreased in all the studied firms, and in some manufacturing firms, there were no first line supervisors in the production departments at all. In some firms, the title of the previous supervisors had been changed to manufacturing manager, their responsibility area became larger and they were in charge of a broader manufacturing area or a product shop. It appeared that the supervisors' careers in the firms taking part in this study had developed mostly in a positive direction. However, at the same time, the amount of work had increased, more specifically in production in the manufacturing industry.

In early eighties, the management team of the organization of the Management Systems Laboratories (MSL) of the Virginia Polytechnic Institute and State University, USA, changed its structure from a standard matrix unit to a flat organization. The flat organization created more negative impacts on the organization and its objectives than positive effects. One year later, the flat organization was changed to a standard hierarchy, and most of the negative effects were overcome. Kurstedt Jr et al. (1991) is believed to be the first experience with a type of flat organization, why that organization was converted to, what worked and what did not, why the organization was converted away from, what was learned from the experience, and what the authors recommend for research organizations considering flat firms. Ghiselli and Siegel (1972) presented a comprehensive survey on leadership and managerial success in tall and flat organization structures.

2. The proposed study

The proposed study of this paper applies factor analysis to detect critical success factors associated with internal, external components influencing on having flat IT based organization, and the study has accomplished in bank Mellat. The sample size is calculated as follows,

$$n = \frac{N \times z_{\alpha/2}^2 \times p \times q}{\varepsilon^2 \times (N - 1) + z_{\alpha/2}^2 \times p \times q}, \quad (1)$$

where N is the population size, $p=1-q$ represents the yes/no categories, $z_{\alpha/2}$ is CDF of normal distribution and finally ε is the error term. Since we have $p=0.5$, $z_{\alpha/2}=1.96$ and $N=1500$, the number of sample size is calculated as $n=306$. The study designed a questionnaire and distributes it among 320 people and managed to collect 308 properly filled ones. There are two questionnaires, one for internal and the other for external factors. In terms of internal factors, the questionnaire contains 20 questions. Kaiser-Meyer-Olkin (KMO) and Bartlett tests are 0.915 and 2630, respectively, which confirm the overall questionnaire. In terms of external factors, the questionnaire contains 20 questions. Kaiser-Meyer-Olkin (KMO) and Bartlett tests are 0.900 and 23260, respectively, which confirm the overall questionnaire.

3. The results

In this section, we present details of our findings in terms of internal/external factors.

3.1. Internal factors

The study has applied factor analysis through principle component analysis to extract important internal factors and the results are summarized in Table 1 as follows,

Table 1
The summary of principal component analysis after rotation for internal process

Description	Processes and the electronic decision making	Teaching and Electronic Learning	Work in IT
Employees do teleworking	0.476		0.636
All decisions are made in group	0.42		0.696
Information technology must be used for decision making			0.516
There is an internet system			0.745
Internet is used for harmony within organizations			0.769
All tasks are assigned electronically	0.618		0.361
A software group is used for accomplishment of tasks			0.61
Virtual units are used to accomplish tasks			0.666
Virtual teams are used to accomplish tasks	0.57		0.361
Management system is used for decision making	0.674		
Management team emphasis on electronic monitoring			0.757
Bank uses electronic methods to order administration	0.366		0.603
Bank uses electronic methods for advertisement			0.558
Electronic contracts are used to accomplish contracts			0.616
Training tasks and processes are performed electronically		0.698	
There is a portal system to accomplish tasks		0.775	
Electronic learning methods are used for training		0.774	
Management is executed in part of organization,		0.56	
The bank uses learning management system for training		0.666	
Enterprise resources planning is used to accomplish tasks	0.436	0.554	
Value	41.764	50.645	56.253
Variance	8.353	1.776	1.122
Accumulated	8.882	5.608	41.764

As we can observe from the results of Table 1, there are three factors including Processes and the electronic decision making, Teaching and Electronic Learning and Work in IT.

3.2. External factors

The study has also used factor analysis through principle component analysis to extract important external factors and the results are given in Table 2 as follows,

Table 2
The summary of principal component analysis for external factors

Item	Electronic Supply	IT structure	Appropriate IT usage	Electronic Communication
Organization uses Internet to provide services				0.709
Organization uses appropriate SCM/CRM				0.747
Appropriate CRM is held among different suppliers			0.41	0.702
Organization uses network structure to accomplish tasks			0.698	
Video conferences are used for communication between different	0.577		0.375	
Managers support electronic communications	0.713			
A modern communication is held among various customers	0.598		0.599	
Most tasks depend on electronic services	0.351		0.68	
Support and administrative units exist	0.648			
Electronic consumer response units exist	0.704			
Software packages exist to take care of documents	0.606			
Internal networks exist	0.535			
All software packages are upgradable and compatible with new	0.444	0.484		
Information system with supplementary documents exists		0.571		
Security access to document exists		0.647		
Necessary hardware and software exists within organizations		0.533		
The capability on work over the internet exists		0.607		
Video conferences are used for external/internal communications		0.639		
Value	36.633	44.397	51.16	56.729
Variance	36.633	7.765	6.762	5.57
Accumulated variance	6.594	1.398	1.217	1.003

Based on the results of Table 2, there are four factors influencing the success of having flat IT based organization including Electronic Supply, IT structure, Appropriate IT usage and Electronic Communication.

4. Conclusion

In this paper, we have presented empirical investigation to detect important internal and external factors influencing critical success factors on having IT based flat organization. Using principal component analysis, the study has detected three internal as well as four external factors influencing on reaching successful IT based organization.

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