

Creating Lean Management Structure in Electronic Banking (Case Study: Ansar Bank)

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To Cite this Article

Asal Mohseni and Masoud Rabani, "Creating Lean Management Structure in Electronic Banking (Case Study: Ansar Bank)", *International Journal for Modern Trends in Science and Technology*, Vol. 04, Issue 04, April 2018, pp.-16-22.

ABSTRACT

One of the main factors to succeed in the banking competitive market is the quick performance without wasting time. The clients, as the main determinant element of this competition, value the technology and quickness and then the technical expertise of the banks. It is necessary to describe the bank services in modern banking, especially electronic banking. So, banks need to get more information from the clients, understand their interests, and expand their relationship with them in order to be more efficient. This paper takes the lean management structure into consideration in the electronic banking. So the aim of studying is building a lean management system for the electronic banking (Ansar Bank is the case study). The descriptive-survey method is used and the data is gathered by questionnaire. Statistical society is the employees of Ansar Bank at management department. It was concluded that lean management can help Ansar Bank to provide better services to clients and receive more satisfactory and faithfulness and it will make them step forward from their competitors. And so there will be more profit and reputation for Ansar Bank.

Keywords: lean management, electronic banking, Ansar Bank..

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I. INTRODUCTION

Iranian National Standards Organization defines the term "lean" as a systematic method in order for recognition and omission of superfluous by improving system constantly and presenting a perfect service to the clients. Executive methods based on quality, flexibility, reducing production timing and group work are joined together by lean manufacturing. The lean manufacturing leads to the reduction of management classification and flat structure. Actually, the lean manufacturing techniques are used to reduce the duration between application and delivery in order to increase the profit, satisfactory of clients and reduction of

production time. According to the experiences of the lean management at different service system, the component of lean management are: reducing superfluous, storage reduction, decreasing the speed, providing the services based on clients' demands, meeting the clients' needs, doing at one stage, assign the control to human sources, designing based on the changes, close cooperation with raw material suppliers, creating the continual quality rising, production just after receiving raw materials, completely flexible and responsible procedure, pithy environment, multi-expertise human source, high quality result meanwhile of less problem (Rahmati, 2007). Electronic banking is the necessity of survive and causes many changes

in electronic banking industry all over the world. Today, the banking services are provided in the least time just by a click and even client can choose among different sellers for their financial needs. As the electronic banking is a strategic tool for banks (Hassanzadeh, 2003). The electronic banking services are provided in different ways: electronic banking, domestic banking, mobile banking, ATM, POS, and internet banking (Nazemi and Mortazavi, 2005). It can be said that electronic banking provide all the banking services electronically and by a safe intermediators and there is no need to physical presence, and many services can be provided such as account info and balance inquiry, drafting, deposit, changing and paying bills based on timing and indexing. Electronic banking has many profits such as increasing clients and decreasing transaction expenses and banks could provide better services and maintain their market share. The profit of electronic banking can be assessed based on either client's or financial organization's point of view (Norris et al., 2001). What banks are providing as electronic services in Iran is a deficient copy of world modern banking because of lack of technical, legal, cultural structure. Lack of knowledge and information in the employees about electronic banking services is one of the serious challenges in our country. It can't be expected that the client is satisfied with modern services while the employees couldn't guide them in order to get better services and present proper services for them (Sorayayee et al., 2008). This paper is looking for a response to what is the effect of lean management on the electronic banking?

1.1. Theoretical Foundations

1.1.1. Electronic banking

One of the main factor and tools for expanding an electronic business is expanding electronic banking systems which work consistent with the global financial and monetary system and ease the electronic businesses. Actually, it can be said that electronic business implementation needs electronic banking. So electronic system is growing fast at financial organization all over the world and the numbers of electronic banking users are increasing rapidly. Iran is a young country on the electronic business and banking and has a long way to reach an acceptable position. Importing new technologies in these two filed, raises new needs in processing, exchanging data, tools, infrastructures and the method of providing modern banking services. By assessing the experience of developed

countries and growth of the electronic banking services, it can be anticipated the next needs and its increasing process properly (Bakhtiyari and Goodarzi, 2009). The electronic banking includes different kinds of communication canals between banks and legal and natural clients. Some of these services are the internet and web-based banking, mobile-based banking, phone-based, kiosk banking, fax banking, SMS banking, ATM banking, smart card banking etc. One of the main results of the internet and IT is electronic banking and it is going to be more important because of increasing financial transaction between countries. And some changes and innovations are needed in the banking systems in order to ease financial and economic transactions because human beings consistently want to find a simpler solution to do things.

Electronic banking provides some facilities for the personnel to increase the speed and efficacy of representing banking services at the branches and even transaction process between branches or banks all over the world and presenting hardware and software facilities for the client to do any banking transaction without physical presence at the bank, in any time of the day by a safe communicative canal. The electronic banking can decrease the government and client spending (Agarwalet al., 2009).

1.1.2. Safety in banking

Internet banking has been popular recently because it has created the faster, cheaper and more accessible ways to perform the activities in the web. Safety means keeping away the forbidden people to access the personal information and let the legitimate ones to access to the valuable property. The majority of bank's activities are associated with personal and important information of their clients. So the safety is very important. The users accept and trust in these kinds of electronic banking system if they look the system is safe; so the safety plays important role in their sense of security. The security policies, which are the subtitle of security aim and elements, include confidentiality, integrity, non-denial, confirmation and authenticity, accessibility control and profitability (Abbasinejad and Mehrnoosh, 2009).

1.1.3. Lean management

The global markets have been changing very fast in recent years. Globalization scud the markets of any country and the organizations have to compete not only with their domestic competitors but also with their international ones in order to maintain and

increase their share from the market. In addition, the fast growth of technology cause changes in willing of the clients and increase their expectation. The lean manufacturing leads the organizations to move through dangerous safety. The book "The machine that changes the world" by Womack and Jones which is the introducer of lean manufacturing in the west is one of the sources of operation management that have used as scientifically reference these years. The most important part of the lean manufacturing is omitting the wastage. In the lean manufacturing, the wastage means any goods, materials, services and process which do not produce value. Womack et al. define value as the ability to give the goods to the client as he/she expect and at the suitable time and price (Pan et al, 2009). The lean system is based on four principles: leadership, culture, structure and production which all of them focus on satisfaction, personnel, raw materials suppliers, stakeholders etc.

- Lean leadership: it finds the problems and informs others. It sets some goals to solve the problem by the help of others and then free others to find a solution for the problem.
- Lean culture: all of the personnel are aware of the perspective of the organization for the future and play a role in it. The perspective is based on clients' willingness and expectations.
- Lean structure: Flattening the organizational structure, cooperation between personnel far from duties and forming multi-purpose specialized teams.
- Lean manufacture: improving productions by omitting, supply chain management (Hajmohammad et al, 2013).

2. REVIEW OF THE LITERATURE

Goetsch and Davis (2014) wrote a book titled "Quality management for organizational excellence". It has been tried, in this book, to study the effective elements on client satisfaction based on lean approach considering three strategies of reducing the time and cost and increasing interest rates on deposits. And then with a multi-criteria fuzzy analytic network process, these elements are prioritized. Therefore, according to previous research on the services quality and client's satisfaction, finally, three elements of equipment, products, and human source are considered the main effective factors in the quality of services based on lean approach. And then the

hypothesis was developed. It is specified by the results of the mean test, the opinion of the experts, and the results derived from the SUPER DECISION software that the priority on the equipment section are equipment, modern technology, electronic services, number and place of the branches, physical facilities, interior design suitability, and the bank's working hours. In human source element, the priorities are work without hesitating and carrying out the work that has been promised to do, the knowledge and manner of personnel, the security of environment and appearance of personnel. In production element, the priorities are the provision of services in return for deposit, quality of services, the speed of granting facilities procedure, paying interest, a variety of deposits, and reduction of commission.

Rezghi Rostami et al. (2014) studied the client satisfactory with internet bank services; case study: Ghavamin Bank. In this study, the level of satisfactory of the client with internet services was measured regarding the importance of client satisfaction. In order to do that, the effect of five elements- fluency, applicable, security, awareness, profitable- on the client satisfaction is studied. The statistical society was Ghavamin internet bank clients and the questionnaire was collected among five branches of Ghavamin bank in Tehran. The results showed the connection between those elements and client's satisfaction and the priority of the elements affecting the satisfaction are easiness, user-friendly, informing, security, and profitability. At the end, based on the findings, it was offered to increase the internet bank services, improve the site in order to be faster, inform the clients about security system of the site, reducing transaction procedures, conducting a support section to solve the problems to increase the client's satisfaction.

Stevia et al. (2015) studied "the effect of internet bank on the operation of Romanian banks based on the two approaches of data envelopment analysis (DEA) and principal components analysis (PCA)" and declared that renovation in banking has affected remarkably the economics of EU countries since recent decades. Innovations in financial fields prepare a competitive environment among the banks. The aim of the survey is to study a solution under which innovation on the internet bank can provide application improvement in Romanian Bank. The efficiency level of each of the studied 24 banks was determined using data envelopment analysis and the banks were divided based on their efficiency into three separate

categories based on the principal components analysis. The result showed that just some of the banks use internet bank in order to increase the efficiency. So, this study included solutions and advice in this field.

Hicks (2007) studied lean thought in managing in a paper “the weakness of information management: understanding and omitting destruction”. He has surveyed a new approach supporting the development and improvement of information management. In this article, the interest of lean thought and the main obstacles in its application are mentioned. The concept of waste related to information management is described a conceptual base for lean thought in the form of information management is represented.

Gong et al. (2015) studied the “disambiguation of the advantages and risks resulting from the innovation in lean thought: a bank case study”. In this paper, a framework is made for understanding the lean thought approach. With this framework, the advantages and risks of lean approach were analyzed in a bank case study. The findings show

that the lean approach has many risks and advantages. The risks could be an obstacle on lean approach and exploit the benefits.

3. METHODOLOGY

The descriptive-survey method is used in this study and the data collected by the questionnaire. The statistical society was the management department and electronic banking of Ansar Bank. Non-random sampling was used based on judgment sampling. In order to collect the expert’s opinion and considering the huge number of experts, just 120 questionnaires have been distributed based on Cochran formula and 114 were filled and sent back them.

3.1. Questionnaire Validation

SPSS software was used in order to assess the questionnaire validity. Cronbach’s alpha was calculated .683 for first 10 questionnaires and 0.702 for the second.

4. RESULTS

Table (1): Matrix of Lean Management’s paired comparisons (criteria)

| | flexibility | Continual improvement | Multi-duty groups | Omitting Coalition | Information system | Zero deficiency | integration |
|-----------------------|-------------|-----------------------|-------------------|--------------------|--------------------|-----------------|-------------|
| Flexibility | 1.0 | 3.07692 | 1.187648 | 0.34800 | 3.90625 | 0.4209999 | 0.75099 |
| Continual improvement | 0.32500 | 1.0 | 3.076923 | 4.22833 | 3.731343 | 0.268000 | 2.710027 |
| Multi-duty groups | 0.84200 | 0.32500 | 1.0 | 0.2149999 | 0.7419999 | 0.8420003 | 3.731343 |
| Omitting coalition | 2.873563 | 0.23649 | 4.651163 | 1.0 | 0.236000 | 0.369000 | 0.7590000 |
| Information system | 0.256000 | 0.26800 | 1.347709 | 4.237288 | 1.0 | 0.357000 | 0.368000 |
| Zero deficiency | 2.375297 | 3.731343 | 1.187648 | 2.710027 | 2.80112 | 1.0 | 0.248000 |
| Integration | 1.331558 | 0.36900 | 0.268000 | 1.317523 | 2.717391 | 4.32258 | 1.0 |

Table (2): inconsistency rate index

| In consistency rate index | 0.41669 | |
|---------------------------|----------------------|---------------------|
| Name | Normalized | Non-normalized |
| Flexibility | 0.139566596818906 | 0.73077316780321344 |
| Continual improvement | 0.18497498666004622 | 0.96853229961116183 |
| Multi-duty groups | 0.10894625025894292 | 0.57044449199327134 |
| Omitting the coalition | 0.12410526294443781 | 0.6498173503552247 |
| Information system | 0.094291642095152006 | 0.49371270642838152 |
| Zero | 0.1909848403964 | 1.0 |

| | | |
|-------------|---------------------|---------------------|
| deficiency | 5183 | |
| Integration | 0.15713042082606313 | 0.82273766074777066 |

According to the calculations in consistency rate that is 0.41 and less than allowed rate is 1.32 in seven matrixes, so the answers are acceptable and compatible.



According to the above information, the best methods of lean management criteria based on the considered criteria are as follow:

1. Zero deficiency
2. Continual improvement
3. Consistency
4. Flexibility
5. Omitting coalition
6. Multi-duty groups
7. Information system

The mentioned decisions are made based on the level of welcome of lean management and the effect of each criterion (zero deficiency, continual improvement, consistency, flexibility, omitting

Table (4): Calculation of inconsistency rate

| inconsistency rate | 0.18701 | |
|--------------------------------------|---------------------|---------------------|
| Name | Normalized | Non-normalized |
| Setting the rules | 0.1649314524807266 | 0.29570300860603727 |
| Accountability to user's need | 0.55776048156636593 | 1.0 |
| Environment control | 0.27730806595290752 | 0.49718127245971194 |

Due to calculate the inconsistency rate which is 0.18 and it is under the allowed level, in three Matrix, it is less than 0.58; so the answers are in consistency and acceptable.



Regarding the obtained data, the best priorities among the chosen lean management criteria method are:

1. Accountability to user's need

coalition, multi-duty group and information system) on each other. So the priority of lean management variables in Ansar Bank was determined.

Table (3): pairwise comparison matrix under the criteria of flexibility

| | Setting the rules | Accountability to users' need | Environment control |
|-------------------------------|-------------------|-------------------------------|---------------------|
| Setting the rules | 1.0 | 0.4580000238 | 0.3840000 |
| Accountability to users' need | 2.183406 | 1.0 | 3.115265 |
| Environment control | 2.6041666 | 0.3209999791 | 1.0 |

2. Environment control
3. Setting the rules

The mentioned decision based on the level of welcome of lean management and the effect of each criterion (accountability to user's need, controlling environment, setting the rules) on each other. So the priority of lean management variables in Ansar Bank was determined.

Table (5): Pairwise comparison matrix under the continual improvement variable

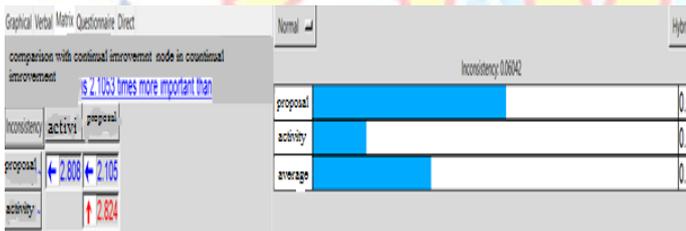
| | Percentage of the applied suggestions | Activities of different parts | Average of suggestions |
|---------------------------------------|---------------------------------------|-------------------------------|------------------------|
| Percentage of the applied suggestions | 1.0 | 2.808989 | 2.105263 |
| Activities of different | 0.3559999700 | 1.0 | 0.3539999695 |

| | | | |
|-------------------------------|--------------|----------|-----|
| sections | | | |
| Average of suggestions | 0.4750000356 | 2.824859 | 1.0 |

Table (6): inconsistency rate index

| | | |
|--|---------------------|---------------------|
| Inconsistency rate index | 0.06042 | |
| Name | Normalized | Non-normalized |
| Percentage of the applied suggestions | 0.52989301231236519 | 1.0 |
| Activities of different sections | 0.14691082213974699 | 0.27724619635698261 |
| Average of suggestions | 0.32319616554788783 | 0.60992720801792311 |

Due to 0.06 consistency rate which is less than allowed level, it is less than 0.58 in three Matrix trilogies. Therefore, the answers are consistency and acceptable.



Due to the information, the best priorities in continual improvement variables according to the considered criteria are:

1. Proposal used percentage
2. The average of proposal
3. Activities of different sections

5. CONCLUSION

Today, using the lean principles in the companies and organizations have led to remarkable results so that they could improve their efficiency with this solution. These companies could reduce their superfluous, waiting time, stock, delivery time and simultaneously with decrease in the price level, could increase the quality of their products. One of the other benefits of lean management is creating responsibility sense in the personnel. It doesn't mean responsibility in responsiveness to higher authority but to have a more freedom of action in their job. In this approach, personnel have more challenge on the production process and so they would use more innovations and learn more skills

and improve continually by group work. Ansar Bank can use the lean management and implement it in the organization and use the advantages of electronic bank such as increasing reputation in innovative services, maintain the client in spite of changing places, make the opportunity to attract new clients, expanding the geographical activities and creating a competitive environment and cause to bring more reputation and interest for the bank's brand. The result of this survey is similar in some extent with Nabipour(2012), hassanloo(2013), malekfar(2013), hajiebrahimi(2014), Vahabzadeh and Kalani(2014), Alaedin(2011), Zhengwei Ma(2012), Janet Wall sheltered Nvpvr(2010), Montazemi A.R et al. (2015), Nasri W(2012), Kristine K et al. (2014), Stevia et al. (2015), Hicks(2007), Hong& Janssen (2015), Hanafizadeh et al.(2015), Alina-Maria (2011), Acharya&Naqvi (2011), Surabhi and RenuArora (2011).

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