



Impact of lean practices on micro-finance institution's operational performance

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Abstract: Implementation of lean management in organization is vital in enhancing maximum performance in organization. As a result of this, the present study assesses the impacts of lean management in performance microfinance organizations. The research was conducted on fifty participants in three different microfinance firms. The data was analyzed using SPSS Version 23. The study revealed that lean management implementation in microfinance firms enhances performance in microfinance firms.

Keywords: lean management, microfinance, implementation.

1. Introduction

1.1 Background

The business concept of lean emphasizes on attaining the expectations of customers in the delivery of quality products at the least required cost. The lean principle of reverberating is cost reduction through continuous improvement. It is a methodological approach which is aimed at maintaining and improving the value of the customer through the identification and elimination of waste, which is either in terms of materials, efforts, or time. This is done through the continuous improvement through product flowing at the pull of the customer in perfection pursuit. Womack et al. (2002) stated that lean roots and concepts are based on foundational ideas which are dated back to the system of production identified as the ford production system. Terms of improvement of reduced cycle and working times, improved quality and reduced costs of work in progress can also be achieved.

A set of operations were established in the first instance and utilized in a consistent manner. This resulted in the production of more products in a short flow of time. The emphasis was later directed towards the flow of the product through the process of including the correct size, operations sequencing, and changeover rapidly. The lean

practices should be adopted by organizations for wastes elimination or reduction . They can be applied interchangeably in the organization manufacturing as well as the service industries.

The constraints theory influenced this study, which is identification methodology for the limiting factor which hinders the achievement of the results and then improves the constraints in a well-structured manner, thus ceasing the limiting factor. The most substantial future challenge for the microfinance sector is the understanding of the complexity increase of the systems of the future. Also, an increase in the number of varying products and services poses a challenge. Changes in technology also pose a challenge. New designs of methodologies are required in the microfinance sector; thus, new education concepts need to be introduced. The challenges are as a result of global competition. For customer satisfaction, various companies are forced to adapt to multiple approaches. Lean management Implementation is among the most adopted approach.

1.2 Problem statement

Lean adoption in the microfinance industry will lead to an increase in profits either directly through reduction of costs or indirectly through the improvement of productivity. A lot of organizations in the industries broad-spectrum have implemented lean management successfully. This has resulted in a reduction in costs and quality improvement. Quality improvement and cost reduction can be achieved through the adoption and implementation of lean management . The efficiency of the microfinance institutions operations involves the extent to which members and donors conform to the internal processes for the improvement of the member's lives. Operations management efficiency enables the micro-finance institutions to utilize the available resources for broadening the member's base, thus serving more people. The microfinance institutions are involved in the social enterprise funding and also in community uplifting . The sound lean management practices bring about the improvement of operational efficiency and also the increase in growth of lending and customer base.

Most of the previous studies mainly concentrated on the manufacturing organizations, thus failing to outline how the lean practices which can be implemented in the service industry. With the understanding of the efficiency and importance of operations management in an organization, the main question that comes up is the extent of the impact of lean practices in the operations of a service industry.

1.3 Research questions

In order to address the problem stated above, it is important for the research

questions to be considered, therefore being investigated and answered:

What is the impact of lean practices adoption in the operational performance of microfinance institutions?

What is the effect of the implementation of lean management to the microfinance institutions?

For the objectives to be met and the above research questions to be answered. This study will highlight the important ways through which improvement and implementation of lean management are viewed in the service delivery in microfinance institutions. This will explore the relationships of the initiatives of lean management improvement and its results.

1.4 Research objectives

The objective of this study is determining the impact of the adoption of lean management practices in the operational performance of microfinance institutions. This study is focused on expounding the concept of lean practice on the aspect of performance in the microfinance industry. The study will also carry out on the literature review and critiques of the implementation of lean practices in the microfinance institutions. The factors that are based on the service quality improvement concepts will be identified. A research methodology and design of research will be developed towards the gathering of data and the testing of the theory.

1.5 Research hypotheses

H1_a: The idea of lean management develops workflow optimizations and related functions which result in increased performance in microfinance organizations

H1_b: The notion of lean management does not enhance workflow optimizations and related functions which result in increased performance in microfinance organizations

H2_a: It is important for the employees in microfinance organizations to adhere to microfinance organizations' rules and guidelines to enhance organization performance

H2_b: It is not fundamental for the workers in microfinance organizations to follow microfinance organizations rules and guidelines to enhance organization performance

H3_a: Generally organizational performance defines the inclusive incorporation of lean management in microfinance institutions

H3_b: Normally, organizational performance does not have a role inclusive incorporation of lean management in microfinance institutions

H4_a: Grasping the microfinance products is crucial in realizing the organizational performance in incorporating lean management in microfinance organizations

H4_b: Understanding microfinance products is not fundamental in achieving organizational performance incorporating lean management in microfinance

organizations

H5a: The major factor in achieving maximum organizational performance in the implementation of lean management in microfinance institutions is the utilization of workforce

H5b: Workforce utilization has not role in achieving maximum organizational performance in the implementation of lean management in microfinance institutions

2. Literature Review

Lean management is a modern approach to running an organization that encourages the idea of continuous improvement Myerson, (2012). The long-term activity is undevoured to systematically realize continuous and incremental change purposely aimed at increasing efficiency and quality. This calls for the encouragement of sharing decision making and leadership responsibilities. The study further described lean management as a creative process that seeks to eliminate elements that lead to excess time, money, or effort. The process is initiated by an analysis stage of the business process to identify and eliminate steps that add no value for service delivery and customers.

2.1 History of lean management

The idea of avoiding waste has a history of management practices. According to Arnheiter, E.D. and Maleyeff, (2005), the modern standards and procedures of lean are modifications and extensions of the concepts by various players in the search for reduced wastage in operations and service management. The idea of Lean management is borrowed from Lean manufacturing in the Toyota Production System (TPS). The concept of Lean is said to have been coined together by John Krafcik in 1988 in his article "Triumph of the Lean Production System." The birth of lean was as a result of challenges that Toyota Motor Corporation as having, and this brought a solution that saw it being replicated and built upon all over the world. The study described the process in Toyota as that which majored on removing steps and processes that did not add value to the process and adjust their systems to ensure that work tasks were equally distributed and that no one arm of the manufacturing cycle was overburdened.

2.2 Lean application

Lean production (manufacturing) is the systematic method whereby waste is eliminated in the manufacturing process. This also includes waste created through the uneven allocation of workloads leading overburden and any event, work that does not add value. In this case, lean is the process or an action that can motivate a client to

pay for. The desire to reduce waste in the microfinance environment is long overdue, and this new way of thinking has proved sufficient for sustainability.

According to a study conducted by Ambe, 2014, it described lean management as a set of activities programmed to accomplish a production goal through the application of minimal capital inputs, activities in progress, and finished goods. Consequently, Cassell, Worley, and Doolen, (2006), in their study found it fitting to describe lean as a systematic removal of waste by the entire organization departments and sections in the value addition chain. In this study, Worley and Doolen described value chain as the whole process that results in the making of a product ranging from raw material to end product. Therefore, the two studies concurred that minimizing waste in microfinance management is critical for a lean-approach. Therefore, the aspect of continuous improvement of processes in microfinance to increase efficiency will boost value addition and customer satisfaction. This is because the entire purpose of lean is to ensure that services rendered to the customer are capable of attracting and retaining customers.

A study conducted by Bicheno and Holweng (2009), found that lean as a management idea should start to form the top. This will initiate the flow of the efforts and enable absorption of the concept in the entire entity. The study found that lean as a management idea cannot be effective if not implemented in the entire organization process chains. An example of the lean application area is the use of register, which is usually intended to accomplish a positive idea such as minimizing doubts Brun, (2011). In this case, the lean approach can assist in minimizing register without creating additional problems. According to Worley, & Doolen, (2006), a good application of lean management approaches is the outcome of mass production of cars, and this helped to increase profitability and affordability of the products.

Organizations are gaining competitive benefit from lean management practices. Organizations are enabled by such activities to perform better through minimization of waste and also, on a global scale, corporations are preferring lean management approach as compared to customary practices in obtaining optimized results. However, Poksinska, (2010, realized that most entities fail in the lean process due to poor organizational culture and adjustments due to changing environmental factors. The study observed that entities need to develop a workforce and relationships of support. This is due to challenges that may arise in the process of absorbing lean management and the adjustments that may be required. A study conducted by Shook (2010), also concurred with the idea by emphasizing an openness culture to create confidence which goes a long way in adopting new ideas and manage developments in innovations that will be in the process.

The concept of culture is believed to hold an organization together, and these

ideologies may be written or assumed to be true . The outcome of successful lean management is the manners in which the entities succeed in the day to day work or handle employees and other stakeholders. Further, the lean idea can be furthered by allowing freedom in management processes to encourage creative thinking. A study conducted by Pellerin, Tamayo, Moeuf, and Lelievre (2016) demonstrated that personnel responsibility in the organizational goals and mechanisms of allocating power and information flow in the management structure affects the organizational performance culture.

According to (Baines, Lightfoot, Williams, & Greenough, (2006), supply chain management involves factors such as locations, raw material source, manufacturing, inventory management, logistics, routing, and scheduling . This means that Lean management should incorporate features and ideas to minimize waste elimination, smooth operation, efficiency, and quality management. Measuring lean success is done by identifying primary lean indicators. This will optimize supply chain processes and avoid defects such as the Bullwhip effect.

The most important factor in examining the success of lean management is in financial terms, particularly in microfinance entities. Microfinance entities that use lean management approaches are known to have been allocating significant budgets directed towards the establishment of lean operations. This means that lean being the future paradigm of management requires to be resourced to get established .

A study conducted by Quesada-Pineda, and Madrigal (2013) observed that resources availability determines the level of innovations and enhancement that a micro finance entity can undertake. Various studies have backed this idea by highlighting that there exists a strong link between financial abilities and lean approaches absorption and retention in the industry . This means that the role played by financial prowess is notably key to the success of the lean implementation.

It is the objective of this study to focus on establishing whether lean management practices can be used in the entire microfinance setup. The study will investigate the application and challenges of lean management practices in microfinance environment and envisage to prove that the lean approach is the best practice.

3. Research methodology and techniques

3.1 Introduction

The validity and success of any research significantly depend upon the appropriate selection of research techniques. This study chapter sets out the research methodological consideration, data collection, and primary data. Based on Bryman perspective, the research onion can be applied in most research methodology's types and also can be used in various contexts . Additionally, the sample size and research

ethics were also considered.

3.2 Methodological considerations

3.2.1 Research philosophy

Based on the introduction and literature review sections, the overarching purpose of this research project is to investigate the impact of lean management practices in microfinance organizations in developing countries. Considering the objective of the study, positivism was designated as the project research philosophy. Positivism research philosophy always creates hypotheses that can be tested and enable explanations that are measured against accepted world knowledge. The hypotheses, in this case, were developed based on the research questions.

3.2.2 Research approach

The research approach employed in this study, is the quantitative approach. As the name suggests, the approach is based on the quantitative data; the approach holds various accepted statistical standards for the validity of the approach. The research approach is always informed by the positivist philosophy. This study intends to investigate the subjective viewpoints concerning lean management practices in microfinance institutions. Therefore quantitative approach was the most effective in this situation. Additionally, the respondents involved in the project are many, and the data was analyzed using SPSS.

3.2.3 Research strategy

In this study, the survey was adopted as the research strategy since the survey is associated with a quantitative approach. Via survey data collection techniques, primary data was obtained from the respondents or the participants this ensured that the quantitative approach was executed.

The main strengths of surveys are that they are capable of obtaining a dataset from large samples of the population. The strategy is well suited to gathering demographic data describing the composition of the sample. The survey is inclusive in the kinds of variables number that can be studied, need minimal investment to develop and administer, which is relatively easy for generalizing. Compared to other strategies like observational techniques surveys elicit information or data concerning attitudes that are hard to determine using conventional strategies. For the survey to be successful questionnaires were used. Questionnaires are usually logical and easy option to collect information from people. Although the questionnaires are hard to design, they are used in all contexts in the modern world.

3.3 Time horizon

In this research, the cross-sectional time horizon was functional. With this type of time

horizon, data have to be gathered at a particular time. Mainly, the cross-sectional are usually used for researches linking to a precise phenomenon at a certain point in time. The cross-sectional study often employs survey.

3.4 Data collection

The field study or research was carried on a sample of about 50 individuals. Data collection was administered using survey monkey. Survey monkey is termed as online survey development cloud-based software which was founded in 1999 by Chris Finley and Ryan Finley. First, the questionnaire was developed from the five hypotheses where hypothesis 1,2,3,4, and 5 generated five-question each, hypothesis 2 one question each. As in interview, questions in the questionnaire can be either open or also closed the questions can give participant multiple-choice questions from which the most appropriate statement is selected by the respondents. The layout of the questions in the questionnaire is an art in itself because if it is poorly laid, the respondents tend, for instance, to repeat the ticking of boxes in the same pattern. Given a choice to select a response on the scale of 1 to 5, the participants will opt for the middle point and usually tend to miss out subsections to questions.

Considering the above factors preparation of the questionnaire in this project involved a lot of expert advice in developing the questionnaire and ensuring all the information concerning the respondents needed was included and filled in. The preliminary structure of the questionnaire consisted of 10 questions. The design of the questionnaire was done by using the 5-point Likert

4. Results

The present study tested the impacts of implementing lean management in microfinance institutions to achieve maximum performance in microfinance organizations. As a result of this, five hypotheses (H1_a, H2_a, H3_a, H4_a, and H5_a) were tested. On the other hand, to comprehensively consider the factors that can enhance maximum performance in microfinance organizations alternative hypotheses (H1_b, H2_b, H3_b, H4_b, and H5_b) were considered. The hypotheses were tested using bivariate correlations in SPSS. Besides, descriptive statistics were also conducted to determine the mean and standard deviation of the data. Table 1 and Table present the results of the study. Table 1 represents descriptive statistics while Table 2 presents the correlation between dependent variables (LEANM1, LEANM2, LEANM3, LEANM4, and LEANM5) and independent variables (Gender, Age, PE1, PE2, PE3 and PE 4).

Table 1: Mean and standard deviation of the relationship between lean management implementation and performance in microfinance organizations

	Mean	Std. Deviation	N
Gender	1.2933	.45836	50
Age	3.3000	.97416	50
LEANM1	3.8780	1.02944	41
LEAM2	4.0000	.89443	41
LEANM3	3.8293	1.02231	41
LEAM4	4.2683	.80698	41
LEANM5	3.9756	.96145	41
PE1	4.0000	1.04881	41
PE2	4.2195	1.03712	41
PE3	4.0732	.98464	41
PE4	4.1951	1.03004	41

Table 2: Correlation between dependent variables and independent variables

		Gender	Age	LEANM1	LEAM2	LEANM3	LEAM4	LEANM5	PE1	PE2	PE3	PE4
Gender	Pearson Correlation	1	-.240	-.099	-.129	-.016	-.262	-.045	-.055	-.122	-.160	-.165
	Sig. (2-tailed)		.093	.536	.423	.919	.097	.779	.734	.448	.319	.303
	N	75	50	41	41	41	41	41	41	41	41	41
Age	Pearson Correlation	-.240	1	-.116	-.057	-.179	-.094	-.073	-.220	-.257	-.151	-.178
	Sig. (2-tailed)	.093		.470	.722	.264	.560	.651	.167	.104	.346	.266
	N	50	50	41	41	41	41	41	41	41	41	41
LEANM1	Pearson Correlation	-.099	-.116	1	.869**	.787**	.702**	.881**	.764**	.822**	.774**	.872**
	Sig. (2-tailed)	.536	.470		.000	.000	.000	.000	.000	.000	.000	.000
	N	41	41	41	41	41	41	41	41	41	41	41
LEAM2	Pearson Correlation	-.129	-.057	.869**	1	.711**	.589**	.843**	.800**	.862**	.852**	.895**
	Sig. (2-tailed)	.423	.722	.000		.000	.000	.000	.000	.000	.000	.000
	N	41	41	41	41	41	41	41	41	41	41	41
LEANM3	Pearson Correlation	-.016	-.179	.787**	.711**	1	.602**	.810**	.723**	.744**	.758**	.768**
	Sig. (2-tailed)	.919	.264	.000	.000		.000	.000	.000	.000	.000	.000
	N	41	41	41	41	41	41	41	41	41	41	41
LEAM4	Pearson Correlation	-.262	-.094	.702**	.589**	.602**	1	.621**	.620**	.615**	.604**	.687**
	Sig. (2-tailed)	.097	.560	.000	.000	.000		.000	.000	.000	.000	.000
	N	41	41	41	41	41	41	41	41	41	41	41
LEANM5	Pearson Correlation	-.045	-.073	.881**	.843**	.810**	.621**	1	.719**	.808**	.794**	.838**
	Sig. (2-tailed)	.779	.651	.000	.000	.000	.000		.000	.000	.000	.000
	N	41	41	41	41	41	41	41	41	41	41	41
PE1	Pearson Correlation	-.055	-.220	.764**	.800**	.723**	.620**	.719**	1	.896**	.872**	.856**
	Sig. (2-tailed)	.734	.167	.000	.000	.000	.000	.000		.000	.000	.000
	N	41	41	41	41	41	41	41	41	41	41	41
PE2	Pearson Correlation	-.122	-.257	.822**	.862**	.744**	.615**	.808**	.896**	1	.939**	.942**
	Sig. (2-tailed)	.448	.104	.000	.000	.000	.000	.000	.000		.000	.000
	N	41	41	41	41	41	41	41	41	41	41	41
PE3	Pearson Correlation	-.160	-.151	.774**	.852**	.758**	.604**	.794**	.872**	.939**	1	.922**

	Sig. (2-tailed)	.319	.346	.000	.000	.000	.000	.000	.000	.000		.000
	N	41	41	41	41	41	41	41	41	41	41	41
PE4	Pearson Correlation	-.165	-.178	.872**	.895**	.768**	.687**	.838**	.856**	.942**	.922**	1
	Sig. (2-tailed)	.303	.266	.000	.000	.000	.000	.000	.000	.000	.000	
	N	41	41	41	41	41	41	41	41	41	41	41

Based on the data, 50 respondents were included in the study. The standard deviations of variables indicate that standard deviations are close to the means of variables (Table 1). Therefore, the data is not spread out. However, only 41 participants were included in the bivariate correlation analysis of data since nine respondents did not fully completely questionnaires. Therefore, they were excluded from the study. Age and gender of the respondents negatively correlate with the variables of lean management and performance in microfinance (Table 2). Other variables positively correlate with each other (Table 2). The correlation significant of 2-tailed is at 0.01 level.

5. Discussion

The study aims at testing how the implementation of lean management affects performance in microfinance organizations. According to the results, lean management implementation in microfinance institutions enhance performance in microfinance institutions. This was established by the p-value or significant of correlation which was less than 0.05, indicating that the null hypotheses (H1_a, H2_a, H3_a, H4_a, and H5_a) are true. Furthermore, the study reveals that gender and age hardly influence the implementation of lean management in microfinance institutions to achieve maximum performance. As a result of this, alternative hypotheses (H1_b, H2_b, H3_b, H4_b and H5_b) were rejected. The incorporation of lean management in microfinance institutions results in achieving maximum performance.

The core of objective focuses on the assessment of organization performance and lean management implementation. Therefore, the comparison between the current study and the previous studies is vital in determining whether variables under investigation affect the lean management in Microfinance firms. According to Nyambu’s research, which was conducted on a microfinance firm, shows that organization performance had a substantial effect on the implementation of lean management in the banking industry . Nyambu’s study found a positive 0.620 correlation between organization performance and lean management program implementation . Furthermore, the previous studies indicate that leadership commitment in practicing; uploading and enhancing organizational values have a substantial impact on the breakthrough of the new initiatives led by that leadership . Previous studies reveal that active engrossment

of the team of leadership, the setting of goals, adherence to the standards of the organization, aligning operations of the executive with the objectives of the organization and working as a team is fundamental in lean management implementation in all industries.

Previous studies also found out that organization performance is crucial in carrying out all organizational activities. Researchers inferred that organization performance explains the network via which important information on the program of lean management implementation is exchanged. Studies show that affirming objective of the organization, which involves reminding workers the organizational strategy, mission, and vision is fundamental in lean management implementation. The studies reveal a solid positive correlation between lean management implementation and organization performance, recording a p-value of 0.570. Elements of organization performance that were found to influence the implementation of lean management include dynamic messaging, effective governance, the participation of stakeholders, decision making, hierarchical accountability levels, daily evaluation, and integrated communication.

6. Conclusion

This study is affected by the theory of restraints which is a methodology for recognizing the restricting factor which obstructs the attainment of desires outcome and the enhancing the two restraints in a well-ordered approach to the effect it stops to be restricting. When used in lean, it maximizes organization efficiency by getting rid of waste from the section of the system that is the biggest restraints on profitability. Queuing theory is also employed in the management of queues and waiting lines. This has enhanced organization performance by enhancing the speed of service delivery, therefore, getting rid of long lines. This has hugely enhanced consumer gratification, staffs morale, and lowered operation cost. The new theory is a knowledge-based view, which identifies that knowledge is the most crucial resource in an organization. Firms can guarantee the knowledge is leveraged and transferred within it, therefore, guaranteeing continuity.

The correlation analysis was further employed to examine the direction of the relationship that existed amongst the dependent and independent variables. The coefficient of determination value obtained was 0.8. This shows that around 80% of the disparity observed in operation is described by the variables in the study. This likewise translates that just 11.8% of the disparity observed in operation performance of MFIs is described by additional variables which are not in the model. The correlation was crucial as the p-value was less than 0.5. Moreover, the model coefficients gotten revealed that all variables had a substantial positive relationship with organization

performance. .

The comparison of the present results with the findings of the previous studies indicates the current findings are in agreement with the results of the early studies. This is confirmed by the research of Nyambu. Nyambu's study shows that organization performance affects lean management in microfinance firms. On the other hand, early researchers found out that organization performance was crucial in the lean management implementation in processing industries. Specifically, organization performances are important in planning, directing, and formulation of organizational activities aiming at embracing lean management implementation. The organization performance strategies which it applies in disseminating its roles are fundamental in establishing the success of lean management implementation. For instance, organization performance factors, as described above, were the determinants in achieving lean management implementation. The current research concludes that a solid commitment by top management of an organization in embracing a lean management system is essential in lean management implementation in the microfinance firm.

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