



## **INFLUENCE OF CULTURAL DIMENSIONS ON LEAN IMPLEMENTATION OF THE BANKING SECTOR IN SRI LANKA**

*Jayashi Silva*

*London Metropolitan University*

### **Abstract**

The research study identifies the influence of the organizational cultural dimensions on lean implementation with regard to Commercial Banks in Sri Lanka. The research papers in existent to cater to the relationship and impact of organizational culture on lean implementation in the Banking Sector are highly scarce and almost none in Sri Lankan Banks. As there is an inclination towards Banks adopting a lean culture where already four major private commercial banks have commenced, it is imperative to have proper research to implement lean in a beneficial manner. Accordingly, the research was carried out to bridge the gap and the research methodology used for the same was, a cross-sectional survey data collected from the four commercial banks in Sri Lanka that have already implemented lean concepts based on the four organizational cultural dimensions of Denison's Model: Adaptability, Mission, Involvement, and Consistency to understand the correlation and its success. Results revealed a positive relationship between the organizational cultural dimensions where the higher adaptability, mission, involvement and consistency dimensions, the success of the lean implementation at the Bank was advanced. Hence the research contributes to bridging the gap of an empirical study on the impact of lean implementation and culture relating to private commercial banks in Sri Lanka as an evaluation for current lean practices implemented by Banks as well as provides insights for other banks and service sector industries to adopt lean practices without a failure. The study also reveals that the banks should deploy a comprehensive, positive approach to organizational culture to enhance the performance of the banks through lean concepts.

### **Keywords:**

Lean Implementation, Organizational Culture, Commercial Banks in Sri Lanka

\* *Corresponding Author:* jayashisilva@gmail.com



## INFLUENCE OF CULTURAL DIMENSIONS ON LEAN IMPLEMENTATION OF THE BANKING SECTOR IN SRI LANKA

### INTRODUCTION

Both academics and practitioners all over the world have been aroused by the positive results in performance achieved through the successful implementation of lean principles (Nawanir et al., (2013). However, according to Losonci et al., (2017), and Samuel et. al (2015), not all such lean implementations conclude with expected outcomes. The mismanagement and /or ignoring of the cultural environment can be a key reason for such failure (Weingarten (2015) (Losonci et al., (2017). Further as explained by Asnan et al., (2015), the implementation of the lean manufacturing concept in the service sector will expand benefits to the service sector only if it is transmitted successfully according to the nature of the service environment which has its own seated culture.

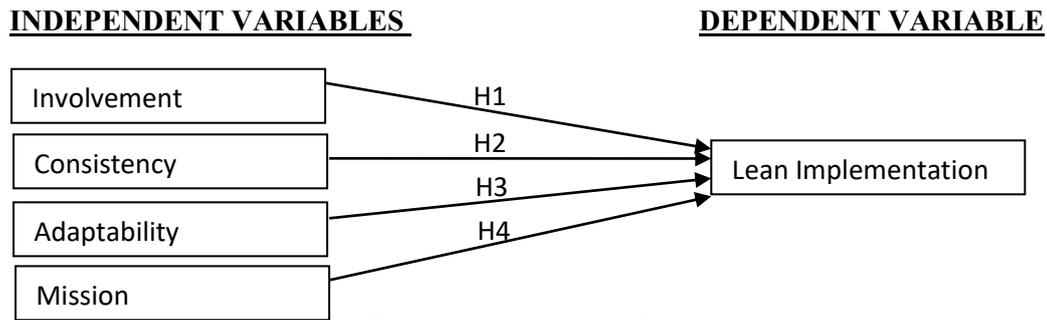
Empirical research is a requirement to get a better understanding of the existing cultures and their impact on lean implementation on an employee perception (Cadden et al., 2020). The research carried out by Dorval et al.,(2019) shows that lean methods are not always successful when implemented and that country culture is one of the contextual elements that may explain why. Accordingly, the author will contribute to address the problem of limited research on the subject and further will focus on the local banks that commenced and banks that intend to commence to reap the relevant benefits in a Sri Lankan context. Currently, there is no research available to investigate the influence of cultural dimensions namely Adaptability, Mission, Involvement, and Consistency on lean implementation in the banking sector of Sri Lanka hence the same has been identified as the research problem in providing empirical research.

The general objective of the study is to examine the impact of cultural dimensions on lean implementation to provide better insights to the Banking Sector especially in Sri Lanka on successfully adopting lean practices and gaining actual productivity within the bank without failure. Accordingly, the research was carried out to identify specific objectives of the influence of the lean implementation has on organizational cultural dimensions based on Denison's model namely Adaptability, Mission, Involvement, and Consistency.

Kokina and Ostrovska (2013) state that "Involvement" occurs when workers "sense that their activities are linked with the objectives of the organization; are empowered to make decisions; are encouraged to work together, and are given priority in the effort to develop their skills and abilities as a quantitative study. Therefore, the research will look at empowerment, team orientation, and competence development as three primary qualities for engagement/involvement to analyze its impact on lean implementation. Further, it is stated that a high level of integration and coordination results in a stable structure where "Consistency" plays a major role. To be "adaptable", as stated by Denison et al.,(2012), a group must have a set of core values and beliefs that allow it to take cues from its external environment and transform them into sustainable, progressive ways of behaving within the group. As stated by Al-najem et al.,(2012), it has been determined through a review of relevant literature that Toyota is led by a very strong mission with well-defined responsibilities and values and is internally consistent in pursuing its key goals. Since these dimensions have not been tested in Sri Lanka, the research questions were derived as follows;

- What is the influence of the involvement cultural dimension on lean implementation?
- What is the influence of the consistency cultural dimension on lean implementation?
- What is the influence of the adaptability cultural dimension on lean implementation?
- What is the influence of the mission cultural dimension on lean implementation?

Accordingly, the following conceptual framework was developed.



*Figure 1 - Conceptual Framework*

Accordingly, the hypothesis development was as follows.

#### Hypothesis 01

H1: There is a relationship between involvement in cultural dimension and lean implementation.

H0: There is no relationship between involvement in cultural dimension and lean implementation.

#### Hypothesis 02

H2: There is a relationship between consistency cultural dimension and lean implementation.

H0: There is no relationship between consistency cultural dimension and lean implementation.

#### Hypothesis 03

H3: There is a relationship between the adaptability of cultural dimensions and lean implementation.

H0: There is no relationship between the adaptability cultural dimension and lean implementation.

#### Hypothesis 04

H4: There is a relationship between the mission cultural dimension and lean implementation.

H0: There is no relationship between the mission cultural dimension and lean implementation.

The research was carried out to bridge the gap and provide an empirical study on the culture of private commercial banks that currently practice lean processes to understand the influence of lean implementation processes for other banks and service sector industries to adopt the lean concepts without a failure as well as an audit for existing banks.

## METHODOLOGY

The design of the research is built as per the research onion concept proposed by (Saunders et al., 2016).

Accordingly, as per the last audited annual reports of the four banks who have implemented the lean concepts, there are a total of 8,085 employees attached to the Western Province which was taken as the target population for the study. Therefore, the sample size as per Krejcie Morgan table with a 5% certainty interim was 370. The sampling technique used to handle the collection of data was through a non-random judgmental technique where through judgment; the author selected specific units to be included in the sample (Lohr, 2022). The study was carried out with a positivist philosophy and a deductive approach with a survey strategy where a structured questionnaire with 22 close-ended questions was distributed in a cross-sectional time horizon to ascertain the cultural influence namely involvement, adaptability, mission and consistency via electronic media using Google Forms. Pre-determined questions covering the four hypothesis were given to participants to ensure reliability and validity.

To collect the data for the research study and test the hypothesis, a questionnaire with a five-point Likert Scale was used which was distributed among the employees of the selected four banks. The data were analyzed using SPSS Statistical Software.

## RESULTS AND DISCUSSION

The data collected through the survey questionnaire was statistically analyzed utilizing the IBM SPSS version 28 and descriptive and Inferential Statistical Analysis was carried out for the data analysis.

The Cronbach's alpha was calculated for all the variables and the result derived was 0.942 which denoted excellent internal consistency hence the research questionnaire results were reliable for further proceedings. To test the validity, the Pearson correlation of the total of variables with each variable was carried out and all the questions were depicted as valid as the significant value ( $p$ ) was  $< 0.001$  which is below the significance level of 0.05.

Reliability Statistics	
Cronbach's Alpha	N of Items
.942	22

Table 1 - Summary of Reliability Test

As per the descriptive analysis, all independent variables namely involvement, consistency, adaptability and mission organizational cultural dimensions had a mean, mode and median of 4 or closer to 4 which implied that the sample employees agreed to the statement which reflected a relationship between lean implementation as per the below depicted table.

Independent Variable				
Description	Mean	Median	Mode	Standard Deviation



1. Involvement	3.8194	3.8333	3.83	0.61574
2. Consistency	3.6135	3.7500	4.00	0.69475
3. Adaptability	3.6615	4.0000	4.25	0.70382
4. Mission	3.8689	4.0000	4.25	0.68574
<b>Dependent Variable</b>				
Lean Implementation	4.3811	4.5000	5.00	0.73024

Table 2 - Summary of Descriptive Statistical Analysis

The Inferential Analysis was carried out to determine the level of the direction of the linear relationship between independent and dependent variables through a two-tailed, Bivariate Pearson correlation, and a positive relationship between all four variables was noted. The chi-square test was carried out to test the hypothesis and establish the independency between two variables and a significant relationship existed between the lean Implementation and organizational cultural dimensions measured.

Description	Pearson Correlation	Remarks	Chi-Square	Remarks	The rank of the Factor
Mission with Lean Implementation	0.626	Strong Positive Relationship	<.001	Alternative Hypothesis Accepted	1
Adaptability with Lean Implementation	0.494	Moderate Positive Relationship	<.001	Alternative Hypothesis Accepted	2
Consistency with Lean Implementation	0.451	Moderate Positive Relationship	<.001	Alternative Hypothesis Accepted	3
Involvement with Lean Implementation	0.353	Moderate Positive Relationship	<.001	Alternative Hypothesis Accepted	4

Table 1 - Summary of Inferential Statistical Analysis



## CONCLUSIONS/RECOMMENDATIONS

The results indicate that the employees of the banks who have implemented lean agree with the statements which conclude that the involvement, mission, adaptability, and mission organizational cultural dimensions do have an impact on lean implementation as per Table 3 depicted above where the null hypothesis was rejected and alternative hypothesis were accepted through chi-square.

The first objective of the study was to identify the influence of involvement the organizational cultural dimension has on lean implementation at the bank. Three attributes namely empowerment, team orientation, and capability development were listed under the main independent variable. Accordingly, through the mean, median, and mode values being 4 as depicted in Table 2 and further through the standard deviation being less than 1, it is evident that most of the respondents agree on the attributes. Further through the Pearson correlation value as depicted in Table 3, it was identified that the relationship was moderately positive, and through the chi-square test, the null hypothesis was rejected confirming the positive relationship between the lean implementation and involvement in organizational cultural dimension.

The second objective of the study was to identify the influence of consistency organizational cultural dimension on lean implementation at the bank. Three attributes namely core values, agreement, and coordination and integration were listed under the main independent variable. Accordingly, through the mean, median, and mode values being 4 or closer to 4 and further, through the standard deviation being less than 1, it is evident that most of the respondents agree on the attributes. Further through the Pearson Correlation Value, it was identified that the relationship was moderately positive, and through the chi-square test, the null hypothesis was rejected confirming the positive relationship between the lean implementation and consistency organizational cultural dimension.

The third objective of the study was to identify the influence of adaptability organizational cultural dimension on the lean implementation at the bank. three attributes namely creating change, customer focus, and organizational learning were listed under the main independent variable. Accordingly, through the mean, median, and mode values being 4 or closer to 4 and further through the standard deviation being less than 1 or closer to 1, it is evident that most of the respondents agree on the attributes. Further through the Pearson correlation value, it was identified that the relationship was moderately positive, and through the chi-square test, the null hypothesis was rejected confirming the positive relationship between the lean implementation and adaptability of the organizational cultural dimension.

The fourth and final objective of the study was to identify the influence of the mission organizational cultural dimension on lean implementation at the bank. Three attributes namely strategic direction and intent, goals and objectives, and vision were listed under the main independent variable. Accordingly, through the mean, median, and mode values being 4 or closer to 4 and further, through the standard deviation being less than 1, it is evident that most of the respondents agree on the attributes. Further through the Pearson correlation value, it was identified that the relationship was moderately positive, and through the chi-square test, the null hypothesis was rejected confirming the positive relationship between the lean implementation and mission organizational cultural dimension.



Hence it is inferred, that in order to implement lean in a successful manner, the organization should commence with generating an organizational vision, mission, and objectives that are aligned and focused with lean concepts. The strategies should be set aiming to inculcate a lean culture within the organization based on the hypothesis accepted on the mission cultural dimension. It is further inferred to conduct frequent awareness programs and training sessions to improve employee skills and knowledge paving the way to empower them in taking forth the lean practices within the organization. Consisting of sound rewards and promotion schemes for lean managers will be recommended to promote a lean culture that will reap the actual benefits from the lean implementation for the organization rather than imposing management theories.

## REFERENCES

- Al-Najem, M., Dhakal, H., & Bennett, N. (2012). The role of culture and leadership in lean transformation: a review and assessment model. *International Journal of Lean Thinking*, 3(1), 119-138.
- Asnan, R., Nordin, N., & Othman, S. N. (2015). Managing change on lean implementation in service sector. *Procedia - Social and Behavioral Sciences*, 211, 313–319. <https://doi.org/10.1016/j.sbspro.2015.11.040>
- Bortolotti, T., Boscari, S., & Danese, P. (2015). Successful lean implementation: Organizational culture and soft lean practices. *International Journal of Production Economics*, 160, 182–201. <https://doi.org/10.1016/j.ijpe.2014.10.013>
- Cadden, T., Millar, K., Treacy, R., & Humphreys, P. (2020). The mediating influence of Organisational Cultural Practices in successful lean management implementation. *International Journal of Production Economics*, 229, 107744. <https://doi.org/10.1016/j.ijpe.2020.107744>
- Denison, D., Hooijberg, R., Lane, N., & Lief, C. (2012). *Leading culture change in global organizations: Aligning culture and strategy*. John Wiley & Sons.
- Dorval, M., Jobin, M.-H., & Benomar, N. (2019). Lean culture: A comprehensive systematic literature review. *International Journal of Productivity and Performance Management*, 68(5), 920–937. <https://doi.org/10.1108/ijppm-03-2018-0087>
- Kokina, I., & Ostrovska, I. (2013). The analysis of organizational culture with the Denison model. *European Scientific Institute, ESI (publishing)*, 362.
- Losonci, D., Kása, R., Demeter, K., Heidrich, B., & Jenei, I. (2017). The impact of shop floor culture and subculture on lean production practices. *International Journal of Operations & Production Management*, 37(2), 205–225. <https://doi.org/10.1108/ijopm-11-2014-0524>
- Maduwanthi, R., & Morawakage, P. (2019). Impact of liquidity risk on the performances of Sri Lankan commercial banks. *Sri Lanka Journal of Social Sciences*, 42(1), 53-65. <https://doi.org/10.4038/sljss.v42i1.7572>
- Nawanir, G., Kong Teong, L., & Norezam Othman, S. (2013). Impact of lean practices on operations performance and Business Performance. *Journal of Manufacturing Technology Management*, 24(7), 1019–1050. <https://doi.org/10.1108/jmtm-03-2012-0027>



Samuel, D., Found, P., & Williams, S. J. (2015). How did the publication of the book *the machine that changed the world* change management thinking? exploring 25 years of Lean Literature. *International Journal of Operations & Production Management*, 35(10), 1386–1407. <https://doi.org/10.1108/ijopm-12-2013-0555>

Saunders, M., Lewis, P. and Thornhill, A. (2016). *Research methods for business students*. 7th ed. Harlow, Essex, England: Pearson Education Limited.

Wiengarten, F., Gimenez, C., Fynes, B., & Ferdows, K. (2015). Exploring the importance of cultural collectivism on the efficacy of Lean Practices. *International Journal of Operations & Production Management*, 35(3), 370–391. <https://doi.org/10.1108/ijopm-09-2012-0357>