IMPACT OF 5S ON BUSINESS PERFORMANCE THROUGH LEAN MANAGEMENT AND BLUE OCEAN LADERSHIP IN THE INDONESIAN MANUFACTURING INDUSTRY

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Abstract

Business competition in the manufacturing sector is increasingly high and unpredictable. Tight investment in capital and human resources requires companies to ensure 5S practices, the basic concepts of Japanese culture and lean management need to be applied to improve business performance in Indonesia, especially at PT. Manufacturing. This research uses a PLS-SEM approach. A total of 85 respondents were in division head positions. The research results show that 5S has no direct or indirect influence on business performance. The results show that lean management and blue ocean leadership do not have a mediating effect between 5S and business performance. Blue ocean leadership has not been implemented optimally by the leadership, so performance has not met expectations. Contribution of researchers to PT. Manufacturing helps top management in companies implement and execute 5S well in the company. The second contribution concerns the need to improve lean management in the pull system.

Keywords: 5S; lean management; blue ocean leadership; manufacturing companies; business performance

Article Info

INTRODUCTION

Increasing challenges in global competition encourage manufacturing companies to adopt new manufacturing management tools to increase company efficiency and competitiveness (Singh et al., 2020). Lean management was adopted by several manufacturing companies as a management tool and applied in various forms (Sadiq et al., 2021) for example Toyota Manufacturing Company adopts just-in-time, Nissan Motor Co and Honda Motor Co adopt lean management for production efficiency and reduce costs (Pachpande, Pachpande and Kulkarni, 2022). The Lean management concept was introduced by Toyota in the 1950s, at which time it was known as the Toyota Production System (Dave, 2020).

5S (Seiri, Seiton, Seiso, Seiketsu, Shitsuke) (Vargas et al., 2023).The historical roots of 5S are in Japanese culture consisting of the principles of Shinto (purity of heart), Buddhism (order), and Confucianism (self-discipline), and the ethical values of Samurai philosophy. The 5S model was formulated by Nagata

Takashi (1991) and is based on five pillars (Perdomo-Verdecia et al., 2022): (1) Seiri (organizing) is distinguishing useful things from useless things, keeping what is useful and throwing away what is useless. (2) Seiton (neatness) examples include labeling and arranging useful objects in a way that makes them easy to find and safe. (3) Seiso is cleaning the work area and surrounding objects to keep them clean. (4) Seiketsu is standardization to maintain a clean work environment which is a work standard. (5) Shitsuke is discipline in work. To achieve maximum results, the implementation of 5S must be followed by improvement activities. Basically, 5S activities aim to help employees detect all types of abnormalities in machines and their environment, making it easier to solve problems and make improvements in their respective work areas. A Japanese company that has implemented 5S into its corporate culture is Toyota Production System (TPS). The goal is to establish standardization and avoid waste. 5S is the entry point to realizing good results (Moore & Webster-Edge, 2023) improving business performance (Vargas et al., 2023). Lean management can be implemented well (Firmansyah & Maemunah, 2021) and innovation improves working conditions and improves business performance (Hermansyah et al., 2024; Yuliantini & Maemunah, 2023). Some studies show that 2-3 percent of companies that implement lean management achieve the desired level of success. Many factors are indicated in the literature as to why organizations fail to sustain lean management implementation (Maemunah & Cuaca, 2021). Define organizational culture as a system of beliefs held by members of an organization, including ways of working, traditions, and acceptable methods for achieving goals. Companies create organizations that reflect their beliefs and values (Teboul & Damier, 2023).

Cultural factors and core values, as well as leadership factors, are some of the key factors that cause the failure of lean management implementation (Bhat et al., 2023). For example, employees who are used to old ways of working often feel uncomfortable with new processes and refuse to adapt—lack of employee commitment. Lean management requires active participation from employees at all levels. If the company culture does not encourage collaboration and engagement, it is difficult to implement lean initiatives effectively (Maemunah et al., 2021).

Leadership as a key element in implementing Lean management (Perdomo-Verdecia et al., 2022), leaders who do not have knowledge related to Lean will have difficulty leading a team and ensuring implementation is running. However, leadership involves behaviors and traits that are not easy to change (Maemunah & Nekrasov, 2023), leaders who fail to integrate Lean practices into the organization's operational strategy and culture will have difficulty achieving sustainable change or may take a long time. Blue Ocean Leadership (BOL) theory highlights that leaders can focus on activities to make changes in leadership. Unlike most research in the field of leadership which is largely based on psychology and cognitive science. BOL is a strategy to inform leadership practices in business (Peimbert-García et al., 2019).

The leadership of an organization operating in the manufacturing sector continues to feel strong pressure from competitors and customers due to increasing expectations due to the rapid growth of innovation (Maemunah et al., 2023). Leadership involves behaviors and traits that are not easily changed customers (Hurriyati et al., 2024) due to increased expectations due to the rapid growth of innovation (Maemunah, 2019) especially in the 4.O industrial era (Kuehnel & Au-Yong-oliveira, 2022). Organizations cannot just remain silent if they do not want to be left behind in increasingly extreme global competition. The implementation of 5S, Lean Management (LM) and BOL is expected to be able to provide rapid changes in the manufacturing environment (Vargas et al., 2023) so that it will result in consistent improvements in business performance dimensions such as increased productivity, good quality, guaranteed delivery, ending waste and optimizing costs to achieve satisfaction, customers and trust in manufactured products (Suhardiman et al., 2024).

The first study was conducted by (Liu et al., 2024) to optimize resources, minimize energy consumption, and achieve zero waste in the production process, to reduce the production costs of the entire system (Yulianti et al., 2023). This is increasingly being implemented. This study systematically reveals the impact of lean strategy on the financial performance of Chinese SMEs (Rahmatullah & Sutiono, 2024) and categorizes lean strategy into two components (Bachmid et al., 2023): inventory reduction and operational reduction, which have a significant impact on SMEs. You want to reap the benefits of lean strategies from your implementation. The second research was carried out by (Moore & Webster-Edge, 2023) implementing 5S to increase efficiency and profit.

The third study (Loh & Mohd Yusof, 2020) investigates the mediating effect of Blue Ocean Leadership (BOL) activities between lean manufacturing (LM) practices and firm performance. The results provide evidence that LM practices have a positive and significant impact on company performance. Understanding lean, especially leaders, in making better decisions in manufacturing and service organizations. Thus, increasing staff motivation and engagement ultimately contributes to company performance (Nisa Romadhani et al., 2022; Sarman & Kartika, 2023). This study has a gap with previous research, namely the focus on competitiveness in the manufacturing sector is unpredictable so it is necessary to adopt 5S, the basic concept of Japanese culture and lean to improve manufacturing performance in Indonesia (Antono et al., 2023; Ramdan, 2023).

METHOD

The research method used is a quantitative method, the data analysis method is PLS SEM, testing the relationship between variables in the research model (Kuehnel & Au-Yong-oliveira, 2022). This research uses non-probabilistic sampling techniques, using a purposive sampling method to select samples based on certain criteria, where respondents are selected based on subjects to measure the variables in the research (Colicchia et al., 2017). Respondents are employees with positions at the level of team leader, foreman, supervisor, department head, division head. Consideration of respondents' knowledge of the variables being measured underlies the selection of job levels that will be used as sample respondents (Hair et al., 2019). Apart from positions, employee departments or work lines are also selected based on certain departments which are closely related to the implementation of 5S, lean management, blue ocean leadership and understanding business performance. The related departments are Production, Production Control & Logistics, Quality, Maintenance, Import Export Components and finally Production Engineering.

This research carried out data processing using Smart PLS 3.29 software (Hair et al., 2019) SmartPLS has the advantages of being able to be used for primary and secondary data, small data samples, for non-normal data distribution, easy to use and interpret. The data processing stages are: first, testing the validity and reliability of the outer model; Second, testing the validity and reliability of the inner model, and in the final stage, testing the hypothesis using bootstrapping. From testing the validity and reliability of the outer model, AVE, Cross Loading, and Cronbach's Alpha, Composite reliability values will be obtained; Meanwhile, from testing the inner model, R2 and Q2 values will be obtained to see Goodness of Fit (GOF) (Siti Maemunah, 2022).   Questionnaires will be given to respondents to obtain information from the company regarding business performance (Liu et al., 2024) its relation to the implementation of 5S, Lean Management and Blue Ocean Leadership in the company (Lai et al., 2022). Top management commitment will ensure the successful implementation of 5S in the production, production and logistics control, quality, maintenance, import/export of spare parts, and production engineering departments in terms of decision making, implementation of organizational goals, and improvement of company performance (Piwowar-Sulej & Iqbal, 2024). 5S is basically oriented towards economic sustainability, namely production efficiency through machine efficiency. Implementing Lean Management helps efficiency by eliminating non-value-added activities to increase operational efficiency.

This questionnaire has three parts: first, relating to the demographic information of the respondents; second, contains latent variables related to 5S activities, Lean Management, Blue Ocean Leadership and business performance (Debnath et al., 2023). The questionnaire used a Likert scale of 1-5, 1-5 with a value of 1 = strongly disagree; 2=disagree; 3=undecided; 4=agree; 5=strongly agree. The 5S variable is a measure that states the level of 5S implementation at PT. Manufacturing. This variable consists of Top Management Involvement, Employee Involvement Initiatives, 5S Basic Initiatives, Shitsuke. Questions related to the 5S variable are presented in Table 1.

Table 1. 5S Variable Questions

No.	Variable	Indicator	Reference
1	Top Management Involvement (TMI)	**TMI1.** Management provides resources to support the 5S - Kaizen - Continuous Improvement initiative	(Albliwi et al., 2017)
		TMI2. Management has communicated and educated its employees about the company's mission statement and strategy	
		TMI3. 5S practices have been included in the company's strategic plan	
		TMI4. Management has demonstrated the business vision, strategy and implementation plans to employees	
		TMI5. Management has implemented 5S - Kaizen - and quality policies	
		TMI6. Management has demonstrated its willingness to adapt 5S principles throughout the organization.	
2	*Employee Involvement Initiatives (EII)*	**EI1.** Training is provided to employees on 5S and other quality control tools to understand/solve problems	(Moore & Webster-Edge, 2023)
		EI2. Employee skills are consistently evaluated and efforts are made to improve skills over time	
		EI3 Employees need to receive training on sustainable 5S principles	
		EI4. Employees are motivated to participate in program 5S, Lean, efficiency, quality improvement	
		EI5. Emphasis is placed on achieving multi-skill employees within the organization	
3	*Basic 5S (BFS)*	**BFS1.** Employees can provide feedback for 5S and propose improvements based on work experience to improve the effectiveness of 5S.	
		BFS2. 5S policies and objectives are understood and implemented at all levels in the organization	
3	Basic 5S (BFS)	**BFS3.** Employees play a role in the implementation and assessment of 5S practices, responsible for implementing those principles within the division to ensure the sustainability of 5S. improve the achievements of 5S implementation	(Pham et al., 2022)
		BFS4. Management monitors 5S progress, as an evaluation for future improvements	
4	5th S (Shitsuke) (FSS)	**FSS1.** Shitsuke has absorbed the voluntary habit of wearing a helmet/gloves/shoes, etc.	
		FSS2. Shitsuke has effectively solved the problem of tools and jigs not being returned to their designated places	
		FSS3. Shitsuke has facilitated to improve communication between employees in the organization	
		FSS4. 5S has improved the aesthetic appearance of the workplace	
		FSS5. 5S has established the realization of expected organizational quality norms	
		FSS6. Shitsuke has helped in improving team performance and Kaizen schemes in the work area.	

The Lean Management variable shows how much Lean Management is implemented in a company, which includes the Pull system, Total Productive Maintenance, Statistical Process Control, Single Minute Exchange of Dies, Visual Management & Production Leveling. Questions related to the Lean Management variable are shown in Table 2.

Table 2. Lean Management Variable Questions

No.	Variable	Indicator	Reference
1	Pull system (PS)	**PS1.** Production is adjusted from the delivery scheme to the customer (cycle delivery)	(Martins et al., 2021)
		PS2. Production in each work shop is drawn from the next customer's request	
		PS3. Companies use kanbans, signal boxes or bins for production control	(Pansare et al., 2021)
		PS4. Companies use a pull system to control production rather than a pre-prepared schedule	
2	Total Productive Maintenance (TPM)	**TPM1.** The company maintains all equipment regularly	(Oroye et al., 2022)
		TPM2. The company keeps records of all equipment maintenance activities	
		TPM3. The company ensures the readiness of machines for production at all times	
		TPM4. Operators are trained to maintain their own machines	
3	Statistical Process Control (SPC)	**SPC1.** Graphics showing defects are used as tools in the work area	(Chaitanya et al., 2024)
		SPC2. Companies use diagrams such as cause and effect (fishbone) to identify the causes of quality problems	
		SPC3. Companies conduct process capability studies before product launch	
		SPC4. Companies use statistical techniques to reduce process variance	
4	Single Minutes Exchange of Dies (SMED)	**SMED1.** The company is working to shorten setup time	
		SMED2. The company has a short setup time for equipment	
		SMED3. Operators perform their own machine adjustments	
		SMED4. Operators are trained on machine setup activities	
5	Production Leveling (PL)	**PL1.** Companies combine production on the same machines and equipment	(Pansare et al., 2021)
		PL2. The company emphasized the need for accurate forecasting to reduce variability in production	
		PL3. Each product is produced in relatively fixed quantities per production period	
		PL4. The company emphasizes the need to equalize workload in each production process	
		PL5. Companies produce by repeating the same product combinations	
		PL6. The company always has buffer stock for each product model to respond to variations in customer demand	

The Blue Ocean Leadership variable shows how big a leader's role is in a company, which includes Empower & Coaching Oriented, Two-way Effective Communication, Motivation & Genba-Kaizen. Pujianto et al. (2023) shows that two-way communication is effective in showing employee engagement and increasing organizational productivity. Questions related to the Blue Ocean Leadership variable are presented in Table 3.

Table 3. Blue Ocean Leadership Variable Questions

No.	Variable	Indicator	Reference
1	Empower & Coaching Oriented (EC)	**EC1.** Leaders have a communication style that empowers others to succeed	(Pujianto et al., 2023)
		EC2. Leadership invests in developing mentoring relationships with direct reports	
2	Two-way effective communication (CO)	**CO1.** Leaders communicate with employees in the work area	(Pujianto et al., 2023)
		CO2. Leadership informs employees what they can expect from the company	
		CO3. Leaders inform employees what the company expects	
		CO4. Leaders communicate directly with employees	
		CO5. Utilize visual controls to help employees check their own work	
3	Motivation (MO)	**MO1.** There is recognition of employee achievements	
		MO2. Leaders have characters that motivate employees to achieve their best performance	
		MO3. Leaders can inspire and mobilize people to work towards a common goal	
		MO4. Leadership holds regular informal meetings with employees	
		MO5. Leaders try to create a sense of mutual trust and respect among employees	
		MO6. Leaders have good relationships with employees	
4	Genba-Kaizen (GK)	**GK1.** Leaders focus on vision and the future	
		GK2. The leader is an innovator and creator of new ideas	
		GK3. Leaders are not afraid to try something new and take risks	
		GK4. Leaders are responsible for teaching lean principles to employees	
		GK5. Leaders learn while working for self-development	
4	Genba-Kaizen (GK)	**GK6.** Leaders discuss every problem resolution down to the root cause	
		GK7. Leaders do not blame employees by highlighting mistakes made	
		GK8. Leaders encourage employees to contribute ideas	

Business performance variables This section shows the work parameters of a company. Business performance variables are shown in table 4. Improving the safety of an organization through effective safety policies and procedures, providing a sense of security for employees. Employees are protected from physical danger or accidents. This sense of security directly impacts employee morale, feeling appreciated and cared for by the company (Ellitan, 2020).

Table 4. Business Performance Variable Questions

No.	Variable	Indicator	Reference
1	Business Performance	**SI**. SAFETY conditions in the company are good (Safety Improvement)	(Ellitan, 2020)
		QI. QUALITY conditions in the company are good (Quality Improvement)	
		CR. Emphasizing Cost EFFICIENCY in the company is already running	
		IN. DELIVERY conditions in the company are good (Delivery Improvement)	
		EMIs. The condition of MORALE in the company is good (Employee Morale Improvement)	
		WR. ENVIRONMENT conditions in the company are good (Waste Reduction)	
		PI. PRODUCTION conditions in the company are good (Production Improvement)	
		VWI. AESTHETIC and MIERUKA conditions in the company are good (Visual Workplace Improvement)	
1	Business Performance	**CIE**. Employees continuously make continuous improvements (Continuous Improvement Environment)	

RESULTS

Respondents are employees at leader level with the positions of Foreman, supervisor, Department Head, Division Head. The respondent has responsibility for the departments of Production, Production Control and Logistics, Quality, Maintenance, Import Export and Production Engineering. The importance of involvement at all levels of the organization to gain better insight into the principles of 5s, lean management and blue ocean for the successful implementation of these principles is also influenced by collaboration between departments to improve business performance.

Table 5. Personal Description & Respondent Profile

No.	Personal Profile Description	Personal Profile Description
1	Position	Team Leader
		Foreman
		Supervisor
		Department Head
		Division Head
		Another:
2	Departement	Production
		Production Control & Logistic
		Quality
		Maintenance
		Export Import Component
		Production Engineering

A total of 85 respondents filled out the questionnaire and could be analyzed, consisting of team leader, foreman, supervisor, department head and finally division head positions with percentages as in Table 6.

Table 6. Statistics on Respondents' Job Levels

Position	Total	Percentage
Team Leader	34	40%
Foreman	25	29,41%
Supervisor	18	21,18%
Department Head	7	8,24%
Division Head	1	1,18%

A total of 85 respondents came from different departments ranging from production, production control & logistics, export import components, maintenance, quality, production engineering, etc. Table 7 displays the percentage of department divisions of these respondents.

Table 7. Statistics of Respondents' Line of Work

Department	Amount	Percentage
Production	33	38,82%
Production Control & Logistic	18	21,18%
Maintenance	13	15,29%
Export Import Component	9	10,59%
Quality	7	8,24%
Production Engineering	5	5,88%

Data was only collected from the 6 departments above because these six departments are directly related to managing the supply chain from raw materials to finished goods.

PLS, hypothesis testing is included in inner model testing. At this stage, a significance test will be carried out, namely direct effect and indirect effect. Before testing the hypothesis, the questionnaire data is processed using the resampling method.

Table 8. Hypothesis Test Results (Direct Influence)

	Original Sample (O)	Sample Mean (M)	Standard Deviation	T Statistics	P Values
5S → Business Performance	0,376	0,342	0,205	1,835	0,067
5S → LM	0,022	0,022	0,017	1,275	0,203
BOL → Business Performance	0,088	0,111	0,181	0,484	0,629
LM → Business Performance	0,326	0,345	0,176	1,851	0,065
LM → BOL	0,003	0,005	0,002	1,504	0,133

Table 9. Hypothesis Test Results (Indirect Influence)

	Original Sample (O)	Sample Mean (M)	Standard Deviation	T Statistics	P Values
5S → LM → Business Performance	0.007	0.007	0.008	0,626	0,256
LM → BOL → Business Performance	0.000	0.001	0.001	0,210	0,529

Table 8 shows the results of testing the significance of the direct influence of the existing variables, while to see the indirect influence can be seen in table 9. The influence of one variable on another variable can be said to be significant if it has a statistical value of T greater than 1.96 or a p-value greater than 0.05. Knowing this, each hypothesis can be explained as follows: A p-value close to 0.05 indicates the possibility of a relationship or difference approaching a significant level. However, these results are not strong enough to conclude that there is a noticeable effect. It is important to consider the context of the research and the discipline. It is often found that results that are close to significant can provide meaningful insights, although they do not meet conventional thresholds. Other variable factors that can affect the results. For example, demographic variables, environmental conditions, or research design can affect the resulting p-value. If the literature or theory supports the hypothesis, it is worth considering using a higher significance level, such as 0.10.   While p-values provide information about statistical significance, consider also reporting effect sizes which can give a clearer picture of how much impact or difference is observed.

Table 8 shows the T statistic results of 1.835 (<1.96) and p value of 0.067 (>0.05). This means that the influence caused by 5S on business performance is not significant so that H1 is rejected.

The p value of 0.067 means that the hypothesis can be accepted with a significance level of 10%. This means that PT. Manufacturing is still not optimal in implementing 5S so it has not had a significant impact on business performance.

Table 9 shows the T statistic results of 1.275 (<1.96) and p value of 0.203 (>0.05). This means that the influence caused by 5S on LM is not significant so that H2 is rejected.

There is still minimal implementation of 5S so it does not have a big impact on Lean Management and even more so on business performance. Even though many people understand how 5S is implemented, the lack of consistency in its implementation from top management to the shop floor means that 5S is currently just ordinary knowledge that does not support LM. The lack of consistency from all employees shows that

awareness of 5S is still not well formed, employees are still focused on implementing the first 3S, namely Seiri, Seiton and Seiso.

Table 9 shows the T statistic results of 0.626 (<1.96) and p value of 0.256 (>0.05). This means that the indirect effect of implementing 5S on BEPP through LM is not significant so that H3 is rejected.

H3 is not significant, but the T statistic H3 value is 0.626 which is smaller than the T statistic H1 value which is 1.835, indicating that the LM variable is not a mediator between 5S and business performance. The existence of a mediating variable should have a stronger influence than its direct influence, but from the T statistic results it can be seen that the direct influence of 5S on business performance is greater than the indirect influence mediated by LM.

Table 8 shows the T statistic results of 1.851 (<1.96) and p value of 0.065 (>0.05). This means that the influence caused by LM on business performance is not significant so that H4 is rejected.

Almost the same as H1, the p value in H4 is 0.065, which can be accepted at a significance level of 10%. In the previous section, it was explained that there were 2 variables forming LM which were eliminated because they did not have good outer loading, namely the pull system and single minute exchange dies, this indicates that the implementation of LM at PT. Manufacturing still needs to be improved so that it will have a significant influence on business performance.

Table 8 shows the T statistic results of 1.504 (<1.96) and p value of 0.133 (>0.05). This means that the influence caused by LM on BOL is not significant so that H5 is rejected.

Table 8 shows the T statistic results of 0.484 (<1.96) and p value of 0.629 (>0.05). This means that the influence caused by BOL on business performance is not significant so that H6 is rejected.

As for H5 and H6, BOL activities at PT. Manufacturing does not yet have a good level of acceptance and application within the company, this can be seen in the company's internal survey previously conducted in June 2020 which showed results in the form of an acceptance rate of 67% and application of 53%. By looking at the low level of acceptance and application, it is clear that the influence on business performance is not yet significant.

Table 9 shows the T statistic results of 0.210 (<1.96) and p value of 0.529 (>0.05). This means that the indirect application of LM to business performance through BOL is not significant so H7 is rejected.

Basically, the implementation of BOL is expected to have a real effect on business performance, however, from the results of hypothesis testing, no significant influence was found by BOL on business performance, either directly or indirectly. This indicates that leaders still lack the skills or ability to embrace employees so that good synergy is formed which can later improve business performance. The results shown in H7 resemble the results shown in H3, namely the T statistic value for H7 is smaller than the value for H4. So it can be concluded that BOL is not a mediator between the influence of LM on business performance.

Table 10. Summary of Hypothesis Testing Results

Variable Relationships	Koefisien	T-Stat	p-value	Conclusion
H1: There is a direct influence of 5S on business performance.	0.376	1.835	0.067	Not Significant at Alpha 5%, But significant at 10%.
H2: There is a direct influence of 5S on the implementation of lean management (LM).	0.022	1.275	0.203	Not Significant
H3: There is an indirect effect of implementing lean management (LM) between 5S and business performance	0.007	0.901	0.368	Not Significant
H4: There is a direct effect of implementing lean management (LM) on business performance	0.326	1.851	0.065	Not Significant at Alpha 5%, But significant at 10%.
H5: There is a direct influence of implementing lean management (LM) on blue ocean leadership (BOL) activities.	0.003	1.504	0.133	Not Significant
H6: There is a direct influence of blue ocean leadership (BOL) activities on business performance	0.088	0.484	0.629	Not Significant
H7: There is an indirect influence of blue ocean leadership (BOL) between the implementation of lean management (LM) and business performance	0.000	0.303	0.762	Not Significant

DISSCUSSION

One of the main findings in this research is that the implementation of 5S at PT. Manufacturing is still not optimal, which means that a significant impact on business performance has not been achieved. The application of 5S in the context of Lean Management has contributed to creating a more efficient and productive work environment, for example, consistent work procedures and standards. Building discipline to maintain the implementation of 5S in the company reduces waste and increases efficiency, so that business goals can be achieved more effectively. The 5S process supports Lean's philosophy of continuous improvement and waste elimination.

However, if implementation is not carried out consistently and thoroughly, the expected benefits, such as increased work safety, employee responsibility and a sense of ownership of the work area, will not be achieved optimally (Amin et al., 2021). lean management and blue ocean leadership to ensure that the practices carried out are truly understood and carried out fully by each individual involved so that the company is able to achieve business performance as targeted (Hoque et al., 2020). Because the implementation of 5S is very minimal, this does not have a significant impact on lean management or even business performance (Firmansyah & Maemunah, 2021; Maemunah et al., 2023). Many people understand how to implement 5S (Basu, 2022; Camman et al., 2017) but because it is not consistently practiced from top management to the workplace then 5S is currently only limited to common sense and does not support LM (Saraswat et al., 2024). The lack of consistency among all employees shows that 5S awareness has not yet fully penetrated and employees are still focused on carrying out the first 3S, namely sorting, tidying and cleaning.

CONCLUSION

One of the shortcomings in the implementation of 5S, Lean Management and blue ocean leadership, the role of the leader is very crucial because it contributes as a guide and motivator for all team members. Insufficient support and involvement of leaders can negatively impact the success of business performance. One of the problems that arises is the lack of effective communication between leaders and employees. Leaders who do not provide employees with enough information regarding the company's expectations can lead to confusion in implementing the desired changes. Leaders do not clearly convey information about the expectations, vision, and goals of the 5S and Lean Management programs as well as blue ocean leadership, so employees will find it difficult to understand the direction that the company wants to achieve.

REFERENCES

Albliwi, S. A., Antony, J., Arshed, N., & Ghadge, A. 2017. International Journal of Quality & Reliability Management. International Journal of Quality & Reliability Management, 34(4), 508–529.

Amin, M. A., Alam, M. R., Alidrisi, H., & Karim, M. A. 2020. A Fuzzy-Based Leanness Evaluation Model For Manufacturing Organisations. Production Planning & Control, 32(11), 959–974. https://doi.org/10.1080/09537287.2020.1778113

Antono, J., Gonzaga, E. Y., Shaddiqi, A., & Wijaya, N. 2023. Will Abusive Supervision Effecton Employee Turnover, Performance and Commitment? Emotional Exhaustion As a Mediator. Jurnal Riset Bisnis Dan Manajemen, 16(1), 12–18. https://doi.org/10.23969/jrbm.v16i1.6335

Bachmid, S., Harun, H., & Noval, N. 2023. Relationship Between Intellectual Intelligence, Adversity Quotient and Employee Performance Mediated By Religiousity. Jurnal Riset Bisnis Dan Manajemen, 16(2), 152–160. https://doi.org/10.23969/jrbm.v16i2.7176

Basu, R. 2022. Green Six Sigma: A Lean Approach To Sustainable Climate Change Initiatives. books.google.com.https://books.google.com/books?hl=en&lr=&id=SC9cEAAAQBAJ&oi=fnd&pg=PR1&dq=5s+lean+management+blue+ocean+leadership+business+excellence+performance+parameters&ots=wQV3-hNENC&sig=59o-byAiYFWWLQag8Cbn0l8JJbM

Bhat, S., Antony, J., Maalouf, M., E.V, G., & Salah, S. 2023. Applications Of Six Sigma For Service Quality Enhancement In The UAE: A Multiple Case Study Analysis And Lessons Learned. International Journal of Lean Six Sigma, 14(7), 1492–1517. https://doi.org/10.1108/IJLSS-06-2022-0144

Camman, C., Fiore, C., Livolsi, L., & Querro, P. 2017. Supply Chain Management and Business Performance. In Supply Chain Management and Business Performance. books.google.com. https://doi.org/10.1002/9781119427407

Chaitanya, R. K., Rahul, & Chandradhara, G. P. 2024. Development of Time Period Expression of Regular and Irregular Buildings Using Statistical Procedure. IOP Conference Series: Earth and Environmental Science, 1387(1), 1–13. https://doi.org/10.1088/1755-1315/1387/1/012013

Colicchia, C., Creazza, A., & Dallari, F. 2017. Lean And Green Supply Chain Management Through Intermodal Transport: Insights From The Fast Moving Consumer Goods Industry. Production Planning and Control, 28(4), 321–334. https://doi.org/10.1080/09537287.2017.1282642

Dave, P. Y. 2020. The History of Lean Manufacturing by the view of Toyota-Ford. International Journal of Scientific and Engeneering Research, 11(8), 1598–1602. http://www.ijser.org

Debnath, B., Shakur, M. S., Bari, A. B. M. M., & Karmaker, C. L. 2023. A Bayesian Best–Worst Approach For Assessing The Critical Success Factors In Sustainable Lean Manufacturing. Decision Analytics Journal, 6(September 2022), 100157. https://doi.org/10.1016/j.dajour.2022.100157

Ellitan, L. 2020. Competing in the Era of Industrial Revolution 4.0 and Society 5.0. Jurnal Maksipreneur: Manajemen, Koperasi, Dan Entrepreneurship, 10(1), 1. https://doi.org/10.30588/jmp.v10i1.657

Firmansyah, M. A., & Maemunah, S. 2021. Lean Management and Green Supply Chain Management Implementation on the Manufacturing and Logistics Industry at an Indonesia. Business and Entrepreneurial Review, 21(1), 11–22. https://doi.org/10.25105/ber.v21i1.9141

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. 2019. When To Use And How To Report The Results of PLS-SEM. European Business Review, 31(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Hermansyah, T., Affandi, A., & Hermawan, A. 2024. The Effect of Competence, Work Motivation, Leadership and Compensation on Affective Commitment and Implications on Performance. Jurnal Riset Bisnis Dan Manajemen, 17(1), 63–74. https://doi.org/10.23969/jrbm.v17i1.9836

Hoque, I., Hasle, P. and Maalouf, M.M. 2020. Lean meeting buyer's expectations, enhanced supplier productivity and compliance capabilities in garment industry. International Journal of Productivity and Performance Management, Vol. 69 No. 7, pp. 1475-1494. https://doi.org/10.1108/IJPPM-08-2019-0410

Hurriyati, R., Hendrayati, H., & Indonesia, U. P. 2024. Marketing Performance Improvement Model Through Digital Innovation Of Banking Products : 17(2), 143–155.

Kuehnel, K., & Au-Yong-oliveira, M. 2022. The Development of an Information Technology Architecture for Automated, Agile and Versatile Companies with Ecological and Ethical Guidelines. Informatics, 9(2). https://doi.org/10.3390/informatics9020037

Lai, N. Y. G., Foo, W. C., Tan, C. S., Kang, M. S., Kang, H. S., Wong, K. H., Yu, L. J., Sun, X., & Tan, N. M. L. 2022. Understanding Learning Intention Complexities in Lean Manufacturing Training for Innovation on the Production Floor. Journal of Open Innovation: Technology, Market, and Complexity, 8(3), 110. https://doi.org/10.3390/joitmc8030110

Liu, F., Yu, Y., Fang, Y., Zhu, M., Shi, Y., & Xiao, S. 2024. Lean Strategy in SMEs: Inventory Leanness, Operational Leanness, And Financial Performance. Asian Journal of Shipping and Logistics, 40(2), 109–117. https://doi.org/10.1016/j.ajsl.2024.02.003

Loh, K. L., & Mohd Yusof, S. 2020. Blue Ocean Leadership Activities Improve Firm Performance. International Journal of Lean Six Sigma, 11(2), 359–375. https://doi.org/10.1108/IJLSS-09-2018-0102

Maemunah et al. 2021. The Implementation of Lean Manufacturing and Industrial. 2(8), 1432–1437. https://jist.publikasiindonesia.id/index.php/jist/

Maemunah, S. 2019. The Effect of Corporate Reputation and Sustainable Innovation Strategy on Business Performance in Automotive Companies. Business and Entrepreneurial Review, 18(1), 65–74. https://doi.org/10.25105/ber.v18i1.5305

Maemunah, S., & Cuaca, H. 2021. Influence of Epidemic COVID–19 on Business Strategy, Information Technology And Supply Chain Agility To Firm Performance In Medical Device Industry. Linguistics and Culture Review, 5. https://doi.org/10.37028/lingcure.v5nS1.1452

Maemunah, S., Damanik, A. I. N., Yuliyanto, A., Sembiring, H. F. A., Sugiyanto, S., & Setiawan, E. B. 2023. Price Competitiveness and Service Quality Have an Impact on Ship Agency Contributions. Jurnal Manajemen Transportasi & Logistik (JMTRANSLOG), 10(2), 186. https://doi.org/10.54324/j.mtl.v10i2.1137

Maemunah, S., & Nekrasov, K. 2023. Competitiveness Based on Logistics and Supply Chain in Medical Device Industry During the Covid-19 Period in Indonesia. AIP Conference Proceedings, 2624(1). https://doi.org/10.1063/5.0132304

Martins, B., Silva, C., Silva, D., MacHado, L., Brás, M., Oliveira, R., Carvalho, T., Silva, V., & Lima, R. M. 2021. Implementation of a Pull System-A Case Study of a Polymeric Production System for the Automotive Industry. Management Systems in Production Engineering, 29(4), 253–259. https://doi.org/10.2478/mspe-2021-0031

Moore, A. J. S., & Webster-Edge, S. 2023. 5S Solutions to Promote Medication Efficiency and Safety. British Journal of Anaesthesia, 130(3), e416–e418. https://doi.org/10.1016/j.bja.2022.11.021

Nisa Romadhani, D., Kirana, K. C., & Subiyanto, E. D. 2022. Work Culture and Job Satisfaction on Performance With Motivation As Intervening Variable. Jurnal Riset Bisnis Dan Manajemen, 15(01), 7–14. https://doi.org/10.23969/jrbm.v15i01.5164

Oroye, O. A., Sylvester, B. O., & Farayibi, P. K. 2022. Total Productive Maintenance and Companies Performance: A Case Study of Fast Moving Consumer Goods Companies. Jurnal Sistem Dan Manajemen Industri, 6(1), 23–32. https://doi.org/10.30656/jsmi.v6i1.4185

Pachpande, S., Pachpande, A. and Kulkarni, J. A. 2022. Indian Business Case Studies Volume I.

Pansare, R., YADAV, G., & Nagare, M. R. 2021. A Hybrid Framework to Prioritize the Performance Metrics of Reconfigurable Manufacturing System: An Integrated Fuzzy AHP–TOPSIS approach. http://dx.doi.org/10.21203/rs.3.rs-465137/v1%0Ahttps://www.researchsquare.com/article/rs-465137/v1

Peimbert-García, R. E., Matis, T., Beltran-Godoy, J. H., Garay-Rondero, C. L., Vicencio-Ortiz, J. C., & López-Soto, D. 2019. Assessing The State of Lean and Six Sigma Practices in Healthcare in Mexico. Leadership in Health Services, 32(4), 644–662. https://doi.org/10.1108/LHS-02-2019-0011

Perdomo-Verdecia, V., Sacristán-Díaz, M., & Garrido-Vega, P. 2022. Lean Management In Hotels: Where We Are and Where We Might Go. International Journal of Hospitality Management, 104(May). https://doi.org/10.1016/j.ijhm.2022.103250

Pham, H. T., Truong Quang, H., Sampaio, P., Carvalho, M., Tran, D. L. A., Vo, V. X., & Duong, B. A. T. 2022. The Impact of Global Risks on Supply Chain Performance. An Empirical Study on Construction Sector in the COVID-19 Pandemic. International Journal of Quality and Reliability Management. https://doi.org/10.1108/IJQRM-03-2022-0084

Piwowar-Sulej, K., & Iqbal, Q. 2024. 5S Implementation, Basic Needs Satisfaction, Sustainable Leadership And Firm Sustainable Performance: Empirical Evidence From The Oil and Gas Industry. Journal of Cleaner Production, 484, 144354. https://doi.org/10.1016/J.JCLEPRO.2024.144354

Pujianto, W. E., Musyaffaah, L., & Supriyadi. 2023. Organizational Justice to Employee Innovative Work Behavior: Mediation Effect of Learning Capacity and Moderation Effect of Blue Ocean Leadership. Greenomika, 5(1), 77–93. https://doi.org/10.55732/unu.gnk.2022.05.1.8

Ramdan, D. 2023. The Influence of Resource Empowerment Management Human To Employee Performance At Bandung Regency Public Works Office. Jurnal Riset Bisnis Dan Manajemen, 16(2), 227–235. https://doi.org/10.23969/jrbm.v16i2.8369

Sadiq, S., Amjad, M. S., Rafique, M. Z., Hussain, S., Yasmeen, U., & Khan, M. A. 2021. An Integrated Framework For Lean Manufacturing In Relation With Blue Ocean Manufacturing - A Case Study. Journal of Cleaner Production, 279. https://doi.org/10.1016/j.jclepro.2020.123790

Saraswat, P., Agrawal, R. and Rane, S.B. 2024. Technological Integration of Lean Manufacturing with Industry 4.0 Toward Lean Automation: Insights From The Systematic Review and Further Research Directions. Benchmarking: An International Journal, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/BIJ-05-2023-0316

Sarman, R., & Kartika, R. 2023. Labor Welfare Affects Employee Performance and Is Mediated By Work Spirit. Jurnal Riset Bisnis Dan Manajemen, 16(1), 53–58. https://doi.org/10.23969/jrbm.v16i1.7011

Singh, S. K., Giudice, M. Del, Chierici, R., & Graziano, D. 2020. Green Innovation and Environmental Performance: The Role of Green Transformational Leadership and Green Human Resource Management. Technological Forecasting and Social Change, 150. https://doi.org/10.1016/j.techfore.2019.119762

Siti Maemunah, M. A. 2022. Transportation Modes During Pandemic Covid-19 in Indonesia. 1(1), 44–47. https://journal.literasisains.id/index.php/sosmaniora

Suhardiman, S., Juniarti, A., & Indra Setia, B. 2024. The Mediating Role of Affective Commitment and Policy Implementation in Improving the Performance of Bumdes. Jurnal Riset Bisnis Dan Manajemen, 17(2), 17–28. https://doi.org/10.23969/jrbm.v17i2.12658

Teboul, J., & Damier, P. 2023. Creative Leadership in Action. In Neuroleadership (... [Prepr, pp. 59–75). https://doi.org/10.1007/978-981-99-5122-2_6

Vargas, A. R. V., Alcaraz, J. L. G., Satapathy, S., & Diaz-Reza, J. R. 2023. The PDCA Cycle for Industrial Improvement: Applied Case Studies (p. 114).

Yulianti, M., Lasminingrat, A., & Setiadi, H. 2023. Green Accounting on Environmental Sustainability Through Waste Management in MSMEs Industry Centre Tahu Cibuntu. Jurnal Riset Bisnis Dan Manajemen, 16(1), 1–6. https://doi.org/10.23969/jrbm.v16i1.6215

Yuliantini & Maemunah. 2023. *Mediasi* Brand Loyalty *Pada* Brand Image, Brand Personality, Brand Awareness *Dan* Perceived Quality *Terhadap* Repurchase Intention (Travel Agent *Konvensional di Jakarta)*. 8, 235–252.