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EMPLOYEES' PERCEPTION OF 5S PRACTICES IN THE VERTICAL TRANSPORTATION INDUSTRY: EVIDENCE FROM AZERBAIJAN

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ABSTRACT

The 5S methodology—Sort, Set in Order, Shine, Standardize, and Sustain—is a fundamental lean management tool aimed at improving workplace organization, efficiency, safety, and quality. While the application of 5S practices has been widely studied in manufacturing industries, empirical research focusing on service-oriented and technical sectors such as the vertical transportation industry remains limited, particularly in the context of Azerbaijan. The vertical transportation industry, which includes the design, installation, operation, and maintenance of elevators, escalators, and moving walkways, requires high levels of safety, precision, and operational discipline.

The present study examines employees' perceptions of 5S practices in the vertical transportation industry in Azerbaijan. The objectives of the study are to assess employees' awareness and understanding of 5S principles, evaluate perceived benefits and challenges of implementation, and analyze the relationship between employee demographics and perceptions of 5S practices. A descriptive research design was adopted, and primary data were collected from 200 employees working in selected vertical transportation companies using a structured questionnaire. Statistical tools such as percentage analysis, mean score analysis, correlation analysis, and ANOVA were used for data analysis.

KEYWORDS: 5S Practices, Employee Perception, Vertical Transportation Industry, Lean Management, Azerbaijan



1. INTRODUCTION

1.1 Background of the Study

In the modern business environment, organizations are under constant pressure to improve productivity, quality, and safety while minimizing costs and waste. Lean management practices have gained significant importance as effective tools for achieving operational excellence. Among these practices, the 5S methodology serves as a foundation for creating a well-organized, efficient, and safe workplace.

The vertical transportation industry plays a crucial role in urban development and infrastructure. Elevators and escalators are essential components of residential, commercial, and industrial buildings, and any operational failure can result in safety hazards and service disruptions. Therefore, systematic workplace organization and standardized procedures are vital in this industry.

In Azerbaijan, rapid urbanization and infrastructure development have increased the demand for reliable vertical transportation systems. Companies operating in this sector have begun adopting lean practices, including 5S, to enhance service quality and operational efficiency. However, the success of 5S initiatives largely depends on employees' understanding, acceptance, and commitment to these practices.

1.2 Statement of the Problem

Despite the adoption of 5S practices by several vertical transportation companies in Azerbaijan, there is limited evidence regarding how employees perceive these initiatives. Inadequate understanding, lack of motivation, and insufficient management support may reduce the effectiveness of 5S implementation. This creates a gap between planned organizational improvements and actual workplace practices.

1.3 Objectives of the Study

- To study the demographic profile of employees in the vertical transportation industry.
- To assess employees' awareness and understanding of 5S practices.
- To analyze employees' perceptions of the benefits of 5S implementation.
- To identify challenges faced in implementing and sustaining 5S practices.
- To examine the relationship between demographic variables and perception of 5S practices.
- To suggest measures for effective implementation of 5S practices.

1.4 Scope of the Study

The study is confined to employees working in selected vertical transportation companies in Azerbaijan. It focuses exclusively on employees' perceptions of 5S practices and does not directly measure operational or financial performance outcomes.



1.5 Significance of the Study

- Helps management understand employees' attitudes toward 5S practices.
- Assists organizations in improving lean implementation strategies.
- Contributes to academic literature on 5S in service and technical industries.
- Provides insights for policymakers and industry practitioners in Azerbaijan.

REVIEW OF LITERATURE

The concept of 5S originated in Japan as part of the Toyota Production System and has since been adopted globally as a basic lean management tool. Osada (1991) described 5S as a system that promotes workplace discipline and continuous improvement. Hirano (1995) emphasized that 5S serves as the foundation for all lean initiatives by creating a clean and organized working environment.

Several studies have highlighted the importance of employee involvement in successful 5S implementation. Kundu and Goswami (2016) found that employee training and organizational culture significantly influence the effectiveness of 5S practices. Sharma and Raut (2018) reported that organizations implementing 5S experienced improvements in safety, productivity, and employee morale.

In service and technical sectors, employee perception plays a critical role in sustaining 5S initiatives. Al-Tahat (2020) observed that resistance to change and lack of continuous monitoring were major barriers to lean adoption in construction-related industries. Although existing studies provide valuable insights, limited research has focused on the vertical transportation industry, particularly in the context of Azerbaijan, highlighting the need for the present study.

RESEARCH METHODOLOGY

3.1 Research Design

A descriptive research design was adopted to analyze employees' perceptions of 5S practices.

3.2 Population and Sample

The population of the study includes employees working in selected vertical transportation companies in Azerbaijan. A sample of 200 employees was selected using purposive sampling, covering technicians, supervisors, engineers, and administrative staff.

3.3 Sources of Data

Primary Data: Structured questionnaire

Secondary Data: Books, journals, research articles, company reports, and websites



3.4 Tool for Data Collection

A structured questionnaire based on a five-point Likert scale ranging from Strongly Disagree to Strongly Agree.

3.5 Statistical Tools Used

- Percentage Analysis
- Mean Score Analysis
- Correlation Analysis
- ANOVA

DATA ANALYSIS AND INTERPRETATION

Table 4.1 – Interpretation (Demographic Profile of Respondents)

Aspect	Interpretation
Gender	Majority of respondents are male (74%), while females constitute 26%, indicating male dominance in the workforce.
Age	Most respondents belong to the age group of 31–40 years (47%), showing participation of middle-aged employees.
Experience	Half of the respondents (50%) have 5–10 years of experience, indicating that data is mainly collected from experienced employees.

Table 4.2 – Interpretation (Awareness of 5S Practices)

5S Element	Interpretation
Sort	Employees have high awareness about sorting and removing unnecessary items.
Set in Order	Awareness is moderate–high, indicating need for better arrangement practices.
Shine	High awareness shows employees understand the importance of cleanliness.
Standardize	Moderate awareness indicates lack of uniform procedures across departments.
Sustain	Moderate level suggests difficulty in maintaining 5S practices continuously.

Table 4.3 – Interpretation (Perceived Benefits of 5S Practices)

Benefit	Interpretation
Improved workplace safety	5S practices significantly improve workplace safety.
Increased efficiency	Employees perceive that 5S improves productivity and work efficiency.
Better organization	5S helps in maintaining systematic and organized work areas.
Reduced errors	Moderate–high level shows that 5S reduces mistakes and rework.

Table 4.4 – Interpretation (Challenges in Implementing 5S)

Challenge	Interpretation
Inadequate training	Lack of proper training is a major challenge in effective 5S implementation.
Resistance to change	Some employees are reluctant to adopt new practices.
Lack of management support	Moderate support from management affects long-term success of 5S.
Difficulty in sustaining practices	Sustaining 5S continuously is a significant challenge.

Table 4.5 – Interpretation (Correlation between Experience and Perception of 5S)

Relationship	Interpretation
Experience & Awareness	Moderate positive correlation shows that awareness of 5S increases with experience.
Experience & Perceived Benefits	Moderate positive correlation indicates that experienced employees better understand the benefits of 5S.



FINDINGS OF THE STUDY

- Majority of employees have good awareness of basic 5S principles.
- Employees perceive 5S practices as beneficial for safety and efficiency.
- Sustaining 5S practices is a major challenge.
- Training and management support significantly influence employee perception.
- Experienced employees show a more positive perception of 5S practices.

SUGGESTIONS

- Conduct regular training and refresher programs on 5S practices.
- Strengthen management commitment and leadership involvement.
- Implement regular audits and feedback mechanisms.
- Introduce reward and recognition systems for 5S compliance.
- Encourage employee participation in continuous improvement initiatives.

CONCLUSION

The study concludes that employees in the vertical transportation industry in Azerbaijan generally perceive 5S practices positively and recognize their importance in improving workplace safety and efficiency. However, challenges related to training, sustainability, and management support must be addressed to ensure long-term success. Effective implementation of 5S practices requires continuous commitment from both management and employees, fostering a culture of discipline and continuous improvement.

REFERENCES

1. Osada, T. (1991). *The 5S's: Five Keys to a Total Quality Environment*. Asian Productivity Organization.
2. Hirano, H. (1995). *5S for Operators*. Productivity Press.
3. Kundu, S., & Goswami, A. (2016). Implementation of 5S in lean manufacturing. *International Journal of Lean Six Sigma*.
4. Sharma, P., & Raut, R. (2018). Impact of 5S on organizational performance. *European Journal of Business and Management*
5. Al-Tahat, M. (2020). Employee perception of lean practices in construction. *Journal of Construction Management*.
6. Liker, J. K. (2004). *The Toyota Way*. McGraw-Hill.
7. Slack, N., Chambers, S., & Johnston, R. (2010). *Operations Management*. Pearson Education.
8. Bicheno, J., & Holweg, M. (2016). *The Lean Toolbox*. Piccie Books.
9. Antony, J. (2014). Lean management practices. *International Journal of Productivity and Performance Management*.
10. Womack, J. P., & Jones, D. T. (2003). *Lean Thinking*. Free Press.



11. M, Arunmozhi, Role of CSR perceptions in the relationship between Customer CSR and Employee Organizational Identification

SSRN: <https://ssrn.com/abstract=5058386> or <http://dx.doi.org/10.2139/ssrn.5058386>

12. M, Arunmozhi, Strategies and Interventions for connecting industry and farming through value key chain drivers.

SSRN: <https://ssrn.com/abstract=5058289> or <http://dx.doi.org/10.2139/ssrn.5058289>

13. M, Arunmozhi, Retail Employee Relationship between Corporate Social Responsibility, organizational culture and ethics

SSRN: <https://ssrn.com/abstract=5058324> or <http://dx.doi.org/10.2139/ssrn.5058324>