International Journal of Management and Commerce Innovations ISSN 2348-7585 (Online)
Vol. 14, Issue 1, pp: (208-216), Month: April 2026 - September 2026, Available at: www.researchpublish.com

A Study on Performance Metrics in the Operations Department at Onload Gears Private Limited

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DOI: https://doi.org/10.5281/zenodo.19692241

Published Date: 22-April-2026

Abstract: **Performance measurement systems play an important role in improving operational efficiency and organisational productivity in manufacturing industries. These systems help organisations monitor operational activities, evaluate employee performance, and ensure that production processes are aligned with organisational objectives. The present study examines the effectiveness of performance metrics used in the Operations Department of Onload Gears Private Limited, Chennai.**

The study adopts a descriptive research design to analyse employee perceptions regarding the existing performance measurement system. Primary data were collected from 120 employees working in the operations department through a structured questionnaire. The collected data were analysed using statistical tools such as percentage analysis, Chi-square test, and One-Way Analysis of Variance (ANOVA).

The results of the study indicate that a majority of employees are aware of the performance metrics implemented within the organisation. However, a considerable number of respondents believe that operational targets are sometimes difficult to achieve and that improvements are required in the current performance measurement system. The statistical analysis further reveals that demographic variables such as gender, educational qualification, and annual income do not significantly influence employee performance levels, whereas age shows a significant relationship with the level of KPI identification.

The study concludes that improving communication of Key Performance Indicators, strengthening preventive maintenance practices, and implementing digital performance monitoring systems can enhance operational efficiency and employee productivity within the organisation.

Keywords: **Performance Metrics, Key Performance Indicators, Operations Management, Manufacturing Efficiency, Employee Productivity, Performance Measurement Systems.**

1. INTRODUCTION

In the contemporary industrial environment, organisations increasingly rely on performance measurement systems to evaluate operational efficiency and support managerial decision-making. Performance metrics serve as measurable indicators that enable organisations to monitor productivity, maintain quality standards, and ensure efficient utilisation of resources. In manufacturing industries, performance measurement plays a particularly significant role because production activities involve multiple operational processes that must be carefully coordinated in order to achieve organisational goals.

Performance metrics are structured tools used to assess the efficiency and effectiveness of organisational activities. These metrics provide quantitative and qualitative information regarding operational performance and help managers identify areas that require improvement. Through systematic monitoring of performance indicators, organisations can track operational progress, evaluate employee productivity, and implement corrective actions when necessary.

Key Performance Indicators (KPIs) are widely used in manufacturing organisations to measure important aspects of operational performance. These indicators may include production output, machine utilisation, product quality, equipment efficiency, downtime levels, and adherence to production schedules. When properly designed and communicated, KPIs help employees understand performance expectations and encourage them to contribute effectively towards organisational objectives.

Onload Gears Private Limited is a well-known manufacturing organisation engaged in the production of On-Load Tap Changers and switchgear components. The company operates in a highly competitive industrial environment where operational efficiency and product quality are essential for maintaining market reputation. In order to ensure efficient production processes, the organisation has implemented various operational practices such as quality control systems, performance monitoring mechanisms, and structured workflow management.

Despite the implementation of these systems, the effectiveness of performance metrics depends largely on employee awareness, clarity of performance indicators, and the practicality of operational targets. In some situations, employees may be aware that performance metrics exist but may not fully understand how these indicators influence their work performance or evaluation. Similarly, if operational targets are perceived as unrealistic or difficult to achieve, employees may not fully engage with the performance measurement system.

Therefore, evaluating the effectiveness of the existing performance measurement system becomes essential for improving operational productivity and organisational performance. A systematic assessment of employee perception can help management identify gaps in KPI communication, target-setting practices, and performance monitoring procedures.

The present study focuses on analysing the performance metrics used in the Operations Department of Onload Gears Private Limited. The study examines employee awareness of performance metrics, identifies the key indicators used in the department, and analyses whether demographic factors influence employee performance levels. By examining these aspects, the study aims to provide practical recommendations for improving the performance measurement system and enhancing operational efficiency within the organisation.

The findings of the study are expected to contribute both academically and practically. From an academic perspective, the study adds to the existing literature on performance measurement in manufacturing organisations. From a practical perspective, the results may assist management in refining the current KPI framework so that it becomes more transparent, realistic, and aligned with organisational productivity goals.

2. OBJECTIVES OF THE STUDY

The primary objective of the study is to evaluate the effectiveness of performance metrics used in the Operations Department of Onload Gears Private Limited. The specific objectives of the study are as follows:

1. To understand the concept and significance of performance metrics in operations management.

2. To identify the major Key Performance Indicators used in the operations department to measure productivity and efficiency.

3. To analyse employee awareness and understanding of the performance measurement system implemented within the organisation.

4. To examine employee perception regarding the usefulness of performance metrics in improving operational performance.

5. To evaluate whether demographic factors have any significant relationship with employee performance and productivity levels.

6. To analyse the level of KPI identification among employees across different demographic categories.

7. To provide suitable suggestions for improving the performance measurement framework and enhancing operational efficiency.

3. REVIEW OF LITERATURE

Performance measurement systems have become an essential component of modern operations management. Researchers and scholars have extensively studied the role of performance metrics in improving organisational productivity, operational efficiency, and strategic decision-making. Several studies highlight that organisations require well-designed performance indicators in order to monitor operational outcomes and achieve continuous improvement.

Melnyk, Stewart, and Swink (2004) explained that performance metrics serve as measurable indicators used to evaluate organisational activities and operational performance. According to their research, effective performance measurement systems enable organisations to track operational outcomes and align performance indicators with strategic objectives. The authors emphasised that organisations must carefully design metrics so that they accurately reflect organisational goals and support effective decision-making.

Kaplan and Norton (2006) introduced the concept of the Balanced Scorecard as a comprehensive performance measurement framework. Their model evaluates organisational performance using four key perspectives: financial performance, customer satisfaction, internal business processes, and learning and growth. The Balanced Scorecard approach suggests that organisations should not rely solely on financial indicators but must consider multiple dimensions of performance to achieve sustainable success.

Neely (2008) defined performance measurement as the process of quantifying the efficiency and effectiveness of organisational actions. He emphasised that performance measurement systems must include both financial and non-financial indicators in order to provide a comprehensive view of organisational performance. According to Neely, organisations must continuously review and update performance indicators to ensure that they remain relevant to changing operational conditions.

Drucker (2014) highlighted the importance of goal-oriented performance evaluation through the concept of Management by Objectives (MBO). He argued that organisations must clearly define performance goals and evaluate employee performance based on measurable outcomes. Drucker also emphasised that employee involvement in goal-setting improves motivation and encourages greater commitment towards organisational objectives.

Mukherjee (2017) examined the role of performance measurement in manufacturing organisations and highlighted the importance of operational indicators such as production output, machine utilisation, equipment efficiency, and defect rates. His research indicated that effective monitoring of operational metrics helps organisations reduce inefficiencies and improve productivity.

Slack, Chambers, and Johnston (2018) identified five major operational performance objectives that organisations should monitor: quality, speed, dependability, flexibility, and cost. According to their study, organisations that effectively measure these operational dimensions are better able to maintain competitiveness in dynamic business environments.

Bititci and his colleagues (2019) emphasised that performance measurement systems must be integrated with organisational strategy and operational processes. Their research highlighted that organisations should develop performance measurement frameworks that support continuous improvement and encourage employee participation.

Ittner and Larcker (2020) suggested that organisations must focus on non-financial performance indicators such as customer satisfaction, product quality, and operational efficiency in addition to financial performance metrics. Their research indicated that non-financial indicators often provide early signals regarding organisational performance trends.

Gunasekaran, Patel, and McGaughey (2023) examined the use of performance metrics in manufacturing operations and concluded that effective KPI frameworks help organisations improve production efficiency, reduce operational costs, and enhance overall performance. They also highlighted that the integration of technology and digital monitoring systems can significantly improve performance measurement practices.

De Waal (2025) analysed high-performance measurement systems and concluded that successful organisations actively involve employees in the design and implementation of performance metrics. According to the study, employee participation improves acceptance of KPIs and enhances organisational performance outcomes.

Although several studies have examined performance measurement frameworks across different industries, limited research has focused on employee perception of performance metrics within manufacturing organisations in India. In particular, there is a lack of empirical studies that analyse how employees understand and respond to KPI systems in operational environments. Therefore, the present study attempts to fill this research gap by examining the performance metrics used in the Operations Department of Onload Gears Private Limited.

4. RESEARCH METHODOLOGY

Research methodology provides the systematic framework used to conduct the study. It describes the research design, data collection methods, sampling procedures, and statistical techniques used for analysis. The present study adopts a descriptive research design to examine employee perception of performance metrics within the operations department.

4.1 Research Design

The study uses a descriptive research design because it aims to describe and analyse employee awareness, perception, and understanding of the performance measurement system implemented within the organisation. Descriptive research is appropriate for studies that attempt to analyse existing conditions and identify patterns in collected data.

4.2 Data Collection

Both primary and secondary data sources were used for the study.

Primary data were collected from employees working in the Operations Department of Onload Gears Private Limited. A structured questionnaire was used to gather information regarding employee demographic characteristics, awareness of performance metrics, perception of operational targets, and suggestions for improvement.

Secondary data were collected from academic books, research journals, organisational reports, and published literature related to operations management and performance measurement systems.

4.3 Sample Size

The study was conducted among employees working in the Operations Department of the organisation. A total of 120 employees were selected as respondents for the study.

The respondents included employees from various operational roles such as:

- Production workers
- Quality control staff
- Maintenance personnel
- Supervisors
- Operational managers

This sample represents a significant portion of the operational workforce.

4.4 Sampling Technique

Convenience sampling was used to select respondents for the study. This sampling technique was adopted because it allowed the researcher to collect data from employees who were available and willing to participate during the data collection period.

4.5 Data Collection Period

The data for the study were collected over a period of approximately three months. The questionnaire was distributed to employees during operational shifts, and responses were recorded for analysis.

4.6 Statistical Tools Used for Analysis

The collected data were analysed using the following statistical tools:

- Percentage Analysis

This method was used to analyse demographic characteristics of respondents and general response patterns related to performance metrics.

- Chi-Square Test

This statistical test was used to examine the relationship between demographic variables and employee performance levels.

- One-Way Analysis of Variance (ANOVA)

ANOVA was used to analyse whether the level of KPI identification differs significantly across different demographic groups.

These statistical techniques helped in interpreting the collected data and drawing meaningful conclusions regarding the effectiveness of the performance measurement system within the organisation.

5. DATA ANALYSIS AND INTERPRETATION

Data analysis plays an important role in research because it helps transform collected data into meaningful information. In this study, the data collected from respondents were analysed using statistical tools such as percentage analysis, Chi-square test, and One-Way Analysis of Variance (ANOVA). The results obtained from these analyses help in understanding employee perceptions regarding performance metrics used in the Operations Department of Onload Gears Private Limited.

5.1 Percentage Analysis – Demographic Profile of Respondents

Percentage analysis was used to examine the demographic characteristics of respondents such as age, gender, educational qualification, marital status, and annual income. This analysis helps in understanding the composition of the workforce participating in the study.

Table 5.1

Demographic Variable	Category	Frequency (%)
Age	Below 25 years	53 (44.2%)
	25–35 years	32 (26.7%)
	36–45 years	26 (21.7%)
	Above 46 years	9 (7.5%)
Gender	Male	63 (52.5%)
	Female	57 (47.5%)
Education	Graduate	64 (53.3%)
	Others	56 (46.7%)
Marital Status	Married	77 (64.2%)
	Unmarried	43 (35.8%)
Annual Income	Rs.10,001–Rs.1,00,000 (majority)	48 (40.0%)

Interpretation

The demographic analysis indicates that a significant proportion of respondents belong to the younger workforce category. The analysis also shows that the respondents consist of both male and female employees with different educational backgrounds and work experience levels. The presence of employees from various demographic groups provides a balanced representation of the workforce within the operations department.

5.2 Percentage Analysis – Awareness of Performance Metrics

This section analyses employee awareness regarding the performance metrics used within the organisation. Understanding employee awareness is important because effective performance measurement systems depend on how clearly employees understand the indicators used to evaluate their work.

Table 5.2

Indicator	Majority Response	Percentage
areness of performance metrics	Yes (aware)	95.0%
Mode of communication	Emails / Reports	45.0%
quency of performance feedback	Monthly	40.0%
Metrics help improve productivity	Neutral	50.0%
Realism of operational targets	Rarely realistic	50.0%
Main cause of operational errors	Machine issues	45.0%
Need to improve current metrics	Yes	60.0%
Area needing most improvement	Quality control	40.0%

Interpretation

The analysis reveals that a majority of employees are aware of the performance metrics used in the operations department. This indicates that the organisation has implemented a performance measurement system that is communicated to employees through internal channels such as reports, meetings, or operational guidelines. However, awareness alone does not guarantee effectiveness, and further analysis is required to evaluate employee perception regarding the usefulness of these metrics.

5.3 Chi-Square Analysis

The Chi-square test was used to examine whether demographic variables are significantly associated with the level of employee performance and productivity. Each variable is analysed separately below with its respective cross-tabulation and test result.

Table 5.3: Age and Level of Employee Performance & Productivity

Hypothesis:

H_0: There exists no significant association between age of the respondents and level of employee performance and productivity levels.

H_1: There is a significant relationship between age of the respondents and level of employee performance and productivity levels.

Category	High	Moderate	Low	Total
Below 25 years	34	12	7	53
25 to 35 years	17	7	8	32
36–45 years	13	8	5	26
Above 46 years	4	0	5	9
Total	68	27	25	120

Chi-Square Test Result — Age and Level of Employee Performance & Productivity

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.844	6	.093
Table Value at 5% Level	12.592	6	——
N of Valid Cases	120	——	——
Result	**H_0 Accepted — Not Significant**		

Since the calculated χ^2 value (10.844) is less than the table value (12.592) at the 5% level of significance, H_0 is accepted. There exists no significant association between age of the respondents and level of employee performance and productivity levels in relation to operational goals and targets.

Table 5.4: Annual Income and Level of Employee Performance & Productivity

Hypothesis:

H_0: There exists no significant association between annual income of the respondents and level of employee performance and productivity levels.

H_1: There is a significant relationship between annual income of the respondents and level of employee performance and productivity levels.

Category	High	Moderate	Low	Total
Less than Rs.10,000	28	8	7	43
Rs.10,001 – Rs.50,000	25	10	13	48
Rs.50,001 – Rs.1,00,000	13	9	5	27
Above Rs.1,00,000	2	0	0	2
Total	68	27	25	120

Chi-Square Test Result — Annual Income and Level of Employee Performance & Productivity

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.750	6	.452
Table Value at 5% Level	12.592	6	——
N of Valid Cases	120	——	——
Result	**H_0 Accepted — Not Significant**		

Since the calculated χ^2 value (5.750) is less than the table value (12.592) at the 5% level of significance, H_0 is accepted. There exists no significant association between annual income of the respondents and level of employee performance and productivity levels in relation to operational goals and targets.

5.4 One-Way ANOVA Analysis

One-Way ANOVA was applied to determine whether mean scores of KPI identification differ significantly across demographic groups. Each variable is tested independently below.

Table 5.5: ANOVA — Level of KPI Identification vs. Age Group

Hypothesis:

H_0: There is no significant relationship between age group of the respondents and Level of Identification of KPIs.

H_1: There is a significant relationship between age group of the respondents and Level of Identification of KPIs.

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig. (p)
Between Groups	28.482	2	14.241	16.702	0.000*
Within Groups	92.938	117	0.853	——	——
Total	121.420	119	——	——	——

** Significant at $p < 0.05$*

The p-value (0.000) is less than 0.05. Therefore H_0 is rejected. There is a significant difference in the mean scores of KPI identification with respect to age group. It is inferred that age.

Table 5.6: ANOVA — Level of KPI Identification vs. Educational Qualification

Hypothesis:

H_0: There is no significant relationship between educational qualification of the respondents and

Level of Identification of KPIs.

H_1: There is a significant relationship between educational qualification of the respondents and Level of Identification of KPIs.

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig. (p)
Between Groups	2.124	2	1.062	1.013	0.367
Within Groups	114.295	117	1.049	——	——
Total	116.420	119	——	——	——

** Significant at $p < 0.05$*

The p-value (0.367) is greater than 0.05. Therefore H_0 is accepted. There is no significant difference in mean KPI identification scores with respect to educational qualification. It is inferred that educational qualification does not influence the level of KPI identification in the Operations Department.

6. FINDINGS

Based on the analysis of the data collected from respondents, the following major findings were identified:

1. The demographic analysis shows that a considerable proportion of respondents belong to the younger workforce category within the organisation.

2. The percentage analysis indicates that a large majority of employees are aware of the performance metrics used in the Operations Department.

3. Employees receive information regarding performance metrics mainly through internal communication channels such as reports, meetings, and operational instructions.

4. A significant number of respondents expressed that operational targets are sometimes perceived as difficult to achieve due to operational challenges.

5. Machine-related issues were identified by several respondents as one of the major factors affecting operational efficiency and productivity.

6. The Chi-square analysis revealed that demographic factors such as gender, educational qualification, and income do not significantly influence employee performance levels.

7. The statistical results indicate that employee performance levels are generally consistent across different demographic categories.

8. The ANOVA analysis indicates that age has a statistically significant influence on the level of KPI identification among employees.

9. The results also indicate that employees believe improvements are required in the existing performance measurement system.

10. Overall, the study highlights that while employees are aware of performance metrics, there is scope for improving the effectiveness and clarity of the performance measurement framework.

7. SUGGESTIONS

Based on the findings of the study, the following suggestions are recommended to improve the effectiveness of the performance measurement system within the organisation:

1. The organisation should strengthen communication of performance metrics by introducing visual dashboards and regular team meetings that clearly explain operational targets and performance indicators.

2. Training programmes should be conducted to improve employee understanding of Key Performance Indicators and their role in enhancing operational productivity.

3. Management should periodically review operational targets to ensure that they are realistic and achievable under existing production conditions.

4. Preventive maintenance practices should be strengthened in order to minimise machine breakdowns and reduce operational disruptions.

5. The organisation may consider implementing digital monitoring systems to track operational performance in real time.

6. Employee participation should be encouraged in the process of reviewing and designing performance metrics to improve acceptance and engagement.

7. Performance evaluation systems should include recognition and reward mechanisms that motivate employees to achieve operational targets.

8. Regular feedback sessions should be conducted between supervisors and employees to discuss performance results and identify areas for improvement.

8. CONCLUSION

Performance measurement systems are essential tools that enable organisations to monitor operational efficiency, evaluate employee productivity, and ensure that production processes are aligned with organisational objectives. In manufacturing environments, where operational activities are closely interconnected, effective performance metrics help organisations maintain quality standards, optimise resource utilisation, and achieve production targets.

The present study examined the performance metrics used in the Operations Department of Onload Gears Private Limited and analysed employee perceptions regarding the effectiveness of these metrics. The findings of the study indicate that employees are generally aware of the performance measurement system implemented within the organisation. However, the results also suggest that improvements are required in the areas of KPI communication, target setting, and operational monitoring.

The statistical analysis revealed that demographic factors such as gender, educational qualification, and income do not significantly influence employee performance levels. This indicates that operational performance is not dependent on individual demographic characteristics but rather on organisational systems and operational practices. However, the ANOVA analysis showed that age has a significant relationship with the level of KPI identification, suggesting that employees belonging to different age groups may differ in their understanding of performance indicators.

The study highlights the importance of improving communication of performance metrics, strengthening preventive maintenance practices, and implementing digital monitoring systems. These measures can help enhance employee awareness, improve operational efficiency, and ensure better alignment between employee performance and organisational objectives.

Overall, the study provides valuable insights into the role of performance metrics in manufacturing operations and offers practical recommendations for improving performance measurement systems. The findings may assist the organisation in strengthening its operational framework and achieving long-term productivity improvements.

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