

A Study on Measuring Employee Engagement Metrics

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Abstract—Employee engagement is a crucial factor that influences workforce stability, employee performance, and organizational effectiveness. The study aims to analyze the relationship between engagement, stability, and performance using quantitative research methods. Primary data was collected from 220 respondents through a structured questionnaire, and various statistical tools such as correlation, Mann-Whitney U test, Kruskal-Wallis H test were used for analysis. The findings reveal that employees perceive engagement as a key factor affecting both workforce stability and performance outcomes. Engagement initiatives such as recognition, managerial support, and career development opportunities were identified as significant contributors to employee motivation and retention. Overall, the study emphasizes the importance of adopting data-driven engagement strategies to improve organizational performance, enhance employee retention, and ensure long-term sustainability.

Index Terms—Employee Engagement, Workforce stability, employee performance, employee retention and Organizational Effectiveness.

I. INTRODUCTION

Employee engagement metrics are essential tools used by organizations to measure the level of employees' commitment, involvement, and emotional connection toward their work and the organization. William A. Kahn (1990) defined employee engagement as the extent to which employees express themselves physically, cognitively, and emotionally in their work roles. These metrics help organizations evaluate employee satisfaction, performance, and retention, which are important indicators of employee engagement. By measuring these factors, organizations can better understand employee attitudes and their level of involvement in organizational activities.

Furthermore, Paul Saks (2006) stated that employee

engagement is closely related to job satisfaction, organizational commitment, and reduced turnover intentions. This shows that measuring employee engagement is important for improving organizational performance and employee relationships. Employee engagement metrics provide useful information that helps management develop effective strategies such as training and development, employee recognition, and improved communication, which contribute to organizational effectiveness and long-term success.

II. REVIEW OF LITERATURE

Jean, Joseph V., and Heraid M. Dhas., (2022) The study's primary goal is to investigate ways to improve employee engagement metrics in the KPO sector as well as the variables that affect employee engagement in this sector. The instrument was utilized for the primary data collection since the reliability coefficients were statistically significant. The study demonstrates that employee engagement metrics, such as turnover interactions, vary depending on the respondents' age group and monthly income within the study area.

Monica M Kate , Kavita Patil., (2024) The goal is to find out how organizational effectiveness (OE) can be enhanced by employee engagement (EE). This is accomplished by presenting a fictional model that illustrates the relationship between Employee Engagement and Organizational Effectiveness in terms of both individual traits and overall influence. The goal is to present an exploratory investigation of employee engagement, including its evolving definitions and concepts, the factors that influence it, its measures, and its significance for enhancing company results. The integration of various behavioral elements, including commitment, involvement, attachment, discretionary effort, energy, positive

attitude, and psychological presence, that collectively translate employee potential into performance and favorably influence organizational success is commonly understood as employee engagement.

C Y, Ajith Kumar., (2025) This study examines the predictive ability of employee engagement metrics in determining individual success. In order to create predictive models that can anticipate performance trends, the research combines survey data, performance evaluations, and HR records with validated engagement constructs, including motivation, job satisfaction, recognition, managerial support, work-life balance, and organizational commitment. The study assesses the degree of relationships between engagement dimensions and performance indicators using statistical methods and machine learning algorithms like regression, decision trees, random forests, and gradient boosting.

Brown, M. I., (2020) This study looks at how the distribution of work unit engagement scores and links with work results are impacted by the use of various metrics for scoring replies, drawing inspiration from customer satisfaction research. The metrics with the highest correlations with performance were those based on very positive replies (net promoter), which were positively skewed. Benchmark scores did not offer any additional criterion-related validity, but they were positively skewed. These findings suggest that employing net promoter scoring may result in a group score distribution that is more normal while simultaneously offering equal to higher predictive validity for performance.

III. RESEARCH METHODOLOGY

Research methodology is a means of determining the outcomes of a research problem. It refers to the process of finding or resolving a research challenge using appropriate methods. By using both primary and secondary data. A systematic questionnaire is used to gather the primary data and journal and research articles are used to gather secondary data. The below statistical tool were tested using SPSS software version 16.0 for data analysis in this study.

IV. RESEARCH DESIGN

Research design is a setup of parameters for the data collecting and analysis. It aims to balance relevance to the research purpose. The study adopts descriptive research design. It describes the present state of affairs and answers who, what, where and how.

V. RESULT AND DISCUSSION

Kruskal - Wallis H Test

	Engagement Impact on Performance Outcomes
Chi-	8.695
Df	4
Asymp.	0.069

a. Kruskal-Wallis Test

b. Grouping Variable: Experience

Interpretation

The Kruskal - Wallis test shows a chi - square value of 8.695, indicating variation across experience levels. However, the p-value of 0.069 is greater than 0.05, showing that the difference is not statistically.

Correlation

			Workfor ce Stabilit y	Employ ee Performan ce	Employ ee Engagem ent
Spearman's rho	Work force Stability	Correlati on Coefficie nt Sig. (2- tailed)	1.000	.318**	.194**
				.000	.000
		N	220	220	220
	Employee	Correlati on Coefficie nt	.318**	1.000	.315**
	Performan ce	Sig. (2- tailed)			
			.000		.000
		N	220	220	220
	Employee Engagem ent	Correlati on Coefficie nt	.194**	.315**	1.000
		Sig. (2- tailed)	.000	.000	
		N	220	220	220

**Correlation is significant at the 0.01 level (2-tailed)

Interpretation

The Spearman Rank correlation between workforce stability and employee performance is 0.318, indicating a weak positive relationship, and it is statistically significant ($p=0.000$). The correlation between workforce stability and employee engagement is 0.194, showing a weak positive but significant relationship. The correlation between employee engagement and employee performance is 0.315, indicating a weak positive relationship, which is also statistically significant ($p=0.000$). Thus, all variables are positively and significantly related.

Mann - Whitney U Test

	Engagement Influence on Workforce Stability
Mann-Whitney	4.728E+03
Wilcoxon W	1.298E+03
Z	-2.598
Asymp. Sig. (2-	0.009

a. Grouping Variable: age

Interpretation

The Mann - Whitney U test shows a U value of 4.728, with a p - value of 0.009, indicating a statistically significant difference. This suggests that age groups differ in their perception of how employee engagement influences workforce stability.

VI. CONCLUSION

The study concludes that employee engagement plays a significant role in enhancing workforce stability, improving employee performance, and achieving organizational success. The findings indicate a strong relationship between engagement metrics and key organizational outcomes such as productivity, retention, and job satisfaction. A majority of respondents agreed that engagement initiatives positively influence workforce stability and performance. Key factors such as recognition, career growth opportunities, and team collaboration were identified in the employee engagement. The study also found that performance management systems and engagement metrics are effective tools for evaluating employee productivity and supporting managerial decision-making. Therefore, organizations should focus on strengthening engagement strategies,

promoting employee wellbeing, and implementing reliable measurement tools.

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