

The Impact of Facilities and Recognition in Enhancing Employee Satisfaction: A Comparative study of Indian Medium and Large Scale Manufacturing Industries

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Abstract: The comparative study examines the impact on employee satisfaction emanating from facilities and recognition programs between medium and large-scale manufacturing industries. As satisfaction of employees' is vital to productivity, retention and overall organizational performance, understanding the influences of workplace facilities and formal recognition on them is vital for business that aims at enhancing their work environments. This research, drawing on Herzberg's two-factor theory of motivation and self-determination theory, explores the potential of facilities and recognition program structures and schemes in affecting job satisfaction industries. The study analyses survey data collected from employees across both industrial sectors and findings suggests that while medium-scale industries leverage informal mechanisms to foster employee satisfaction, larger ones benefit from more formalized programs. Implications for HR practices in tailoring recognition and facilities-related interventions are discussed and paths for further research into the nuances of satisfaction-driven performances in manufacturing sectors are presented.

Keywords: QWL, Work-place Facilities, Employee Recognition, Manufacturing Sector, Comparative Analysis, Employee Satisfaction.

1. Introduction

In the broad organizational studies, satisfaction of employees has garnered focal significance due to its potential in enhancing productivity, retention and efficiency of businesses particularly in manufacturing sector (Guest, 2017; Kooij et al., 2020). In manufacturing sectors that drives on task specialization and structured hierarchies, facilities and recognition dimensions play a vital role in employees QWL (Lau & May, 1998; Sabonete et al., 2021; Van Ingen et al., 2021). Physical infrastructure and welfare-related provisions are those that encompass facilities and their adequacies are closely associated with employees' satisfaction, primarily by focussing on environments that are safe, comfortable and conducive for their physical well-being (Abdullah et al., 2021; Campion et al., 2005; Chandrasekar, 2011). Provisions like rest areas, recreational facilities, and health services that encompass welfare has a significant bearing on employees' psychological comfort and motivation, thus potentiates their performance and job satisfaction (Forrier & Sels, 2003; Suleiman AlBattat & Mat Som, 2013).

Larger organizations tend to have a well-structured welfare programs due to greater financial resources and formal processes that meet a wide-range of employee needs (Li et al., 2020; Sadaf et al., 2022). On the contrary, medium-scale organizations offer less formalized but more flexible systems that could lead to closer interpersonal relationship and a stronger sense of belongingness (Forrier & Sels, 2003). Physical work environment regardless of the scale of the industry, has a direct correlation with employee performance and adequate facilities and innovative welfare schemes possess the potential to improve employees' overall satisfaction (Van Ingen et al., 2021).

Praise, rewards and acknowledgements of achievements that makeup recognition dimension of QWL, is another fundamental driver of job satisfaction and motivation (Brun & Dugas, 2008). Across large and medium-scale organizations, employees that are recognized for their work are more likely to exhibit higher levels of engagement, organizational commitment and therefore enhanced productivity (Tessema et al., 2013). Recognition structure however varies based on the size of the organization. Larger

organizations have formalized systems of recognition, such as performance-based incentives and company-wide acknowledgements that create a systematic approach to reinforce positive behaviour (Hariri et al., 2024). In contrast, medium-scale organizations depend on informal recognition processes that encourage immediate feedback and personal interaction between employees and their supervisors (Storey et al., 2010).

The existing research discourse indicates that for employee satisfaction, facilities and recognition dimensions are critical, yet few studies specifically compare their impact across large and medium-scale manufacturing industries. Evidently, larger industries provide extensive facilities and a formalized recognition programs, medium-scale offer more personalized and adaptive environment that may foster stronger interpersonal bonds and immediate recognition, which could have unique benefits for job satisfaction (Forrier & Sels, 2003).

This comparative study seeks to examine the effects of facilities and recognition dimensions of QWL on employee satisfaction and their variations in medium and large-scale manufacturing industries (Huselid, 1995; Kooij et al., 2020). For similar comparative studies basic t-tests have been primarily relied on in the past, however, the use of more robust statistical tools such as Welch's t-test, Welch's ANOVA, Cohen's d and power of the test have been used in this study to provide a clearer understanding of practical significance of comparative differences (Delacre et al., 2017; Lakens, 2013; Ruxton, 2006). These methods facilitate a more detailed analysis of the factors contributing to satisfaction in distinct manufacturing settings, offering insights for authoritative personnel alike that seek to improve QWL in manufacturing sector and ensuing improvements in retention and productivity.

The theoretical framework for this research is drawn from well-established QWL concepts such as employee satisfaction and organizational behaviour. "Herzberg's Two-Factor Theory of Motivation" posits that satisfaction and dissatisfaction arise from two sets of factors; motivators (recognition and responsibility, the intrinsic factors) and hygiene factors (working conditions and salary, the extrinsic factors) (House & Wigdor, 1967; Yusoff et al., 2013). In this study facilities is seen as hygiene factor and recognition as a motivator and the study examines their effect on overall employee satisfaction between medium and large-scale manufacturing industries. Self-determination theory emphasizes intrinsic motivation and its role in fostering employee engagement and satisfaction. This comparative study examines how recognition as an intrinsic motivator, affects employees' perceived autonomy and competencies across medium and large-scale industries (Gagné & Deci, 2005; Ryan & Deci, 2000). Job Characteristics Model suggests that task identity, task significance, autonomy and feedback drive satisfaction (Hackman & Oldham, 1976). Recognition, in this study is linked to feedback dimension and facilities relate to task significance and overall work environment. This study examines the job characteristics' role in enhancing employee satisfaction across industry size (Giauque et al., 2014; Koonmee et al., 2010)

The extensive research on QWL and its dimensions in manufacturing sectors have limited literature that compares QWL perception studies across medium and large sectors. Most either focus on small-to-medium or large-scale, rather than comparing (Storey et al., 2010; Van Der Voet, 2014; Wright et al., 2001). Comparative studies therefore potentiates the understanding on the effect of organizational scale on employee perceptions of job relevance, facilities and recognition dimensions. Studies show reliance on basic statistical tools like t-tests and correlations rather than those that account for differences in variances and sample sizes such as Welch's t-tests and Welch's ANOVA. Studies also reflect omitting effect size measurements that are critical in understanding the practical significance of statistical findings (Lakens, 2013; Ruxton, 2006). This study thus uses these tools to provide deeper insights into employee satisfaction across different organizational scales.

This study is thus objectified in comparing the influence of facilities and recognition (both formal and informal) on employee satisfaction in medium and large-scale manufacturing industries, explore differences in employee satisfaction that emanates from organizational scales by utilizing advanced statistical tools to determine the significance of these differences in employees' perception related to facilities and recognition dimensions between industry scales.

This study therefore tests the following hypotheses.

- H1: There is a no significant difference in the perceived impact of facilities dimension of QWL on employee satisfaction between medium and large-scale manufacturing industries amongst classes such as L, M, and H.

- H2: There is no significant difference in the perceived impact of recognition dimension of QWL on employee satisfaction between medium and large-scale manufacturing industries amongst classes such as L, M, and H.

2. Research Design and Population Sampling

This study uses a comparative cross-sectional, quantitative methodology to evaluate employee perceptions of facilities and recognition dimensions in medium and large-scale manufacturing industries. Statistical techniques are employed to gather and evaluate data in order to determine the importance of variations among industries.

The target population consists of workers in large and medium-sized manufacturing industries in Mysore and Bangalore districts that are categorized according to factors like size, industry type, and geographic location. The employee population consists of people who operate at different levels aside from the shop floor, people who can understand the questionnaire with ease and record their answers. The population summary, sample size, and responses are in Table 1. When sought, efforts are made to ensure that they understood the intent and type of questions. A straightforward sampling technique is used to guarantee that a sample of workers from medium and large-scale sectors are represented. There are 236 employees from large-scale industries and 207 employees from medium-sized industries in the sample. This sample was divided further into various classes as presented in Table 2, to perform hypothesis testing for each classification to draw inferences.

Table 1: Summary population, sample drawn and responses received

S/L	Industry Scale	No. of Companies	Total No. of Employees (Not including shop-floor)	No. of employees participated	% of Female
1	Large	8	2200	236	13.15
2	Medium	10	1700	207	8.2

Table 2: Classification of respondents from large and medium-scale manufacturing industries for the purpose of Inferential Statistics.

S/L	Group Classification	Abbreviation	Sample size		Description of Classification
			Large	Medium	
1	Lower Age Group	L	59	75	Employees in the age range of 21 – 30 years; “Lower Age Group”.
2	Middle Age Group	M	109	91	Employees in the age range of 31 – 40 years; “Middle Age Group”.
3	Higher Age Group	H	68	41	Employees in the age range of 41 -55 years; “Higher Age Group”.

3. Data Collection Methods, Ethical Considerations and Analysis Tools

A structured questionnaire is designed to measure perceived QWL based on key attributes of facilities and recognition dimensions. Table 3 presents the Question Statements and their mapping with Attributes of facilities and recognition dimensions of QWL.

Table 3: Question Statements and their mapping with attributes of facilities and recognition dimensions of QWL

S/L	Statement of the Question	Attribute Mapped	Attribute Abbreviation
1	My organization respects my viewpoint and experience into consideration when making decisions on my area of expertise	Praise	Ps
3	Motivating incentive and reward programs are in place at my company.	Rewards	Re
4	My organization recognizes my contributions however big or small and rewards them suitably	Praise	Ps
5	I get my share of respect in my organization	Praise	Ps
6	The benefits such as bonus, fringe benefits, etcetera, are the best in the organization.	Rewards	Re

7	My job performance is improved because of motivation, good compensation, rewards, benefits and recognition given by my organization.	Employee welfare	Ew
8	I believe the governing rules, regulations and policies of my organization are in the best interest of the organization and me.	Employee welfare	Ew
9	My organization offers proper health care facilities for its employees	Employee welfare	Ew
10	Other employee beneficial aspects like holidays, medical benefits, ward-education, canteen facilities, etcetera., are good in my organization	Employee welfare	Ew
11	Salary, bonuses, etcetera, are accounted to me in time.	Employee welfare	Ew
12	The hygiene, service time and the quality of food (Refreshments / drinks / breakfast / lunch, etcetera.) through cafeteria is highly appreciable.	Refreshments	Rf

A seven-point Likert scale is used ranging from 7-Very Strongly Agree to 1-Very Strongly Disagree with 4-Not Decided (Cummins & Gullone, 2000). Reliability of the questionnaire was measured through the Cronbach's Alpha in Microsoft Office Professional Plus 2016 version and test re-test method was used for the same (Heiser, 2005; Hu et al., 2015). The Cronbach's Alpha obtained was 0.87.

The researcher took the responsibility in ensuring respondents and organizations alike that none is obliged and participation is voluntary. By not withholding any information about the study, the researchers made sure that participants suffered no physical or emotional harm. Additionally, researchers ensured the responses are anonymous and are safe from access by any else other than the researchers (Simons & Usher, 2012).

Both hard copy and digital versions of the survey were created, distributed, and responses from the intended participants were gathered between January and August of 2022. The paper version, which the employees preferred and which made the questions easier for them to grasp, was distributed to a few individuals from various businesses. After being completed, the paperwork was returned and totalled. Digital administration was used for a small number of instances, and tabulation of the results was done. Descriptive statistics such as mean, standard deviation, frequency distributions are calculated for demographic variables. For inferential statistics, Welch's t-tests, Welch's ANOVA, Cohen's d and power of the tests along with degrees of freedom, mean differences and confidence intervals are computed. Significance level of 0.05 is set for all computations and Microsoft Office Professional Plus 2016 version was used for analysing the data (Heiser, 2005; Hu et al., 2015).

4. Results and Discussions

1. Descriptive Analysis and inferences drawn for Facilities and Recognition

Table 4. Descriptive Statistics for facilities

Scale	Items /Attributes	Count	Range	Mean	Standard Deviation	Response Distribution							
						Description	7	6	5	4	3	2	1
Medium	Employee Welfare	207	1-7	4.59	1.62	Count	26	35	70	13	34	23	6
						%	12.56	16.91	33.82	6.28	16.43	11.11	2.90
	Refreshments			4.46	1.71	Count	30	24	72	10	33	33	5
						%	14.49	11.59	34.78	4.83	15.94	15.94	2.42
Large	Employee Welfare	236	1-7	5.09	1.47	Count	42	59	77	15	25	17	1
						%	17.80	25.00	32.63	6.36	10.59	7.20	0.42
	Refreshments			4.97	1.48	Count	36	57	79	13	31	20	0
						%	15.25	24.15	33.47	5.51	13.14	8.47	0.00

Table 4 presents the descriptive statistics for facilities dimension of QWL across medium and large-scale industries in terms of its attributes namely employee welfare (Ew) and refreshments (Rf). The medium-scale industries report mean of 4.59 and 4.46 with standard deviation of 1.62 and 1.71 for the attributes of facilities dimension of QWL. The distribution varies from 'strongly agree' to 'strongly disagree' for the attributes Ew and Rf, which indicates mixed perceptions of personnel on these attributes

in medium-scale industries. The large-scale industries report mean of 5.09 and 4.97 with a lower standard deviations of 1.47 and 1.48 for the attributes of facilities dimension of QWL. The distribution of responses varies from ‘disagree’ to ‘very strongly agree’, tilting more densely towards the later, that indicates more positive perceptions of personnel on these attributes.

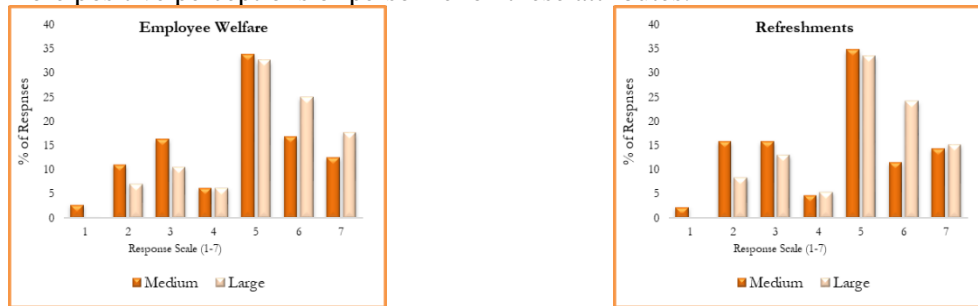


Figure 1: Facilities response distribution in terms of its items/dimensions between medium v/s large-scale manufacturing industries

Figure 1 presents the differences between medium and large-scale industries in the form of bar chart for the attributes of facilities dimension of QWL. For employee welfare (Ew) attribute, responses reported from medium-scale indicate them peaking at around five but spread almost symmetrically around it that indicates mixed perception of personnel about effects of Ew on their performance. Large-scale industries report the responses ranging in 5-7 scale and very few responses on the lower end of the scale that indicates a positive perception of personnel in larger industries about facilities, benefits and services that are in place to ensure their well-being, comfort, and overall quality of life within their workplace. The perceptions are similar even in medium-scale industries; however, spread of responses may indicate that personnel in medium-scale desire improvements in these aspects aimed at enhancing their physical, mental and social well-being that they perceive enhances their performance. For refreshments (Rf) attribute, responses reported from medium-scale indicate them peaking at around five but spread almost symmetrically around it that indicates mixed perception of personnel about effects of Rf on their performance. Large-scale industries report the responses ranging in 5-7 scale and very few responses on the lower end of the scale that indicates a positive perception of personnel in larger industries about provision of food and drinks that may include access to coffee, tea, snacks or light meals at the workplace. The perceptions are similar even in medium-scale industries; however, spread of responses may indicate that personnel in medium-scale desire improvements in these aspects aimed at enhancing their physical comfort and well-being that could keep up workplace morale and create opportunities for informal interactions and relaxation that they perceive enhances their performance.

The aspects such as policies to maintain safe working environment, healthcare, leave policies, support systems, physical amenities and social-recreational activities from Ew attribute and strategies to keep up workplace morale and platforms for informal social interactions and relaxations of Rf attribute are some of the factors that may positively affect performance in large and medium-sized industries. However, the responses reported in figure 1, indicate these aspects are perceived to be good by personnel in larger industries. In addition, the larger industries cluster more around 5-7 as supposed to that of medium-scale peaking around 5 and spreading across the scale that indicates better overall perceptions being prevalent in larger than in medium sector.

Table 5. Descriptive Statistics for Recognition

Scale	Items /Attributes	Count	Range	Mean	Standard Deviation	Response Distribution							
						Description	7	6	5	4	3	2	1
Medium	Praise	207	1-7	4.50	1.64	Count	22	35	73	10	37	22	8
						%	10.63	16.91	35.27	4.83	17.87	10.63	3.86
	Rewards			Count	15	41	75	12	27	32	5		
				%	7.25	19.81	36.23	5.80	13.04	15.46	2.42		
Large	Praise	236	1-7	5.01	1.52	Count	41	53	80	13	28	19	2
						%	17.37	22.46	33.90	5.51	11.86	8.05	0.85
	Rewards			Count	31	67	73	10	37	17	1		
				%	13.14	28.39	30.93	4.24	15.68	7.20	0.42		

Table 5 presents the descriptive statistics for Recognition dimension of QWL across medium and large-scale industries in terms of its attributes namely praise (Ps) and rewards (Re). The medium-scale industries report mean of 4.50 and 4.46 with standard deviation of 1.64 and 1.61 for the attributes of recognition dimension of QWL. The distribution varies from ‘very strongly agree’ to ‘strongly disagree’ for the attributes Ps and Re, which indicates mixed perceptions of personnel on these attributes in

medium-scale industries. The large-scale industries report mean of 5.01 and 4.96 with standard deviations of 1.52 and 1.48 for attributes of recognition dimension of QWL. The distribution of responses varies from ‘disagree’ to ‘very strongly agree’, tilting more densely towards the later, that indicates slightly more positive perceptions of personnel on these attributes.

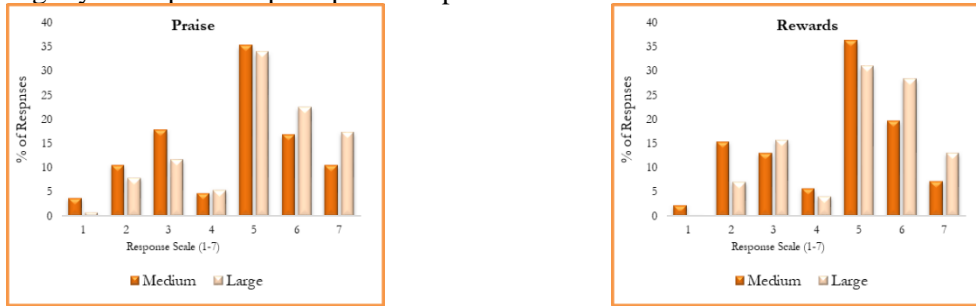


Figure 2: Recognition response distribution in terms of its items/dimensions between medium v/s large-scale manufacturing industries

Figure 2 presents the differences between medium and large-scale industries in the form of bar chart for the attributes of recognition dimension of QWL. For praise (Ps) attribute, medium-scale responses spread across the scale peaking around five and almost symmetric that indicates mixed perceptions of personnel about its effect on their performance. The responses reported by personnel in larger industries that cluster more towards 5-7 range indicate a more positive perception about positive verbal acknowledgement of work or achievements as supposed to personnel in medium-scale industries. However, personnel in medium-scale reporting a peak of five indicate that even in this sector, there is some positive perception about the Pr attribute, but a more widespread distribution may indicate that the perceptions are uncommon. For rewards (Re) attribute, the pattern of distribution is similar to that of Ps attribute, medium-scale responses spread across the scale peaking around five and almost symmetric that indicates mixed perceptions of personnel about its effect on their performance. The responses reported by personnel in larger industries that cluster more towards 5-7 range indicate a more positive perception about tangible and intangible paybacks that they receive on their efforts, performance and contributions as supposed to that of personnel in medium-scale industries. However, personnel in medium-scale reporting a peak of five indicate that even in this sector, there is some positive perception about the Re attribute, but a more widespread distribution may indicate that the perceptions are uncommon.

The aspects such as appreciative expression from peers and colleagues for a job well done, and bonuses, salary hikes or financial compensations, promotions, and WLB initiatives as those that encompass Ps and Re attributes that may have positive impact on performance across large and medium-scale industries. However, the responses reported in figure 2, indicate these aspects are perceived to be good by personnel in larger industries. In addition, the larger industries cluster more around 5-7 as supposed to that of medium-scale peaking around 5 and spreading across the scale that indicates better overall perceptions being prevalent in larger than in medium sector.

2. Inferential Statistics

Table 6: Inferential Statistics for Attributes of facilities dimension of QWL under various classification.

Group	Attribute	Mean (Large, Medium)	m.d	Confidence Interval	DoF	ts (tc)	F _s (F _c)	P-value	d	Pow
L	Ew	5.15, 4.73	0.42	0.773, 0.061	127.77	1.141 (1.979)	2.040 (1.454)	0.359	0.28	0.53
	Rf	5.10, 4.56	0.54	0.908, 0.175	131.63	1.257 (1.978)	2.148 (1.501)	0.211	0.34	0.67
M	Ew	5.06, 4.39	0.67	0.950, 0.391	182.14	1.893 (1.973)	4.244 (1.379)	0.068	0.43	1.00
	Rf	4.89, 4.35	0.54	0.818, 0.258	180.19	1.466 (1.973)	2.626 (1.384)	0.145	0.34	0.99
H	Ew	5.09, 4.77	0.51	0.880, 0.142	79.01	0.956 (1.991)	1.057 (1.574)	0.357	0.31	0.63
	Rf	5.00, 4.54	0.46	0.839, 0.088	76.33	0.818 (1.992)	0.780 (1.594)	0.416	0.28	0.49

Table 6 presents a comparative analysis of the perceived impact of facilities across its dimensions, employee welfare (Ew), and refreshments (Rf), on employee performance between large and medium-scale manufacturing industries. For the 'L' category, both Ew and Rf attribute report no statistically significant difference in employee perception between the two sectors through Welch's t-tests (t-statistic of 1.141 and 1.257 < t-critical) on their effect on their performance. Welch's ANOVA with F-statistics of 2.040 and 2.148 > F-critical indicates statistically significant variance difference between large and medium-scale manufacturing industries, but p-values of 0.359 and 0.211 > 0.05 significance level indicates no statistically significant difference. Cohen's d of 0.28 and 0.34 indicate small to moderate practical significance and power of the tests of 0.53 and 0.67 indicate the reliability of the tests to detect deviations if it exists. For the 'M' category, employee perception on the effect of Ew and Rf attributes are similar to that of 'L' category personnel. Welch's t-tests with t-statistics of 1.893 and 1.466 < t-critical indicates no significant statistically difference but Welch's ANOVA with F-statistic of 4.244 and 2.626 > F-critical indicates statistically significant variance difference between groups. P-values of 0.068 and 0.145 > 0.05 significance level indicate no statistically significant difference. Cohen's d of 0.43 and 0.34 indicate small to moderate practical significance and power of the tests are high indicating the reliability of the tests to detect deviations if it exists. For 'H' category, employee perceptions on the effects of Ew and Rf attributes on their performance report no statistically significant difference through Welch's t-tests, Welch's ANOVA and p-values.

Table 7: Inferential Statistics for Attributes of recognition dimension of QWL under various classification.

Group	Attribute	Mean (Large, Medium)	m.d	Confidence Interval	DoF	ts (tc)	F _s (F _c)	P-value	d	Pow
L	Ps	4.91, 4.31	1.60	0.987, 0.209	127.38	1.408 (1.979)	2.739 (1.498)	0.174	0.38	0.80
	Re	4.95, 4.65	0.30	0.690, 0.084	126.14	0.762 (1.979)	1.140 (1.493)	0.522	0.20	0.37
M	Ps	5.10, 4.57	0.53	0.814, 0.246	185.90	1.518 (1.973)	2.721 (1.377)	0.144	0.34	0.90
	Re	4.96, 4.34	0.62	0.890, 0.346	180.43	1.802 (1.974)	3.728 (1.373)	0.076	0.41	1.00
H	Ps	4.96, 4.69	0.52	0.890, 0.144	79.46	0.971 (1.991)	1.160 (1.579)	0.354	0.32	0.56
	Re	4.96, 4.38	0.58	0.942, 0.214	83.21	1.246 (1.989)	1.404 (1.546)	0.217	0.38	0.90

Table 7 presents comparative analysis of the perceived impact of recognition across its dimensions, praise (Ps) and rewards (Re), on employee performance between large and medium-scale manufacturing industries. For the 'L' category, employee perceptions on the effects of Ps and Re attributes on their performance are not statistically different reported through Welch's t-test (t-statistics of 1.408 and 0.762 < t-critical). Welch's ANOVA for Ps attribute however with F-statistic of 2.739 > F-critical indicate statistically significant variance difference between two sectors. No statistically significant difference is indicated through p-values. Cohen's d of 0.38 and 0.20 indicate small practical significance of the size but power of the tests are relatively higher that indicates reliability of the tests to detect deviations if it exists. For 'M' category, Welch's t-tests report no statistically significant difference in employee perceptions about effects of Ps and Re attributes on their performance, however, Welch's ANOVA with F-statistic of 2.721 and 3.728 > F-critical indicates statistically significant variance difference between groups. No statistically significant difference exists based on p-values as well. Cohen's d of 0.34 and 0.41 indicate small to moderate practical significance but high power of the tests indicate the reliability of the tests to detect any deviations if it exists. For the 'H' category, across all tests namely Welch's t-tests, Welch's ANOVA and p-values, there is no statistically significant difference in the perceptions of employees about effects of Ps and Re attributes on their performance.

5. Results of Hypothesis Testing

In the current study, Welch's t-test, Welch's ANOVA, and p-value are used to test the hypothesis. The results of the tested hypothesis are shown in Tables 6.a and 6.b. each hypothesis is examined for age groups (L, M, and H) classification. As a result, the conclusions from hypothesis testing are not inherently conclusive; rather, they are based on each of these classifications. Welch's ANOVA compares

sample variances between groups, Welch's t-test compares sample means, and p-value examines the hypothesis at the 0.05 significance level.

Table 6.a: Results of H1.0 for Age classification

Hypothesis	Cat.	Decision Parameters					
		Welch's t-test	Status	Welch's ANOVA	Status	P-value	Status
H 1.0.a: Ew	L	$t_s < t_c$	R	$F_s > F_c$	A	> 0.05	R
	M	$t_s < t_c$	R	$F_s > F_c$	A	> 0.05	R
	H	$t_s < t_c$	R	$F_s < F_c$	R	> 0.05	R
H 1.0.b: Rf	L	$t_s < t_c$	R	$F_s > F_c$	A	> 0.05	R
	M	$t_s < t_c$	R	$F_s > F_c$	A	> 0.05	R
	H	$t_s < t_c$	R	$F_s < F_c$	R	> 0.05	R

For hypothesis examining the perceived differences in the effects of facilities dimension on employee performance across its attributes 'employee welfare (Ew)' and 'refreshments (Rf)', table 6.a presents the test results. Welch's t-tests rejects the hypothesis for all classes of age groups thus stating that there is no significant differences in employee perceptions about the effects of these attributes on their performance. Results based on p-values ascertain the findings from Welch's t-tests by rejecting the hypothesis for all age categories. Welch's ANOVA accepts the hypothesis for 'L' and 'M' age categories thus stating that there is statistically significant variance difference in employee perceptions about effects of Ew and Rf attributes on their performance between large and medium-scale manufacturing industries.

Table 6.b: Results of H2.0 for Age classification

Hypothesis	Cat.	Decision Parameters					
		Welch's t-test	Status	Welch's ANOVA	Status	P-value	Status
H 1.0: Ps	L	$t_s < t_c$	R	$F_s > F_c$	A	> 0.05	R
	M	$t_s < t_c$	R	$F_s > F_c$	A	> 0.05	R
	H	$t_s < t_c$	R	$F_s < F_c$	R	> 0.05	R
H 1.0: Re	L	$t_s < t_c$	R	$F_s < F_c$	R	> 0.05	R
	M	$t_s < t_c$	R	$F_s > F_c$	A	> 0.05	R
	H	$t_s < t_c$	R	$F_s < F_c$	R	> 0.05	R

For hypothesis examining the perceived differences in the effects of recognition dimension on employee performance across its attributes 'praise (Ps)' and 'rewards (Re)', table 6.b presents the test results. Welch's t-tests rejects the hypothesis for all classes of age groups thus stating that there is no significant differences in employee perceptions about the effects of these attributes on their performance. Results based on p-values ascertain the findings from Welch's t-tests by rejecting the hypothesis for all age categories. Welch's ANOVA accepts the hypothesis for 'L' and 'M' age categories thus stating that there is statistically significant variance difference in employee perceptions about effects of Ps attribute on their performance between large and medium-scale manufacturing industries. In addition, Welch's ANOVA accepts that hypothesis for 'M' age category thus stating that there is statistically significant variance difference in employee perceptions about effects of Re attribute on their performance between large and medium-scale manufacturing industries.

6. Discussions

In organizational studies, role of facilities and recognition in enhancing employee satisfaction has drawn considerable attention evident from scholarly discourse. This comparative evaluation intends to assess attributes of facilities and recognition dimensions' influences on perceived employee performance in medium and large-scale manufacturing industries and thereby contributing to the understanding the nuanced differences that exists.

Both facilities and recognition dimensions are found to influence employee well-being and satisfaction significantly. Proper workplace ergonomics, recreational facilities and availability of welfare programs that makeup facilities dimension and the likes of praise and rewards as those that makeup recognition dimension have therefore a great bearing on overall well-being of an employee (Kerketta & Chauhan, 2023). The variations that may exist on these offerings across large and medium-scale manufacturing industries may therefore play vital note in comprehending the strategies that potentiates overall growth of industrial society, (Lobo et al., 2016), particularly in blooming industrial sectors of Bangalore and

Mysore districts of Karnataka. Comparative studies as such may propel equivalence in strategies to be evolved and deployed in enhancing the perceptions of personnel across sectors that may increase interdependency, cross effectiveness, collaborative and competitive growth that propels overall growth and sustenance of organizations and therefore the industrial sectors (Ryan & Deci, 2000).

The combination of facilities and recognition programs offer up varying degree of advantage on employee satisfaction depending on organizational sizes. Larger industrial sectors due to a more structured environment provide comprehensive programs that addresses material and recognition needs, while medium-scale industries thrive on flexibility, closer interpersonal relationships and more personalized recognition mechanisms (Baldwin & Johnson, 1996). Additionally, there arises a desire to explore the effectiveness of informal recognition in medium organizations and its comparisons to approaches that exists in larger industries (Forrier & Sels, 2003).

The analysis of facilities dimension for 'L' category revealed that they reported higher mean scores for larger industries compared to medium-scale but the difference is not statistically significant. 'Motivation', 'rewards and compensations' and 'fair deployment of policies' are inferred to accentuate better performance of 'L' personnel in medium-scale industries as supposed to larger ones, wherein these are inferred to be better. However, average scores of 4.92 suggests that enhancements of all aspects of facilities dimensions may potentiate better performance across industries. For recognition dimension, however, its essence in terms of 'perceptions of contributions in decision-making', 'schemes that motivate', 'significance of existence in an organization' and 'tangible benefits' are perceived to be better in larger industries. For both sectors, better performance from 'L' category personnel may ensue with enhancements of these attributes.

For 'M' category, the analysis reveals 'motivation', 'compensatory benefits', 'deployment of rules and policies', and 'physical and financial well-being' as aspects that may accentuate 'M' personnel's performance in medium-scale industries as supposed to larger industries, wherein these aspects seem to be better in 'M' personnel's perception. However, the average of scores is 4.71, which suggests that enhancements of all aspects of facility dimensions may potentiate better performance across industries. The analysis for recognition dimension reveals that with higher mean values, the 'M' personnel favour larger industries in terms of Ps and Re attributes, but Welch's t-test reveals no statistically significant differences, but Welch's ANOVA does report a significant difference in variance between the two scales of industries. Therefore, the analysis indicates that through enhancements in aspects such as 'participative decision-making', 'motivating through incentives', 'recognizing contributions and benefiting them', performance may potentiate amongst 'M' personnel across industries.

For 'H' category, the analysis reveals that 'on-time disbursement of salary, bonuses, etcetera' is an aspect that may accentuate their performance in medium-scale industries as supposed to larger industries, wherein these aspects seem to be better in 'H' personnel's perception. However, the average of scores is 4.9, which suggests that enhancements of all aspects of facility dimensions may potentiate better performance across industries. The analysis of recognition dimension reveals that with a mean difference of around 0.5, 'H' personnel favour larger industries on aspects of the recognition dimension of QWL, though this inference is not statistically significant. Both Welch's t-tests and Welch's ANOVA indicate that the difference between large and medium-scale industries is not significant. However, aspects such as 'involvement in decision-making' in 'H' personnel's areas of expertise may induce better performance from these 'H' personnel across industries.

7. Conclusions

In order to report a detailed analysis and inferences drawn under different classification of the 207 sample size from medium and 236 sample size from large-scale manufacturing industries in Mysore and Bangalore industrial area, a comparative analysis of the perceived impact of Facilities and recognition dimensions of QWL is presented in this paper. This analysis has uncovered variation in employees' perceptions on different aspects of these dimensions.

The analysis carried out across different demographic categorisation revealed insights on perceptions of employees about facilities and recognition. While both these dimensions play a crucial role in enhancing employee satisfaction, their effectiveness is dependent on organizational sizes. Due to their strength, larger industries might provide a formal recognition process and extensive infrastructure, whereas medium-sized industries might provide individualized and adaptable settings that encourage informal recognition and close-knit relationships. As evident, a one-size-fits-all approach may not be applicable

due to the dynamisms that exists but tailored strategies are necessary to enhance employee satisfaction across different organizational sizes. This attempt at creating equivocal ecosystem may uplift the general bearing of industrial sector and its far-reaching potential and thus elevate its greater acceptance.

Disclosure Statement

The author(s) declare that there are no conflicts of interest that relate to the research, authorship, or publication of this article.

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