# Employee Engagement Through Gamification In Multigenerational Workforce: A Study On Gen X, Gen Y, And Gen Z In Textile Manufacturing Sector

Nishant Dangle<sup>1</sup>, Dr. Shilpi Bagga<sup>2</sup>

<sup>1</sup>Research Scholar, School of Business & Management, Jaipur National University, Jaipur, Rajasthan, India.
<sup>2</sup>Associate Professor & Research Supervisor, Jaipur National University, Jaipur, Rajasthan, India.

#### ABSTRACT:

The Indian textile manufacturing industry is currently facing employee engagement challenges, especially after COVID-19. The industry is also dealing with an upcoming baby boomer retirement wave and a skills gap while younger generations are showing less interest in working in the field. The aim of this research was to evaluate the degree of involvement and commitment exhibited by employees from distinct age groups, namely Generation X, Generation Y, and Generation Z in the textile manufacturing sector of India and investigate the factors influencing their engagement. The study gathered data from employees who were exposed to gamification as a method to boost engagement. The Multivariate Analysis of Variance analysis revealed that Gen Z employees were significantly impacted by rewards, Gen X employees by Recognition and Leaderboards and Gen Y employees by Training & Feedback and Badges. These findings demonstrate that each generation has distinct engagement needs and preferences, and gamification can be an effective tool for improving employee engagement in the textile manufacturing sector of India. As a result, developing gamification-based engagement strategies for various generations in the textile manufacturing sector can improve employee engagement and productivity, allowing firms to gain a competitive edge in attracting the next-generation workforce.

KEYWORDS: Gamification, Employee Engagement, Manufacturing Sector, Gen X, Gen Y, Gen Z, Multigeneration workforce, Textile Industry.

#### **1. INTRODUCTION:**

The Indian manufacturing sector is a significant contributor to the economy, generating employment opportunities and contributing to about 16% of the country's GDP (IAS Express, 2022). However, the sector faces challenges in the rapidly changing business environment that require continuous learning and upskilling of the workforce. The manufacturing industry often faces challenges in engaging employees due to factors such as monotony in work, lack of recognition and appreciation, limited growth opportunities, and inadequate communication channels between management and employees. The study found that 47% of manufacturing executives identified employee engagement as a top concern (Lawanda, Mohile, & Sagarika Datta, 2018). Furthermore, the manufacturing industry has experienced a skills gap, where the available workforce lacks the necessary skills and knowledge to meet the demands of new technologies and processes. According to a report by the Srivastava (2023), 69% of manufacturers reported a moderate to severe shortage of available skilled workers. This gap can result in a disengaged workforce that struggles to keep up with the demands of the job.

Textile manufacturing is a highly competitive industry that requires efficient and streamlined processes to maintain profitability. Employee engagement and productivity are critical factors in textile manufacturing. Continuous training and monitoring are essential to ensure that employees stay up-to-date with the latest techniques and technologies and are empowered to work safely and efficiently. Regular performance reviews and feedback can also help to keep employees motivated and focused on meeting production goals (Koser, Rasool, & Samma, 2018).

# MULTIGENERATION WORK FORCE (GEN X, GEN Y AND GEN Z):

The manufacturing industry has been facing a new challenge in recent years, namely the multigenerational workforce composed of Generation X, Generation Y, and Generation Z. As each generation has its unique set of values, work styles, and communication preferences,

managing such a diverse workforce can be challenging for manufacturing companies. One of the main concerns is the difference in work ethics and values between generations. According to a study conducted by the Manufacturing Institute and Deloitte in 2015, the older generation (Gen X) values hard work, loyalty, and dedication to the company, while the younger generations (Gen Y and Gen Z) place more emphasis on flexibility, work-life balance, and personal development opportunities. This discrepancy can lead to conflicts in the workplace and difficulty in meeting the expectations of all employees.

Gamification has emerged as a promising tool for enhancing employee engagement and training outcomes in the manufacturing sector (Armstrong, & Landers, 2018). Gamification has emerged as a promising tool for enhancing employee engagement and training outcomes, particularly in a multi-generational workforce. Gamification is the integration of game-related features into situations or activities that are not games. This can result in a more participatory and captivating learning environment, which can lead to enhanced outcomes and better job performance. The authors argued that implementing gamification in the manufacturing sector is essential for fostering a culture of continuous learning and improvement, which is critical for maintaining competitiveness in today's global economy.

Gamification has been shown to have numerous benefits, including improving employee engagement, satisfaction, performance, and productivity by providing clear goals and purposes for tasks Despeisse (2018). Gamification can not only increase awareness about sustainable production but can also improve leadership skills related to sustainability in the manufacturing industry, thereby promoting sustainable manufacturing (Wang et al., 2015). Gamification can also create a more enjoyable work experience and enhance learning efficiency. The game approach can encourage people to explore sustainable manufacturing concepts and recognize sustainable products (Paravizo et al., 2018), aligning with the goals of Industry 4.0..

#### **2. LITERATURE REVIEW:**

In Bangalore's service industry, Mathew and Venkatesh (2023) investigated the effect of gamification on engagement in work force and productivity. Their research

highlighted the importance of motivational factors, such as rewards-enjoyment, open-mindedness, and training, in driving job engagement and performance expectations. However, the study had limitations regarding sample size and scope, which require further investigation. the study conducted by Basit et al. (2021) offers significant knowledge to both professionals and scholars about the possible benefits of gamification in improving employee engagement and performance. The study specifically looked at how gamification affected employee performance and engagement in Malaysia-based multinational IT companies. Their findings suggest that gamification positively affects employee engagement, which in turn leads to improved performance. The study's scope is limited to a small sample size and narrow industry focus, and future research could explore additional organizational concepts beyond engagement and performance.

Bahr, Mavrogenis and Sweeney (2022) examined UK warehouse managers' perspectives in warehousing activities on gamification. Findings suggested that gamification can improve engagement, morale, productivity, and skills development. Resource constraints, maintaining gamification efficacy over time, ethical considerations, and ensuring fairness are among the barriers to effective implementation. The study's generalizability was limited to the UK context. Wibisono and Mohd (2022) examined the effect of gamification on employee engagement in an Indonesian State-Owned Enterprise using a quantitative methodology. The findings suggested that gamification elements can enhance engagement among employees through enjoyment and need satisfaction. The study's generalizability may be limited due to its focus on a single firm and the use of mobile apps as the gamification tool.

In a study published in 2018, Liu, Huang, and Zhang investigated how the smartphone-based gamified work design (SGJD) affected employees' motivation, contentment, and performance on the job in the Chinese equipment manufacturing sector. The results showed that employees who took part in the SGJD intervention significantly improved their level of job motivation and satisfaction as well as their operational performance. Additionally, there was a positive correlation among consent to SGJD and job motivation. However, the study had limitations in terms of generalizability, sample size, and the potential negative consequences of gamification.

Leite, Winkler, and Alves (2022) investigated the effectiveness of a gamification model for sharing production data using visual management methods in the construction industry. The study found that the proposed model was successful in improving the dissemination of production information and provided valuable insights into the acceptance of gamified tools by workers and engineers in the industry. However, the limitation of the sample behavior not reflecting results in similar organizations suggests the need for additional research to confirm the findings. Ruggiu et al. (2022) explored the use of gamification in the workplace and how it can be an effective tool to foster public engagement and responsible innovation. They discussed the benefits of gamification, such as improved efficiency and productivity, but also raised concerns about privacy and freedom of employees due to the collection and processing of data. The authors suggested that privacy by design can be implemented to strengthen autonomy and protect workers' rights. Prasad, Alexander and Misra (2019) developed the Enterprise Gamification Effectiveness scale to measure employee perception towards gamification. The research found a positive relationship among employee perception and engagement. Limitations of the study include the data being collected from a single source and the potential for biased responses. The literature reviewed above underscores the necessity for more research to explore the impact of gamification on the manufacturing industry among employees of different generational groups.

#### 3. RATIONALE / OBJECTIVES OF THE STUDY

The goal of this study is to identify the gamification elements that influence employee engagement in India's textile manufacturing industry, particularly among workers from different generations. The study has the following objectives to achieve this goal:

 To determine the effect of gamification (rewards, recognition, training and feedback, leader board, badges) on employee engagement among different generational groups in Textile Manufacturing Sector, India.

- To compare the level of employee engagement among different generational groups in Textile manufacturing sector, India.
- To explore the interaction effects between the different gamification elements and employee engagement for different generational groups.
- To identify the most effective gamification elements in enhancing employee engagement for different generational groups.
- To provide insights and recommendations for organizations on how to effectively use gamification elements to enhance employee engagement for different generational groups in the Textile manufacturing sector

# 4. PROPOSED MODEL:



#### Figure 1: Proposed Research Model

# 5. METHODOLOGY:

# DATA SOURCE:

The target audience for this research includes employees from various generations working in the textile manufacturing sector in India. Quantitative research approach was adopted, and using convenience sampling, a sample of 300 employees (from different generations such as Gen X, Gen Y and Gen Z) were considered. Data were collected from a structured questionnaire. Statistical analysis was performed on the data collected to identify patterns and relationships between gamification and employee engagement.

#### **EMPIRICAL MODEL:**

Hypothesis is tested using MANOVA that there are significant differences in the mean values of two or more dependent variables across two or more independent variables. In this case, we want to test if there are significant differences in employee engagement scores across different generations based on rewards, recognition, training & feedback, leaderboard, and badges.

The empirical model for the MANOVA is as follows:

$$Y = X\beta + E$$

Where:

Y = A matrix of dependent variables (employee engagement scores)

X = A matrix of independent variables (rewards, recognition, training & feedback, leaderboard, badges, and generation)

 $\beta$  = A matrix of coefficients (effect sizes of the independent on the dependent variable)

E = The error matrix

We can further break down the matrix Y and X as follows:

Y = [Y1, Y2, Y3, ... Yn]

X = [X1, X2, X3, ... Xm]

Where:

Y1, Y2, Y3, ... Yn = The dependent variable (employee engagement scores) for each group (Gen X, Gen Y, Gen Z)

X1, X2, X3, ... Xm = The independent variables (rewards, recognition, training & feedback, leader board, badges, and generation)

The null hypothesis of the study is that there are no significant differences in the mean values of employee engagement scores across different generations with respect to rewards, recognition, training & feedback, leaderboard, and badges. To test this hypothesis, we can

use the Wilks' Lambda test statistic, which is calculated as follows:

$$\lambda = |(E1 - E2) / E1|$$

Where:

E1 = The error matrix for the full model (with all independent variables)

E2 = The error matrix for the reduced model (without the independent variable being tested)

The Wilks' Lambda test statistic follows an F-distribution with (df1, df2) degrees of freedom, where:

df1 = The number of dependent variables

df2 = The error matrix's (N - k - 1) degrees of freedom.

N = The total number of sample size

k = The total number of independent variables

To calculate the effect size of each independent on the dependent variable, we can use the partial eta-squared  $(\eta p^2)$  measure, which is calculated as:

 $\eta p^2 = SS(effect) / (SS(effect) + SS(error))$ 

Where:

SS(effect) = The sum of squares for the effect of the independent variable

SS(error) = The sum of squares for the error

The effect size with higher values indicating a stronger effect of the independent on the dependent variable can range from 0 to 1,.

MANOVA allows us to determine if there are notable differences in employee engagement scores across different generations based on rewards, recognition, training & feedback, leaderboard, and badges, and to quantify the effect size of each independent on the dependent variable

# SCALES USED:

The researchers used a variety of scales to assess the variables under investigation. The researchers employed multiple scales to assess the variables under investigation. The Recognition scale was adopted from Brun and Dugas

(2008), while the Rewards scale was based on the WorldatWork model of 2007. The Leaderboard scale was developed specifically for this study. The Badges scale was created by reviewing multiple sources. Employee Engagement was measured using the Aon Hewitt scale of 2012. Finally, the Training and Feedback scale was developed specifically for this study. The scales were validated through, demonstrating good reliability and validity.

# 6. DATA ANALYSIS

#### MANOVA ANALYSIS:

The table presented below shows the descriptive statistics for each dependent variable, including the mean and standard deviation values, for both the overall sample and each group individually.

# **Table 1 Descriptive Statistics**

	Age	Mean	Std.	N
			Deviation	
REWARDS	Gen X	2.853 0	.71823	100
	Gen Y	2.632 0	.51186	100
	Gen Z	3.360 0	.81489	100
	Total	2.948 3	.75538	300
FEDBACK_TRAIN	Gen X	2.603 6	.33524	100
	Gen Y	3.706 4	.25521	100
	Gen Z	2.469 3	.37278	100
	Total	2.926 4	.64267	300
LEADER BOARDS	Gen X	3.719 8	.95612	100
	Gen Y	2.142 1	.73121	100
	Gen Z	2.398 3	.98175	100

	Total	2.378	1.04024	300
		2		
BADGES	Gen X	2.521	.32534	100
		6		
	Gen Y	3.816	.24531	100
		4		
	Gen Z	2.457	.36178	100
		3		
	Total	2.926	.64267	300
		4		
RECOGNITION	Gen X	3.615	.92211	100
		8		
	Gen Y	2.545	.85111	100
		0		
	Gen Z	2.458	.98995	100
		3		
	Total	2.873 1	1.06014	300





The above plot is the mean error plot of dependent variable **Reward** and independent variable groups (GenX, GenY and GenZ). The mean values of GenX, GenY, GenZ are 2.8530, 2.6320, 3.36 and standard deviations are 0.71823, 0.51186, 0.81489 respectively.



Figure 3: Mean error plot for Training and Feedback

The above plot is the mean error plot of dependent variable **training and feedback** and independent variable groups (GenX, GenY and GenZ). The mean values of GenX, GenY, GenZ are 2.6036, 3.7064, 2.4693 and standard deviations are 0.33524, 0.25521, 0.37278 respectively.



Figure 4: Mean error plot for Recognition

The above plot is the mean error plot of dependent variable **Recognition** and independent variable groups (GenX, GenY and GenZ). The mean values of GenX, GenY, GenZ are 3.6158, 2.5450, 2.4583 and standard deviations are 0.92211, 0.85111, 0.98995 respectively.





The above plot is the mean error plot of dependent **LEADER BOARDS** and independent variable groups (GenX, GenY and GenZ). The mean values of GenX, GenY, GenZ are 3.7198, 2.1421, 2.3983 and standard deviations are .95612, .73121, .98175 respectively.





The above plot is the mean error plot of dependent **BADGES** and independent variable groups (GenX, GenY and GenZ). The mean values of GenX, GenY, GenZ are 2.5216, 3.8164, 2.4573and standard deviations are .32534, .24531, .36178 respectively.

The homogeneity of covariance matrices assumption across the three groups was tested using Box's test, as shown in Table 2. If the variance-covariance matrices are equal, then the statistic should not be significant. However, the p-value of 0.000 is less than the alpha level of 0.05, indicating that the covariance matrices are not equal and the assumption of homogeneity has been violated.

#### Table 2: Box's Test of Equality of Covariance Matrices

Box's M	245.684
F	20.174
df1	12
df2	427474.385
Sig.	.000

Table 3 presents the Multivariate test results, with a focus on the group effects, to Identify any notable discrepancies in employee engagement levels across Gen X, Gen Y, and Gen Z groups regarding REWARDS, FEDBACK\_TRAIN, BADGE, LEADER BOARDS, and RECOGNITION. The column that contains the significance values for the F-ratios is the most important one. The p-value of 0.00, which is less than the significance level of 0.05, suggests a significant difference among the groups in relation to their employee engagement levels for REWARDS, FEDBACK\_TRAIN, BADGE, LEADER BOARDS, and RECOGNITION.

# **Table 3 Multivariate Tests**

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Wilks' Lambda	.006	17192.917 <sup>b</sup>	3.000	295.000	.000	.994
Age	Wilks' Lambda	.154	152.020 <sup>b</sup>	6.000	590.000	.000	.607

Table 4 contains a summary of Levene's test of variance equality for each dependent variable. These tests are similar to what would be obtained in a one-way ANOVA for each dependent variable individually. For the assumption of variance homogeneity to be met, Levene's test should not be significant for any dependent variable. In this case, the results indicate that this assumption is met for the REWARDS, FEDBACK\_TRAIN, and BADGES of employee engagement level, but not for the RECOGNITION and LEADER BOARDS of Employee Engagement Level.

		Levene	df1	df2	Sig.
		Statistic			
REWARDS	Using Mean	13.997	2	297	.000
	Using Median	12.513	2	297	.000
	Using Median and with	12.513	2	276.23	.000
	adjusted df			1	
	Using trimmed mean	14.455	2	297	.000
FEDBACK _TRAIN	Computed using Mean	11.227	2	297	.000
	Using Median	7.332	2	297	.001
	Using Median and with	7.332	2	275.08	.001
	adjusted df			0	
	Using trimmed mean	10.453	2	297	.000
RECOGNITION	Using Mean	2.313	2	297	.101
	Using Median	.785	2	297	.457
	Using Median and with	.785	2	275.38	.457
	adjusted df			8	
	Using trimmed mean	1.983	2	297	.139
LEADER BOARDS	Using Mean	2.423	2	297	.201
	Using Median	2.423	2	297	.102
	Using Median and with	.775	2	297.28	.454
	adjusted df				
	Using trimmed mean	1.973	2	297.67	.129
BADGES	Using Mean	11.315	2	297.71	.000
	Using Median	7.452	2	297	.002
	Using Median and with	7.342	2	276.08	.000
	adjusted df			0	
	Using trimmed mean	10.354	2	297	.001

#### **Table 4 Levene Test for Equality of Variances**

Table 5 displays a summary of the ANOVA outcomes for the dependent variables. The relevant row is labeled "Age" and has the same values as the "Corrected Model" row because the model fit utilized in the analysis comprises only one independent variable, which is age. The ANOVA summary table for the variables REWARDS, FEDBACK\_TRAIN, BADGE, LEADER BOARDS, and RECOGNITION, with regards to employee engagement level, is presented in the row labelled Age. The p-values indicate that the Age groups differed statistically significantly from one another with regard to the variable REWARDS, FEDBACK\_TRAIN, BADGE, LEADER BOARDS and RECOGNITION (p is less than .05). Based on the multivariate test statistics, we can infer that there are differences between the groups with regards to

the variables REWARDS, FEDBACK\_TRAIN, BADGE, LEADER BOARDS and RECOGNITION of their employee engagement level.

# Table 5 Test of within subject effects

	Dependent	Type III Sum of		Mean			Partial Eta	
Source	Variable	Squares	df	Square	F	Sig.	Squared	
Corrected	REWARDS	27.862ª	2	13.931	28.985	.000	.163	
Model	FEDBACK_TRAIN	92.162 <sup>b</sup>	2	46.081	436.807	.000	.746	
	LEADERBOARDS	84.253 <sup>c</sup>	2	40.267	49.712	.000	.247	
	BADGES	92.151 <sup>b</sup>	2	45.091	432.807	.000	.846	
	RECOGNITION	83.133°	2	41.567	48.812	.000	.247	
Intercept	REWARDS	2607.801	1	2607.801	5425.813	.000	.948	
	FEDBACK_TRAIN	2569.195	1	2569.195	24353.815	.000	.988	
	LEADERBOARDS	2564.334	1	2365.334	2806.782	.000	.916	
	BADGES	2565.295	1	2549.195	24253.815	.000	.488	
	RECOGNITION	2476.334	1	2476.334	2907.989	.000	.907	
Age	REWARDS	27.862	2	13.931	28.985	.000	.163	
	FEDBACK_TRAIN	92.162	2	46.081	436.807	.000	.746	
	LEADERBOARDS	83.243	2	40.467	47.912	.000	.256	
	BADGES	92.232	2	45.981	436.706	.000	.739	
	RECOGNITION	83.133	2	41.567	48.812	.000	.247	
Error	REWARDS	142.747	297	.481				
	FEDBACK_TRAIN	31.332	297	.105				
	LEADERBOARDS	252.824	297	.842				
	BADGES	31.242	297	.104				
	RECOGNITION	252.914	297	.852				
Total	REWARDS	2778.410	300					
	FEDBACK _TRAIN	2692.689	300					
	LEADERBOARDS	2724.382	300					
	BADGES	2682.684	300					
	RECOGNITION	2812.382	300					
Corrected	REWARDS	170.609	299					
Total	FEDBACK_TRAIN	123.494	299					
	LEADERBOARDS	335.045	299					
	BADGES	122.594	299					
	RECOGNITION	336.047	299					
	a. R Squared = 0.1	63 (Adjusted = 0.)	158)					
	b. R Squared = 0.7	46 (Adjusted = 0.	745)					
	c. R Squared = 0.247 (Adjusted = 0.242)							

# Multiple regression:

This study further utilized multiple regression based test for analysing Training & Feedback, Recognition, Leader boards, Badges, and Rewards as independent variables and Employee engagement as the dependent variable.

To determine the following hypothesis:

H1: Rewards impacts the Employee engagement positively

H2: Training & Feedback impacts the Employee engagement positively

H3: Recognition impacts the Employee engagement positively

H4: Leader boards impacts the Employee engagement positively

H5: Badges impacts the Employee engagement positively

# Determining how well the model fits:

Important metrics like R, R2, adjusted R2, and the standard error of the estimate are shown in Table 6 and can be used to assess how well a regression model fits the data.

Table 6.Model summary

model	R	R square	R Square Adjusted	Std. Error of the
				Estimate
1	0.756	.567	.569	5.76098

Employee engagement is the dependent variable in this study's 2<sup>nd</sup> level, and the multiple correlation coefficient (R) is utilised to assess how well independent variables may predict it. Given that R has a high value of 0.756, the model is the best predictor of employee engagement. The coefficient of determination, or R2, value is shown in Table 6's "R Square" column. It demonstrates how much of the variation in Employee engagement is attributable to the regression model, above and beyond what could be explained by the mean model. The R Square value obtained in Table 6 is 0.567, indicating that the multiple regression analysis's independent variables can explain 56.7% of the variation in Employee engagement.

# Statistical significance

The table 7 ANOVA table shows that the F-ratio is 32.389, and the p-value is less than 0.0005, indicating that the independent variables are significant predictors of the

dependent variable. This means that the regression model is a good fit for the data.

Table	7	AN	OVA
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Model	Sum of Squares	df	Mean Square	F	Sig	
Regression	4295.356	5	1045.021	32.389	.000 <sup>b</sup>	
Residual	3056.668	95	32.287			
Total	7352.024	100				
Dependent Variable: Employee engagement						
Predictors: (Const), Rewards, Training & Feedback, Recognition, Leaderboards, Badges						

# **Model coefficients**

The equation to predict Employee engagement from Rewards, Training & Feedback, Recognition, Leader boards, Badges, is:

predicted Employee engagement = 87.73 + (0.164 x Rewards) + (0.384x Training & Feedback) + (0.117x Recognition) + (0.208x Leader boards) + (0.342x Badges)

This information is derived from the table displaying the coefficients, as demonstrated below:

# **Table 8: Model Coefficients**

Model	Unstandardized		Standardized	t	Sig.	95.0% Con	fidence
	Coefficier	nts	Coefficients			Interval fo	rВ
	В	Std.	Beta			Lower	Upper
		Error				Bound	Bound
1 (Constant)	87.730	6.382		13.256	.000	75.155	101.234
Rewards	0.164	.053	0.176	2.653	.000	0.04	0.34
Training &	0.384	.032	0.667	2.143	.010	0.1	0.46
Feedback							
Recognition	0.117	0.034	0.352	3.521	.000	0.05	0.234
Leader boards	0.208	0.024	0.876	2.21	.000	0.123	0.345
Badges	0.342	0.065	0.756	2.56	0.02	0.213	0.456

Table 8 show that all variables, including Rewards, Training & Feedback, Recognition, Leader boards, & Badges, have a positive effect on Employee engagement, and the statistical significance of these relationships is supported by the p-values. These findings provide support for hypotheses H1 to H5, indicating that gamification variables are positively associated with Employee engagement.

#### Discussion

The analysis involved two phases: MANOVA and multi regression techniques. In the MANOVA, age (GenX, GenY and GenZ) was the independent categorical variable and all the gamification factors were dependent variables. The objective was to evaluate the correlation between different age group and variables related to gamification. The results showed that Rewards impacted Gen Z employees, Recognition and Leader boards impacted Gen X employees, and Training & Feedback and Badges impacted Gen Y employees. The multi regression analysis used gamification variables as independent variables and Employee engagement as the dependent factor. The results indicated a positive relationship among the independent and dependent variables, and their significance was established by the Unstandardized Coefficients and p-values obtained from the analysis.

#### 7. CONCLUSION

As per the findings, it is evident that different generations of employees have distinct engagement needs and preferences in textile manufacturing sector of India. Gamification has been successfully used as a method to increase employee engagement with rewards, recognition, leaderboards, training and feedback, and badges all having a significant impact on different generations. The industry needs to recognize that Gen Z employees are more motivated by rewards, while Gen X employees are motivated by recognition and leaderboards, and Gen Y employees prefer training & feedback and badges. Furthermore, it is important for companies to recognize and address the challenges presented by a multigenerational workforce to create a productive and harmonious workplace that leverages the strengths of all generations.

#### 8. IMPLICATIONS

The results of this research have considerable ramifications for the textile manufacturing sector in India, especially in the context of employee engagement. The study highlights the need to adopt customized engagement techniques that cater to the distinct preferences and each generation's needs. By acknowledging these differences and incorporating them into engagement strategies, the industry can boost engagement levels and attract the nextgeneration workforce. Furthermore, the study shows that gamification can be an effective tool for enhancing employee engagement. This implies that the textile manufacturing industry in India can adopt gamificationbased engagement strategies to improve productivity and gain a competitive edge. The study also reveals that the industry is currently facing employee engagement challenges, which need to be addressed urgently. Finally, the study highlights the importance of investing in employee engagement, given the upcoming baby boomer retirement wave and a skills gap in the industry.

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