

DEVELOPING ROBUST EMPLOYEE CREATIVITY FRAMEWORK: INSIGHTS FROM THE MANUFACTURING INDUSTRY OF PUNJAB

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Abstract

Employee creativity is one of the crucial aspects for the growth and competence of the organizations including medium and large-scale manufacturing organizations. Thus, the current study aims to develop a robust model of employee creativity within medium and large-scale manufacturing industries. A sample of 400 employees at the middle management level was selected for this purpose. The research examines various employee-specific, organizational, and facilitating factors that influence employee creativity. Employee-specific factors analyzed in the study include knowledge, skills, intrinsic motivation, self-efficacy, and personality. Organizational factors encompass work autonomy, leader-member exchange, and extrinsic motivation. Facilitating conditions are also considered, focusing on barriers that may hinder employee performance. Using structural equation modeling, the study reveals significant direct impact of knowledge, skills, intrinsic motivation, work autonomy, and extrinsic motivation on employee creativity. Additionally, barriers faced by employees show inverse impact on creativity. Facilitating conditions indirectly affect creativity through their influence on work autonomy, leader-member exchange, and extrinsic motivation. These results indicate that enhancement in the creativity level of employees can not only be addressed only by individual and organizational facets but also by the facilitating conditions which reduce the impact of organizational barriers. The implications of the study include strategies for nurturing a supportive environment that allows autonomy, balances motivation (both intrinsic and extrinsic) and encouraging leader-member relationship. The present study also identifies various avenues for the future research. Findings of the present study have highlighted potential cohort of employee creativity in the manufacturing settings.

Keywords: autonomy, barriers, creativity, knowledge, motivation, skills.

INTRODUCTION

In today's knowledge-driven economy, employee creativity stands as a pivotal determinant for gaining competitive advantage (Gonlepa et al., 2023). It embodies unique intellectual capital of employees, manifesting in innovative ideas crucial for task success (Jain and Jain, 2017). Consequently, research attention has escalated towards understanding the intricacies of employee creativity, particularly in knowledge-intensive domains (Gonlepa et al., 2023). Defined as the ability to generate novel ideas essential for effective task completion, employee creativity significantly enhances organizational performance (Yesuf et al., 2023; Yang and Zhao, 2021). This has prompted extensive investigation into the drivers and outcomes of employee creativity, revealing its positive correlation with employee performance and organizational profitability (Yang and Zhao, 2021; Rumanti et al., 2023). Further, empirical

evidences also underscore impact of employee creativity on individual factors like career advancement, intellectual capabilities, and continuous learning (Shalley et al., 2009), as well as organizational factors including competitiveness, productivity, and market positioning (Gu et al., 2015). Therefore, it is crucial for organizations to comprehend these dynamics in order to foster and leverage employee creativity effectively, through a thorough investigation of factors that either facilitate or hinder it.

Accordingly, various research attempts have been made to explore dynamics of employee creativity. In this regard, research attempts are found to reveal two segments of antecedents, namely, individual-specific and organizational-specific factors. Individual-specific factors encompass attributes such as knowledge, skills, and self-efficacy (Gonlepa et al., 2023; Almuraqab and Andaleeb, 2021), while organizational-specific factors include

extrinsic motivation, autonomy in work, and leader-member exchanges (Guo et al., 2021; Safa and Mohamed, 2020). Moreover, studies have also emphasized significant role of organizational behavior in shaping employee creativity (Mostafa and El-Masry, 2008; Mostafa, 2005). Despite these advancements, there remains a notable research gap concerning the dynamics of employee creativity within medium and large-scale manufacturing enterprises in Punjab, India. This study seeks to develop a comprehensive model investigating the factors influencing employee creativity in this specific context.

II. AVAILABLE RESEARCH EVIDENCES

Employee Creativity and Employee-Specific Factors

The importance of understanding the subject-matter emerges as a critical factor influencing employee creativity, as highlighted by Yesuf et al. (2023). When employees possess adequate knowledge and skills relevant to their tasks, they are more likely to introduce innovative ideas within their organization (Ma et al., 2021; Ke, 2018). This knowledge enrichment not only enhances employees' intellectual capacities but also widens their vision, enabling them to contribute creatively (Albooshi, 2018). Moreover, possessing domain-specific knowledge acts as an intrinsic motivator, boosting employees' confidence in their ability to fulfill responsibilities effectively, which in turn fosters creativity (Almuraqab et al., 2021; Jin and Suntraynth, 2022).

Personality traits, particularly proactive personality, have also been identified as influential in fostering employee innovation (Roth et al., 2022; Gupta et al., 2019). A proactive personality reflects an employee's initiative to exert influence in their environment, actively seeking opportunities and persisting until goals are achieved (Wang et al., 2022; Deng et al., 2022). This proactive stance correlates positively with heightened creativity in the workplace (Zhang et al., 2021) and is linked to higher self-efficacy levels, which further enhance creativity (Karimi et al., 2021).

Self-efficacy itself plays a pivotal role in driving employee creativity, as indicated by Son and Nguyen (2023) and Santoso et al. (2019). Employees with high self-efficacy are more likely to independently seek solutions and explore multiple possibilities, thereby enhancing their creative output (Yang et al., 2021). Seeking constructive feedback also contributes to boosting self-efficacy, which in turn supports creative abilities (Cheng and Zhang, 2019). This discussion indicates relevance of knowledge, skills, personality, self-efficacy and intrinsic motivation in different contexts and setting. Accordingly, the hypothesis framed include:

H01: Knowledge has no significant impact on employee creativity.

H02: Skills have no significant impact on employee creativity.

H03: Personality has no significant impact on employee creativity.

H04: Self-efficacy has no significant impact on employee creativity.

H05: Intrinsic motivation has no significant impact on employee creativity.

Employee Creativity and Organizational-Specific Factors

In addition, the creativity of employees has also been found to be contingent upon organizational-specific characteristics. Effective leadership plays crucial role in fostering an environment where employees can implement innovative ideas effectively (Fraihat et al., 2023). Leaders who are receptive to employees' ideas and proposals encourage them to utilize creativity in their roles (Khasawneh et al., 2022). Moreover, the quality of leader-member exchange is pivotal; strong relationships characterized by trust and support enhance psychological capital, thereby stimulating creativity among employees (Allison, 2021; Upadhyay and Kumar, 2020).

The Ability-Motivation-Opportunity (AMO) framework, as proposed by Cai et al. (2020), suggests that aligning employees' abilities with

suitable opportunities can enhance creativity. This framework emphasizes the role of external motivation, such as appreciation and recognition, in fostering creative performance. However, the provision of extrinsic rewards needs careful consideration, as excessive emphasis on rewards can potentially stifle intrinsic motivation and creativity (Muzafary et al., 2019).

Furthermore, the level of autonomy granted to employees in their work environment significantly influences their creativity (Guo et al., 2012). Greater autonomy allows employees to independently determine how they approach tasks, fostering creativity and optimal performance (Safa and Mohamed, 2020). When employees have the freedom to choose their methods and innovate within their roles, they are more likely to contribute creatively to organizational objectives. Thus, organizational-specific factors such as effective leadership, positive leader-member exchange, alignment of abilities with opportunities, and appropriate levels of work autonomy are critical in cultivating an environment conducive to employee creativity. These factors not only empower employees to generate and implement innovative ideas but also enhance their overall job satisfaction and organizational commitment. Accordingly, the hypothesis include:

H06: Work autonomy has no significant impact on employee creativity.

H07: Extrinsic motivation has no significant impact on employee creativity.

H08: Leader-Member exchange has no significant impact on employee creativity.

Employee Creativity and Organizational Barriers

Amabile et al. (1996) have significantly contributed to the understanding of how organizational obstacles impact employee creativity through their component model, also known as the organizational facet model. This model illustrates how factors such as rigid hierarchical structures and overly critical management can diminish employee motivation. Building on this framework, Walter (2012) empirically validated these insights, finding

that barriers like risk aversion, time constraints, poor physical work environments, and internal conflicts exert substantial negative effects on employee creativity.

Numerous studies have further explored impact of organizational obstacles on employee creativity, identifying a range of factors including lack of cohesion among teams, high job demands, rigid regulations, negative feedback, and intimidating performance evaluations (Saleem et al., 2021; Mostafa and El-Masry, 2008; Mostafa, 2005).

Despite extensive research on the influence of both employee-specific and organizational-related factors, as well as organizational barriers, on employee creativity in various global contexts (Miao et al., 2020; Minh-Duc and Huu-Lam, 2019; Newman et al., 2018; Gupta and Chadha, 2017; Peng et al., 2017), there remains a notable gap in research specifically focusing on the medium and large-scale manufacturing industry in Punjab, India. Punjab, with its robust industrial sector contributing significantly to the national economy, presents a unique context for exploring factors influencing employee creativity (Meena, 2023). To the best of our knowledge, no comprehensive study has investigated the dynamics of employee creativity within Punjab's manufacturing sector despite its strategic importance. Therefore, there is a critical need for research that examines how employee-specific attributes, organizational factors, and barriers influence creativity within this specific regional and industrial context. Such research could provide valuable insights for organizational leaders and policymakers aiming to enhance creativity and innovation in Punjab's manufacturing enterprises.

Accordingly, the hypotheses include:

H09: Organizational barriers have no significant impact on employee creativity.

Based on the aforementioned hypothesis, a conceptual Employee Creativity (EC) model has been framed and represented in the Figure 1.

III. RESEARCH METHODOLOGY

Sample Design

The present endeavor focused on middle-level management personnel in medium and large-scale industries located across the state of Punjab, India. Serving as a vital link between strategy and execution, driving innovation, problem solving and process optimization, creativity of the employees at the middle level management becomes crucial for enhancing organizational competence (Dubina, 2013). Accordingly, a district-wise list of 1080 registered units (871 medium-scale units and 209 large-scale units) for the year 2020-21 in Punjab, has been assessed from the Department of Industries and Commerce, Punjab. From the 1,080 registered units, seven districts covering 80% of the total units have been selected including Ludhiana, Fatehgarh Sahib, SAS Nagar, Patiala, Bathinda, Amritsar, and Malerkotla. Proportionate sampling approach has been employed to ensure equal representation of medium and large-scale units in the sample. A total of 100 units were selected, with four employees sampled from each, leading to 400 responses. The sample size was calculated using Yamane's formula, considering a population of 310,000 employees and a 5% margin of error. Rigorous checks ensured data quality, and the survey was conducted from November 2021 to June 2022.

Development of Questionnaire

Data was collected using a structured questionnaire divided into socio-economic status and factors influencing creativity among middle-level managers in Punjab's medium and large-scale industries. Dimensions assessed included employee creativity, knowledge, skills, personality traits, self-efficacy, motivation, work autonomy, leader-member exchange, incentives, and organizational barriers (Refer Annexure I) and five point-Likert type scale has been utilized to capture the responses.

Demographic Profile of the Sample

The demographic profile of the sample reveals that a majority of the employees are males aged over 45 years with educational qualifications equivalent to

graduation. Most employees have been with their units for less than 3 years and earn a monthly personal income of less than INR 30,000. One-fourth of the sample works in food processing, followed by agricultural and allied products sectors.

IV. DATA ANALYSIS

Data Adequacy Test for Constructs

The normality of the data was evaluated based on standard deviation, skewness, and kurtosis values following guidelines by Hair et al. (2017). Internal consistency across all scales was assessed using Cronbach's alpha, demonstrating values ranging from 0.80 to 0.89 for constructs such as employee creativity (EC), knowledge (Kn), skills (Sk), personality traits (PP), self-efficacy (SE), intrinsic motivation (IM), work autonomy (WA), leader-member exchange (LM), extrinsic motivation (EM), and organizational barriers (OB).

Further, Exploratory Factor Analysis (EFA) with principal component analysis and varimax rotation assessed factorizability. Kaiser-Meyer-Olkin (KMO) values ranged from 0.745 to 0.925, and Bartlett's test of sphericity was significant ($p < 0.01$), aligning with norms recommended by Hair et al. (2017) and Beaumont (2012). Communalities and factor loadings exceeded the recommended threshold value of 0.50 and latent root criterion confirmed single-factor solutions for all constructs, explaining variance ranging from 58.012% to 70.104%.

Furthermore, Confirmatory Factor Analysis (CFA), following guidelines by Willmer et al. (2019) and Hair et al. (2017), validated structural validity with construct validity exceeding 0.50 and reliability exceeding 0.70 (see Annexure II). Model fit indices further supported the structural validity of the constructs (refer Annexure III). Also, the correlation analysis was conducted to assess multicollinearity, adhering to Zainudin's (2015) guideline that correlation coefficients should not exceed 0.85. Results presented in the Table II indicate that none of the correlation coefficients exceeded this threshold, thus confirming the

absence of multicollinearity.

INSERT TABLE II ABOUT HERE

The discriminant validity was ensured by comparing correlation coefficients with the respective average variance extracted (AVE) values, as recommended by Hammer et al. (2011). As reported in the Table II, the AVE values were consistently higher than the corresponding correlation coefficients across the study variables, validating discriminant validity. These analyses reinforce the robustness of the data and support the validity of the constructs examined in the study.

Structural Results of EC Model

Primarily, the values of critical ratios have been examined for the twelve paths (refer Figure 1) for which the said values come out to be statistically insignificant for two paths, that is, $EC < SE$ and $EC < PP$ which indicates the need for the modification the conceptual model. Accordingly, these two paths have been dropped from the conceptual model and the SEM has been run again. For the modified model, all the paths are found to be statistically significant, that is, $WA < OB$ (0.43; $p < 0.01$); $EM < OB$ (0.50; $p < 0.01$); $LM < OB$ (0.02; $p < 0.01$); $EC < OB$ (0.10; $p < 0.10$); $EC < Kn$ (0.39; $p < 0.01$); $EC < Sk$ (0.22; $p < 0.01$); $EC < IM$ (0.10; $p < 0.05$); $EC < WA$ (0.14; $p < 0.01$); $EC < EM$ (0.09; $p < 0.05$); and $EC < LM$ (0.13; $p < 0.01$). Further, the values of model fit indices are also found to meet the referential criterion values, that is, $CMIN = 4.476 < 5$; $RMSEA = 0.05 < 0.06$; $GFI = 0.87 > 0.85$; $AGFI = 0.82 > 0.80$; and $CFI = 0.91 > 0.90$. This confirms the statistical fitness of the modified conceptual EC model. Thus, this model has been named as Final EC Model and the model has been represented in the Figure 2.

INSERT FIGURE 2 ABOUT HERE

The outcome from the Employee Creativity (EC) model indicates significant impact of certain variables. Specifically, knowledge (Kn) was found to have a statistically significant positive effect on employee creativity (EC), with a coefficient of 0.41 ($p < 0.01$). This supports the rejection of hypothesis H01, suggesting that increasing knowledge

enhances employee creativity. Similarly, skills (Sk) and intrinsic motivation (IM) also showed statistically significant impacts on employee creativity, with coefficients of 0.20 and 0.09, respectively ($p < 0.01$), leading to the rejection of hypotheses H02 and H05. Further, the relatively higher value of parameter estimates in case of Kn unveils knowledge as the strongest predictor of employee creativity, followed by skills and intrinsic motivation.

However, hypotheses H03 and H04, which proposed significant impacts of personality (PP) and self-efficacy (SE) on employee creativity, were accepted as their coefficients were found to be statistically insignificant (refer to Table III). This implies that personality traits and self-efficacy do not significantly influence employee creativity in this context.

INSERT TABLE III ABOUT HERE

The analysis of organizational factors in relation to employee creativity (EC) reveals significant impacts across several dimensions. Specifically, job autonomy (WA), extrinsic motivation (EM), and leader-member exchange (LM) were found to have statistically significant coefficients in predicting employee creativity (EC). The coefficients were 0.15 ($p < 0.01$) for $EC < WA$, 0.09 ($p < 0.05$) for $EC < EM$, and 0.01 ($p < 0.05$) for $EC < LM$, indicating that these organizational parameters influence creativity positively. Consequently, hypotheses H06, H07, and H08 were rejected, affirming their significant impacts. Job autonomy (WA) exhibited the highest coefficient among these factors, suggesting it has the strongest predictive influence on creativity compared to leader-member exchange and extrinsic motivation.

Additionally, organizational barriers (OB) were found to significantly impact employee creativity (EC) with a coefficient of 0.08 and a p-value of less than 0.10. OB not only directly influences EC but also indirectly affects it through WA, LM, and EM. Decreasing organizational barriers was associated with increased job autonomy (effect size = 0.32, $p <$

0.05), enhanced leader-member exchange (effect size = 0.19, $p < 0.01$), and higher extrinsic motivation (effect size = 0.41, $p < 0.01$). The indirect effects of OB on EC through WA, EM, and LM were calculated as 0.048, 0.0369, and 0.028, respectively. This underscores OB's substantial impact on EC through these mediating factors, highlighting its multifaceted influence on employee creativity.

V. FINDINGS

The present endeavour has unveiled knowledge as a significant predictor of employee creativity, with findings showing that enhancing knowledge of employees also enhances their ability to innovate. This aligns with studies by Bagaria et al. (2022) and Yang et al. (2022). Similarly, enriching both domain-specific and general skills also found to improve creativity, emphasizing the importance of continuous skill development. These findings are consistent with the works of Layyinah and Subiyanto (2022) and Ke (2018). Further, confidence of the employees in their ability to innovate has also emerged as a crucial factor. This supports earlier research by Hasse et al. (2018) and Brockhus et al. (2014), emphasizing that self-efficacy strengthens creative processes. Both intrinsic and extrinsic motivation were found to significantly enhance creativity. This suggests that sustained motivation drives higher creative outputs corroborating with the findings of Zhang et al. (2021) and Lin et al. (2022).

Among the organizational facets, work autonomy also found to be critical for shaping the creativity level of the employees. This shows that employees, with freedom to manage their tasks, employees higher level of creativity corroborating with the findings of Alhassan et al. (2022) and Jaiswal and Dhar (2017). Additionally, positive relationships between leaders and employees (effective leader-member exchange), has also shown instrumental role in enhancing creativity of employees. Effective leader-member exchange build trust and confidence in employees and fosters effective communication which encourages employees for more creative work. The findings are consistent with

the findings of Xie et al. (2020) and Volmer et al. (2012).

However, organizational barriers are noticed to hinder the creativity level of employees. Insufficient managerial support, lack of coherence, inadequate infrastructure, etc., found to restrict creativity level of employees. Such barriers limit the enabling conditions including job autonomy, extrinsic motivation and effectiveness of leader-member exchange phenomenon, thereby, restricting the employees while showcasing their creativity at the workplace. Aligning with the findings of Saleem et al. (2022) and Mostafa and El-Masry (2008), the study has shown that enhanced organizational barriers reduce creativity level of the employees. Overall, the findings suggest that while personal attributes like knowledge, skills, and motivation are vital, organizational dynamics such as leadership quality and the removal of barriers are equally important to fully realize employee creative potential.

VI. IMPLICATIONS

The present research synthesizes the existing literature by integrating personal, organizational, and environmental factors into a unified framework for understanding employee creativity. It emphasizes dual role of individual attributes and contextual influences, providing a comprehensive perspective for future research.

Practically, the findings suggest several innovative strategies to foster creativity in organizations. One recommendation is the establishment of Creativity Incubation Hubs-dedicated spaces where employees from different departments collaborate on innovative projects outside their routine tasks. These hubs can use methods like design thinking and cross-functional brainstorming to stimulate new ideas. Another suggestion is the implementation of Personalized Creativity Dashboards, leveraging AI-powered tools to track and enhance individual and team creativity metrics, providing actionable insights for improvement.

Organizations can also adopt Reverse Mentoring

Programs, where younger employees share fresh perspectives and technological insights with senior staff. This approach encourages cross-generational learning and sparks innovative thinking. Additionally, providing flexible work models that allow employees greater autonomy in scheduling and task management can encourage experimentation and risk-taking, fostering a culture of innovation.

Leadership development programs should focus on building trust, empathy, and effective communication skills in leaders to strengthen their relationships with employees. Such relationships are crucial for fostering a supportive environment conducive to creativity. Lastly, addressing organizational barriers such as inadequate infrastructure and limited managerial support is essential to create enabling conditions for innovation.

By implementing these unique strategies alongside traditional practices like skill enhancement and open communication, organizations can nurture a culture of creativity that ensures sustainable innovation and competitiveness. These implications serve as actionable pathways for companies aiming to maximize their creative potential.

CONCLUSION

This study identified critical factors influencing employee creativity in Punjab's medium and large-scale manufacturing plants. Knowledge and skills emerged as significant drivers of creativity, while intrinsic and extrinsic motivation and work autonomy also played pivotal roles. Positive leader-member relationships were found to be instrumental in fostering a creative environment. Conversely, organizational barriers, including limited coherence and managerial support, hindered creativity. By addressing these barriers and leveraging the enabling factors, organizations can enhance innovation and competitiveness. Future research should integrate objective measures of creativity, expand to other sectors and regions,

and consider demographic factors to gain a broader understanding of creativity dynamics. This study lays a solid foundation for exploring how organizations can create environments that nurture and sustain employee creativity.

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Annexure I: Conceptualization of the Measures

Constructs	Definition	Sources
Employee Creativity	The extent to which employees utilize new ideas to accomplish tasks or overcome problems.	The Zhou and George (2001)
Knowledge	The extent to which individuals have the requisite information to effectively do their assigned tasks.	Birdi et al. (2016) and Dutton et al. (2001)
Skills	Proficiency of employees in effectively doing their assigned tasks.	Birdi et al. (2016)
Personality	Proactive attribute of employees that drives them to actively pursue new opportunities and persistently strive to achieve their goals.	Seibert et al. (1999)
Self-Efficacy	The characteristic that describes an employee's inclination to autonomously accomplish assigned tasks without significant dependence on external assistance.	by Chen et al. (2001) and Schwarzer and Jerusalem (1995)
Intrinsic Motivation	The innate drive that motivates workers to perform at a high level of efficiency and effectiveness.	Tierney et al. (1999).
Work Autonomy	The extent to which employees possess the capacity to exercise discretion in determining the methods and strategies to carry out their assigned tasks.	Breaugh (1985)
Leader-Member Exchange	The dynamic between employees and their leaders, which is marked by a reciprocal relationship of esteem and confidence.	Robert and Vandenberghe (2020); and Scandura and Graen (1984)
Extrinsic Motivation	The external factors that incentivize employees to perform their work in the desired manner.	Nielsen (2018), Tremblay et al. (2009), and Guay et al. (2000)
Organizational Barrier	The variables that impede personnel from performing their work with effectiveness and efficiency.	Wong and Pang (2003)

Annexure I: Conceptualization of the Measures

Items	Constructs										Total of Factor Loadings	Item Reliability	Measurement Error
	EC	Kn	Sk	PP	SE	IM	WA	LM	EM	OB			
Ec1	0.6										5.16	0.36	0.64
Ec2	0.84											0.71	0.29
Ec3	0.63											0.40	0.60
Ec4	0.75											0.56	0.44
Ec5	0.57											0.32	0.68
Ec6	0.88											0.77	0.23
Ec7	0.89											0.79	0.21
Kn1		0.98									4.29	0.99	0.04
Kn2		0.60										0.59	0.64
Kn3		0.59										0.58	0.65
Kn4		0.57										0.56	0.68
Kn5		0.93										0.93	0.14
Kn6		0.62										0.62	0.62
Sk1			0.92								3.45	0.85	0.15
Sk2			0.55									0.30	0.70
Sk3			0.91									0.83	0.17
Sk4			0.53									0.28	0.72
Sk5			0.54									0.29	0.71
Pp3				0.63							4.45	0.40	0.60
Pp4				0.99								0.98	0.02

Items	Constructs										Total of Factor Loadings	Item Reliab ility	Measure ment Error
	EC	Kn	Sk	PP	SE	IM	WA	LM	EM	OB			
Pp5				0.95								0.90	0.10
Pp6				0.99								0.98	0.02
Pp7				0.89								0.79	0.21
Se1					0.73						5.96	0.53	0.47
Se2					0.77							0.59	0.41
Se3					0.67							0.45	0.55
Se4					0.84							0.71	0.29
Se5					0.73							0.53	0.47
Se6					0.76							0.58	0.42
Se7					0.8							0.64	0.36
Se8					0.66							0.44	0.56
Im1						0.89					3.63	0.79	0.21
Im2						0.67						0.45	0.55
Im3						0.77						0.59	0.41
Im4						0.63						0.40	0.60
Im5						0.67						0.45	0.55
Wa1							0.91				5.34	0.83	0.17
Wa2							0.69					0.48	0.52
Wa3							0.83					0.69	0.31
Wa4							0.86					0.74	0.26
Wa5							0.75					0.56	0.44
Wa6							0.65					0.42	0.58
Wa7							0.65					0.42	0.58

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Items	Constructs										Total of Factor Loadings	Item Reliab ility	Measure ment Error
	EC	Kn	Sk	PP	SE	IM	WA	LM	EM	OB			
LM1								0.77			3.6	0.59	0.41
LM2								0.71				0.50	0.50
LM3								0.71				0.50	0.50
LM4								0.73				0.53	0.47
LM7								0.68				0.46	0.54
EM1									0.91		5.65	0.83	0.17
EM2									0.83			0.69	0.31
EM3									0.8			0.64	0.36
EM4									0.77			0.59	0.41
EM5									0.82			0.67	0.33
EM6									0.73			0.53	0.47
EM7									0.79			0.62	0.38
OB1										0.66	4.99	0.44	0.56
OB2										0.69		0.48	0.52
OB3										0.7		0.49	0.51
OB4										0.65		0.42	0.58
OB5										0.78		0.61	0.39
OB6										0.79		0.62	0.38
OB7										0.72		0.52	0.48
AVE	0.56	0.71	0.51	0.81	0.56	0.54	0.59	0.52	0.65	0.51			
CR	0.89	0.86	0.82	0.95	0.90	0.85	0.90	0.84	0.92	0.87			

Note: All the factor loadings are significant at 1 per cent level of significance and more than prescribed criterion of 0.50.

Source: Author's Calculations

Annexure III. Results of Model Fit Indices

Constructs	CMIN	RMSEA	GFI	AGFI	CFI
EC	3.001	0.04	0.886	0.94	0.939
Kn	1.862	0.046	0.989	0.968	0.997
Sk	4.41	0.03	0.965	0.8868	0.969
PP	4.54	0.049	0.983	0.936	0.996
SE	4.548	0.048	0.944	0.9	0.96
IM	3.89	0.039	0.969	0.882	0.967
WA	5.01	0.041	0.945	0.89	0.964
LM	3.715	0.029	0.965	0.895	0.956
EM	4.231	0.039	0.902	0.924	0.978
OB	3.684	0.037	0.964	0.929	0.969
Referential Values	<5	< 0.06	> 0.85	> 0.80	> 0.90

Note: df = Degrees of Freedom; χ^2 = Chi-square; of Fit Index; CFI = Comparative Fit Index.
 RMSEA = Root Mean Square Residual; GFI = Source: Author's Calculations
 Goodness of Fit Index; AGFI = Adjusted Goodness

Table I: Demographic Profile of the Sampled Employees

Demographic Variables	Groups	Frequency	Percentage (%)
Gender	Male	240	60
	Female	160	40
Age	Below 25 Years	116	29
	25-35 Years	48	12
	35-45 Years	88	22
	Above 45 Years	148	37
Educational Qualification	Graduation and	220	55
	Post Graduation and	180	45
Work Experience	Less than 1 Year	92	23
	1-3 Years	152	38
	3-6 Years	88	22
	More than 6 Years	68	17
Personal Monthly Income	Less than Rs. 30,000	168	42
	Rs. 30,000-Rs. 50,000	136	34
	More than Rs. 50,000	96	24
Nature of Unit	Food Processing	101	25.3
	Textile and Apparel	141	35.3
	Agricultural and Allied	103	25.8
	Others	55	13.8

Table II: Results of Correlation Coefficient and Average Variance Extracted

Constructs	EC	KN	Sk	PP	SE	IM	WA	LM	EM	OB	AVE
EC	1	0.001	0.000	0.001	0.001	0.003	0.000	0.000	0.000	0.001	0.890
KN		1	0.500	0.393	0.008	0.539	0.423	0.450	0.159	0.085	0.710
SK			1	0.423	0.010	0.513	0.417	0.498	0.157	0.142	0.820
PP				1	0.002	0.527	0.328	0.389	0.124	0.065	0.950
SE					1	0.009	0.004	0.006	0.001	0.001	0.900
IM						1	0.434	0.419	0.212	0.082	0.850
WA							1	0.608	0.353	0.067	0.900
LM								1	0.206	0.115	0.840
EM									1	0.001	0.920
OB										1	0.870

Source: Author's Calculations

Table III: Structural Results of EC Model

Explained Variable		Explanatory Variables	Parameter Estimates (Unstandardized)	Coefficient (β) Value (Standardized)	Results of Hypothesis
EC	<---	Kn	0.39**	0.41**	H ₀₁ is rejected
EC	<---	Sk	0.22**	0.20**	H ₀₂ is rejected
EC	<---	PP	-0.06	-	H ₀₅ is accepted
EC	<---	SE	-0.01	-	H ₀₄ is accepted
EC	<---	IM	0.10*	0.09**	H ₀₅ is rejected
EC	<---	WA	0.14**	0.15**	H ₀₆ is rejected
EC	<---	EM	0.09*	0.09*	H ₀₇ is accepted
EC	<---	LM	0.10*	0.12*	H ₀₈ is rejected
EC	<---	OB	0.10***	0.08***	H09 is rejected
WA	<---	OB	0.43**	0.32**	
EM	<---	OB	0.50**	0.41**	
LM		OB	0.23**	0.19**	

Note: ** statistically significant at 1 per cent level of significance

value indicates less obstructions.

Source: Author's Calculations

OB has been reversely coded in the way that higher

Figure 1: Conceptual Employee Creativity (EC) Model

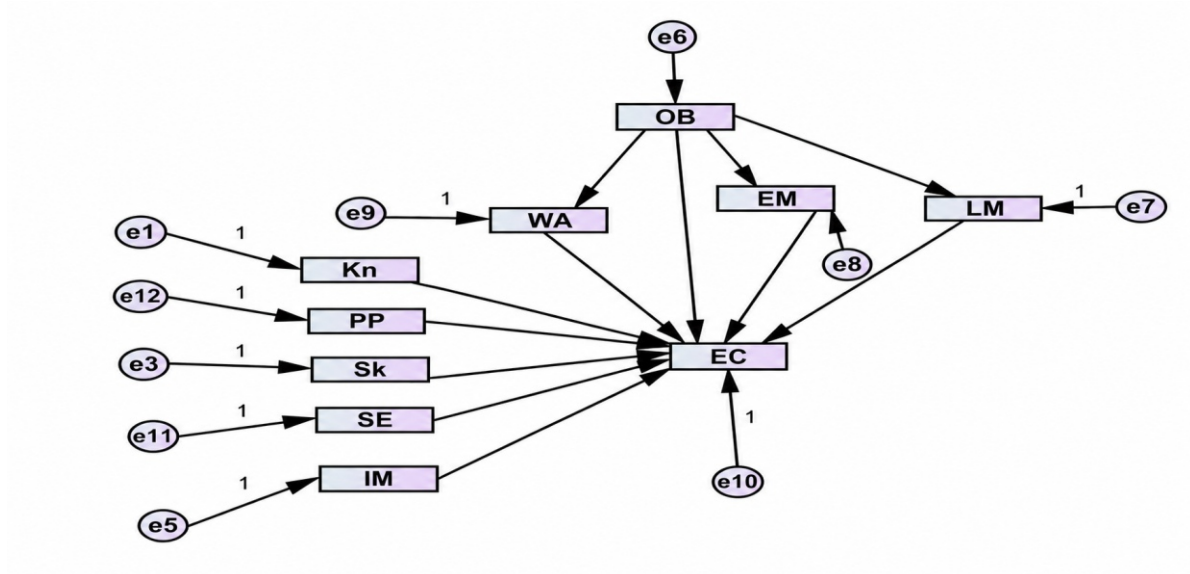


Figure 2: Final EC Model

