

Innovative Behavior of Employees in Rubber Authority of Thailand



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ABSTRACT: The objective of the study is to 1) level of innovative behavior of employees in Rubber Authority of Thailand 2) To compare study of demographic factors affecting innovative behavior of employees in Rubber Authority of Thailand. The samples used in this study were 331 employees in Rubber Authority of Thailand. The tool used in collecting the study was a questionnaires. The statistics used in the analysis consisted of descriptive statistics such as frequency, percentage, mean, standard deviation and inferential statistics, including t-test and one-way ANOVA and regression analysis. The results showed that Individual factors of respondents Most of them were legally registered, male, aged 30 to less than 40 years old, working period between 6 - 10 years, employees have bachelor's degrees. Have employees level 4 – 6. The levels of innovative behavior of employees were at a high level. The hypothesis testing found that gender, working experience, education and position affect innovative behavior of employees in Rubber Authority of Thailand. The organizational support, work motivation of personnel and organizational culture affected the innovative behavior of employees in Rubber Authority of Thailand with statistical significance at the 0.05 level.

KEYWORDS: Innovative Behavior, Organizational support, Work motivation, Organizational culture, Rubber Authority of Thailand

I. INTRODUCTION

Currently, organizations, whether public or private, face rapidly changing conditions across various domains such as environment, economy, society, politics, culture, and related factors due to technological advancements. This compels every nation and organization worldwide to adapt swiftly to these changes, underscoring the importance of knowledge application and innovation.

Innovation arises either from new inventions or modifications of existing solutions, not necessarily requiring creation from scratch but potentially evolving from existing bases to improve. When implemented, innovation enhances operational effectiveness and efficiency. Organizational innovation is driven by collaborative efforts among employees, not machines; it emerges from the knowledge, skills, and experience of personnel who apply creative thinking to innovate within their organizations. Effective innovation management is a strategy that can alter organizational direction and methodology in response to various changes to stabilize the organization's footing.

The Rubber Authority of Thailand (RAOT) was established from the merger of three entities: the Office of the Rubber Replanting Aid Fund, the Rubber Organization, and the Rubber Research Institute. Governed by the Rubber Authority of Thailand Act, B.E. 2558 (2015), RAOT aims to comprehensively manage the country's rubber from upstream to downstream to enhance income and life quality. RAOT prioritizes innovation management, fostering processes that promote sustainable organizational practices. It focuses on using innovation to add value and sustainability to the Thai rubber industry, particularly by supporting research, experimentation, and development to diversify rubber products, enhance rubber usage, and facilitate commercial advancement.

This research studies the innovative behavior in the workplace of employees at the Rubber Authority of Thailand (RAOT) and the factors influencing this behavior. The study aims to use the findings to enhance understanding and development, fostering motivation and competitive advantage in line with organizational policy.

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II. THEORETICAL FRAMEWORK AND RELATED RESEARCH

A. *The concept of organizational support*

The concept of organizational support is crucial in fostering employee retention and innovation. According to Eisenberger et al., an organization can maintain valuable employees through positive organizational commitment and trust, resulting in beneficial behaviors. Thus, practical support by the organization, whether through monetary rewards, promotions, or enhanced quality of life, along with recognition of employee input, is vital. Consequently, evaluating organizational support involves assessing employees' perception of this support, which significantly impacts their psychological processes.

B. *Work Motivation Theories and Concepts*

Evans (1971) developed a path model relating to work motivation, highlighting three critical points:

1. Work motivation is driven by achieving set goals, which enhances further motivation.
2. While motivation is present, constraints like lack of skills or freedom can disrupt activities. Conversely, without motivation, activities cannot proceed efficiently. "Effective activities require consistency, which depends on knowledge, skills, a conducive work environment, and the motivation to proceed."
3. Success according to set goals is due to consistent efforts aligned with those objectives.

Additionally, Steers & Porter (1983) define motivation as the force that drives an individual to act. This force directs and sustains work behavior to achieve personal goals and is supported by organizational support.

C. *Organizational Culture Theories*

According to Von Stamm (2008), organizational culture is crucial for fostering innovation as it involves shared values that promote creativity. An innovation-friendly culture supports risk-taking, experimentation, acceptance of failures without punitive consequences, challenges to the status quo, a positive attitude towards change, teamwork, and an environment that encourages collaborative exploration of new ideas.

Robbins (1994, p. 254) states that organizational culture is upheld by its members and is evident through ten key attributes: 1. Individual Initiative, 2. Risk Tolerance, 3. Direction, 4. Integration, 5. Management Support, 6. Control, 7. Identity, 8. Reward System, 9. Conflict Tolerance, 10. Communication Patterns.

D. *Innovation Behavior and Workplace Theories*

Kanter (1988) identifies three critical behaviors evident in organizations that foster innovation, which manifest at individual, group, and organizational levels:

1. Idea Generation: This involves the process of creating new ideas and developing them into implementable actions.
2. Idea Promotion: Once new ideas are generated, this entails seeking support to foster acceptance and backing for these ideas.
3. Idea Realization and Innovation: This is about turning new ideas into practical, beneficial outcomes.

III. RESEARCH METHODOLOGY

1. Population: The study involves 2,249 employees of the Rubber Authority of Thailand, as per data on August 3, 2023.
2. Sample size: Determined using Krejcie and Morgan's table, resulting in 331 participants.
3. Research instrument: This quantitative study uses questionnaires, analyzed using frequency statistics and percentage Values.
 - Section 1: General respondent data, analyzed for frequency and percentage.
 - Section 2: Organizational support impacting innovation behavior, analyzed using mean percentage and standard Deviation.
 - Section 3: Motivational influences on innovation behavior, analyzed using mean percentage and standard deviation.
 - Section 4: Organizational culture's impact on innovation behavior, analyzed similarly.
 - Section 5: Innovation behavior itself, analyzed for frequency and percentage.
4. Hypothesis testing: Analysis using t-test and one-way ANOVA
Hypothesis 1: Individual differences significantly affect the innovative behavior among employees of the Rubber Authority of Thailand.
5. Hypothesis testing: Employed regression analysis.
Hypothesis 2: Organizational support significantly influences employees' innovative behavior.
Hypothesis 3: Motivational factors significantly affect employees' innovative behavior.
Hypothesis 4: Organizational culture significantly impacts employees' innovative behavior.

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IV. RESEARCH RESULTS

A. Demographic Data Analysis

From a sample of 331 employees (Table 1), the majority are male (55%, n=182) and female (45%, n=149). The age group most represented is 30-40 years (63.1%, n=209), followed by 40-50 years (24.5%, n=81), and over 50 years (12.4%, n=41). Work experience ranges from 6-10 years (48.9%, n=162), 10-15 years (26.3%, n=87), and over 15 years (24.8%, n=82). Educational levels are primarily bachelor's degree holders (69.5%, n=230) and master's degree holders (30.5%, n=101). Job positions range from levels 4- 6(61%, n=202), followed by level 7(21.8%, n=72), and above level 7(17.2%, n=57).

B. Innovative Behavior Analysis

The analysis in the Table 1, the majority of respondents perceive organizational support as moderate overall (Mean = 3.17, S.D. = 0.72). When considering individual aspects, support in knowledge is rated highest, also at a moderate level (Mean = 3.40, S.D. = 0.60). This is followed by support in terms of rewards (Mean = 3.08, S.D. = 1.06), and the least is budgetary support (Mean = 3.03, S.D. = 0.85).

Table 1. Organizational Support Analysis: Data table shows detailed analysis regarding organizational Support affecting innovation.

Organizational Support	\bar{x}	S.D.	Level
Knowledge	3.40	0.60	Moderate
Compensation	3.08	1.06	Moderate
Budget	3.03	0.85	Moderate
Overall	3.17	0.72	Moderate

Table 2. Work Motivation Analysis: Data table showing analysis regarding work motivation.

Work Motivation	\bar{x}	S.D.	Level
Organizational factors	2.88	0.91	Moderate
Personal factors	3.66	0.65	High
Overall	3.27	0.64	Moderate

According to the Table 2, the majority of respondents perceive overall work motivation as moderate (Mean = 3.27, S.D. = 0.64). Upon examining specific factors, respondents rated personal factors as the most influential, with a rating of 'high' (Mean = 3.66, S.D. = 0.65). This was followed by organizational factors, which were rated as 'moderate' (Mean = 2.88, S.D. = 0.91).

Table 3. Organizational Culture Analysis: Data table showing the analysis regarding organizational culture.

Organizational Culture	\bar{x}	S.D.	Level
Individual initiative	3.40	0.84	Moderate
Risk tolerance	3.63	0.65	High
Direction setting	3.27	0.77	Moderate
Management support	3.40	0.68	Moderate
Reward system	3.18	0.81	Moderate
Communication patterns	3.66	0.65	High
Overall	3.42	0.62	High

In the Table 3, it is evident that the majority of respondents view the organizational culture overall as high (Mean = 3.42, S.D. = 0.62). When examined by aspect, the highest ratings were for communication styles (Mean = 3.66, S.D. = 0.65), followed closely by risk tolerance (Mean = 3.63, S.D. = 0.65). The least favorable view was towards the reward system, rated as moderate (Mean = 3.18, S.D. = 0.81).

Table 4. Innovative Behavior Analysis: Data table showing the analysis of innovative behavior in the workplace.

Innovative Behavior in Work Performance	\bar{x}	S.D.	Level
Idea generation	3.75	0.68	High
Idea support	3.47	0.73	High
Idea realization	3.53	0.58	High
Overall	3.58	0.59	High

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The results in the Table 4, it is evident that respondents generally perceive the level of innovative behavior in their workplace as high (Mean = 3.58, S.D. = 0.59). Detailed analysis shows the highest ratings for idea generation (Mean = 3.75, S.D. = 0.68), followed by idea realization (Mean = 3.53, S.D. = 0.58), and the lowest for idea support (Mean = 3.47, S.D. = 0.73).

C. Hypothesis Testing

Hypothesis 1: Personal factors differ and affect the innovative behavior in the workplace among employees of the Rubber Authority of Thailand, analyzed using t-test and one-way ANOVA.

Table 5. Shows personal factors differing in innovative behavior among employees of the Rubber Authority of Thailand.

Personal Factors	t-test/F test	Sig.
Gender	1.45	0.07
Age	15.46	0.00*
Work Experience	3.37	0.03*
Education Level	17.45	0.00*
Job Status/Position Level	8.53	0.00*

From the Table 5, it is evident that individual factors such as age, work experience, educational level, and job status significantly impact the innovative behavior in the workplace among employees of the Rubber Authority of Thailand, with statistical significance at the 0.05 level.

Hypothesis 2: Factors related to organizational support impact the innovative behavior of employees of the Rubber Authority of Thailand, analyzed using multiple regression analysis.

Table 6. Displays the results of hypothesis testing on organizational support factors affecting the innovative behavior of the employees of the Rubber Authority of Thailand.

Organizational Support	B	Std . Error	Beta	t	Sig.
)Constant(	2.18	0.15		14.50	0.00*
Support in terms of knowledge	0.15	0.05	0.16	2.81	0.00*
Support in terms of compensation	0.28	0.03	0.50	8.36	0.00*
Support in terms of budgeting	0.01	0.04	0.00	0.02	0.98
<i>R = 0.59 R² = 0.35 Adjusted .R² = 0.35 SEE = 0.47 F = 61.01 Sig = . 0.000</i>					

* Statistically significant at the 0.05 level.

The Table 6, it is observed that organizational support factors, including knowledge support and reward support, significantly influence the innovative behavior of the employees at the Rubber Authority of Thailand at a statistical significance level of 0.05. The multiple regression analysis shows a high correlation coefficient ($R = 0.59$), with 35.00% of the variance explained by the model (Adjusted $R^2 = 0.35$), and a standard error of estimate ($SEE = 0.47$).

Hypothesis 3: Work motivation factors affect the innovative behavior of employees at the Rubber Authority of Thailand, analyzed using multiple regression analysis.

Table 7. Displays results of hypothesis testing on work motivation factors affecting the innovative behavior of the employees at the Rubber Authority of Thailand.

Work Motivation	B	Std . Error	Beta	t	Sig.
)Constant(	1.09	0.12		8.49	0.00*
Organizational factors	0.15	0.02	0.24	6.00	0.00*
Personal factors	0.55	0.03	0.61	15.33	0.00*
<i>R = 0.73 R² = 0.54 Adjusted .R² = 0.53 SEE = 0.40 F = 192.74 Sig = . 0.000</i>					

* Statistically significant at the 0.05 level.

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From the Table 7, it is evident that work motivation factors, including organizational and personal factors, significantly influence the innovative behavior of employees at the Rubber Authority of Thailand, as demonstrated at a statistical significance level of 0.05. The correlation coefficient is high ($R = 0.73$), with a predictive power of 54% (Adjusted $R^2 = 0.54$), and a standard error of estimate at 0.40 (SEE = 0.40).

Hypothesis 4: Organizational culture factors affect employees' innovative behavior, analyzed using multiple regression analysis.

Table 8. Presents the hypothesis testing results for how organizational culture impacts employees' Innovative behaviors at the Rubber Authority of Thailand.

Organizational Culture	B	Std . Error	Beta	t	Sig.
)Constant(	0.85	0.14		5.99	0.00*
Individual initiative	-0.31	0.04	-0.44	-6.34	0.00*
Risk tolerance	0.16	0.04	0.17	3.31	0.00*
Direction setting	0.02	0.04	0.02	0.43	0.00*
Management support	0.31	0.06	0.37	5.31	0.66
Reward system	0.13	0.04	0.19	3.20	0.00*
Communication style	0.44	0.05	0.48	7.72	0.00*
<i>R = 0.75 R² = 0.56 Adjusted .R² = 0.56 SEE = 0.39 F = 71.20 Sig = . 0.000</i>					

* Statistically significant at the 0.05 level.

The analysis result in the Table 8, organizational culture factors, such as individual initiative, risk tolerance, direction, reward systems, and communication styles, significantly impact employees' innovation behaviors at the Rubber Authority of Thailand, with statistical significance at the 0.05 level. The multiple correlation coefficient is high ($R = 0.75$), explaining 56% of the variance (Adjusted $R^2 = 0.56$), with a standard error of estimate of 0.39 (SEE = 0.39).

V. DISCUSSION AND CONCLUSIONS

The level of innovative behavior among employees of the Rubber Authority of Thailand is reported to be high. Survey data indicate that the organization prioritizes innovative behavior highly, with the greatest emphasis on idea generation, followed by idea realization and support. This finding aligns with research by Sornadisak (2017), which found high levels of individual innovation behavior in employees within the Bangkok Metropolitan Region, emphasizing openness to new information, knowledge, and experiences. Organizational factors like knowledge support and reward systems were found to influence innovative behaviors, corroborating Saecow's (2015) findings that managerial support, motivation, and an innovative atmosphere positively affect innovation-oriented work behaviors.

Regarding the influence of work motivation factors on the innovative behavior of employees at the Rubber Authority of Thailand, the study identified both organizational and personal factors as impactful. This aligns with Saecow's (2015) findings on organizational factors promoting innovative work behaviors within the meat processing industry in Bangkok and its environs, emphasizing that motivation and a conducive environment foster innovation. The research revealed that the most significant positive factor was the innovative atmosphere, characterized by knowledge sharing and collaborative problem-solving among coworkers, which effectively helps employees to adapt and embrace new ideas.

The study also indicated that organizational culture elements such as individual initiative, risk tolerance, direction, reward systems, and communication styles significantly influence innovation behaviors. This is consistent with Panmanee's (2019) research on organizational factors at Thai Postal Service, where motivational elements within the organization substantially fostered innovative behaviors. Similarly, Sunut's (2019) model highlighted that organizational structure and culture directly impact innovative behaviors through mechanisms like knowledge sharing, underlining the critical role of leadership in fostering an innovative atmosphere.

A Study Recommendations

1. Organizations should examine individual employee behaviors to tailor motivational strategies based on Lowell's ideas or Maslow's hierarchy of needs. Given the diverse needs across various job positions in the Rubber Authority of Thailand, aligning compensation strategies with these needs can motivate efficient and innovative performance.

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2. Since organizational culture greatly influences innovative behaviors, it's crucial for organizations to foster a culture where employees freely share ideas and knowledge. This can transform operational methods to enhance efficiency and competitive edge.
3. Organizations should prioritize financial support and incentives to encourage employee participation in innovation, transforming operational methods and introducing new approaches to enhance organizational effectiveness.

B. Suggestions for Future Studies

1. Given that this research only covers employees from various departments of the Rubber Authority of Thailand, future studies should specifically target employees in different job roles for more comprehensive research outcomes, which could lead to more effective managerial improvements.
2. As this research is quantitative, it may not fully encompass all relevant data. Future studies should include qualitative research, conducting in-depth interviews with individual employees to understand their perspectives on their work and the organization. This could provide management with valuable insights for future organizational improvements.

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