



THE EFFECT OF SELF-EFFICACY AND EXTRINSIC REWARDS ON INNOVATIVE WORK BEHAVIOUR (IWB) MEDIATED BY WORK ENGAGEMENT ON EMPLOYEES AT PERTAMINA IN SUMBAGUT

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ABSTRACT

Introduction: This research aims to examine the impact of Work Engagement on Innovative Work Behaviour (IWB) among PT Pertamina employees in North Sumatra (Sumbagut), mediated by Self-Efficacy and Extrinsic Reward. To address the issues, it is essential to exhibit innovative work behaviour of the complex energy industry, including expectations for efficiency, transparent governance, and sustainable innovation

Methods: This study adopts a quantitative methodology via a survey technique via a questionnaire administered to 141 Pertamina employees in Sumbagut. Data analysis was conducted via Structural Equation Modelling (SEM) through AMOS software.

Results: The findings indicated that Self-Efficacy and Extrinsic Reward exert a favourable and significant influence on Innovative Work Behaviour, both directly and via the mediation of Work Engagement. This discovery validates the significance of personal self-assurance and external incentives in fostering work engagement and innovative behaviour among employees.

Conclusion and suggestion: This research offers a tangible contribution to human resource management in designing strategies to improve employee innovation performance by strengthening internal and external factors and creating a work environment that supports engagement.

INTRODUCTION

Rapid technological change, digital disruption, and global economic uncertainty have compelled organizations to continuously adapt and innovate. Amid these challenges, employees' Innovative Work Behaviour (IWB) has emerged as a vital element in assessing a company's competitiveness and sustainability. Innovative Work Behavior (IWB) encompasses employees' initiatives in generating, advocating, and implementing novel concepts to improve processes, products, or services in the workplace. In the mining and energy sectors, which are the backbone of Indonesia's economy—especially in the Sumatra region—the demand for IWB is increasingly high. This is driven by the need for operational efficiency, governance transparency, and sustainable innovation to address environmental, social, and economic challenges.

However, various reports show that not all companies in this sector have succeeded in fostering a work culture that supports innovation. For example, in 2025, the public was shocked by allegations of a major corruption case involving PT Pertamina Patra Niaga—a subsidiary of Indonesia's largest state-owned energy company—which included oil import manipulation, fuel mixing, and LNG purchases without clear contracts. The state was estimated to have suffered losses of up to IDR 193.7 trillion (Reuters, 2025). This case reflects weak internal controls, low organizational integrity, and a lack of encouragement for employees to innovate or speak up against irregularities in the workplace.

Sumatra itself is one of the key operational hubs for the national energy industry, including PT Pertamina Patra Niaga, which plays a strategic role in fuel distribution and logistics across various provinces. Focusing on Pertamina Patra Niaga's Northern Sumatra Regional Office (Sumbagut) is relevant, as the area includes key provinces such as Aceh, North Sumatra, and Riau, which are major producers and consumers of national energy. Moreover, Patra Niaga Sumbagut faces complex operational challenges related to inter-regional energy distribution and supply chain monitoring, which require innovative engagement from employees to ensure efficiency, safety, and regulatory compliance.

As the largest energy company in Indonesia, PT Pertamina has a strategic role in supporting national energy resilience and managing natural resources while empowering local human capital. According to Law No. 8 of 1971, Pertamina is a state-owned company responsible for managing oil and gas extraction in Indonesia. Following Law No. 22 of 2001 and Government Regulation No. 31 of 2003, Pertamina's status changed from a non-departmental government agency to a Persero (state-owned enterprise), and it is now required to operate on a commercial basis to generate profits.

Based on 2019 data from PT Pertamina, a significant proportion of its active employees are aged 20–39 years. Nationally, data from 2019–2021 consistently show that over 59% of Indonesian employees are under the age of 40. As a large and modern SOE, Pertamina's workforce is dominated by millennials (born between 1980 and 2000), a generation known for its tech-savviness—an essential asset in addressing the challenges and opportunities of the Industrial Revolution 4.0 era. In Aceh, Pertamina and its subsidiaries are actively engaged in oil and gas exploration and production. However, internal reports from Pertamina's Human Capital Division in the Sumatra region, including Aceh, revealed that only around 53% of field employees consistently demonstrated innovative work behaviour.

Numerous Research indicates that IWB affected by both personal and environmental variables. A crucial individual aspect is Self-efficacy is described as an individual's conviction regarding their capacity to accomplish particular activities (Bandura, 1997). Research conducted by Prihantoro et al. (2022) identified a substantial there exists a favorable association between self-efficacy and innovative work behavior (IWB). Workers possessing elevated self-efficacy are more inclined to investigate novel concepts and undertake essential risks to foster innovation. Self-efficacy is an indispensable personal asset (Xanthopoulou et al., 2008) that influences the extent of effort employees exert and their persistence when confronted with challenges (Wood & Bandura, 1989).

However, the relationship between these variables and IWB is not always direct. One crucial mediating factor engagement at work is a pleasant mental wellness that is described by enthusiasm, loyalty, and full immersion in individual's duties. (Schaufeli et al., 2002). Engaged personnel exhibit a heightened propensity to seek innovative ideas and perpetually enhance their performance. Afsar et al. (2021) established that job engagement can influence The connection between motivation and innovative work behavior (IWB).

Engagement in work is a motivational structure that includes energy, commitment, and concentration (Schaufeli et al., 2006). Research indicates that supervisory support and confidence might improve employee engagement, consequently decreasing turnover intentions (Shahpouri et al., 2016).

External influences, including extrinsic rewards, contribute to employee motivation. Rewards such as bonuses, promotions, recognition, and other incentives can boost work enthusiasm and creativity. Appropriate rewards can reinforce positive behavior and stimulate internal innovation. Initial observations show that although Pertamina offers various rewards such as the "Innovation Award" and "Employee of the Month," these have not been equitably distributed across all employee levels—especially in regional operational units—potentially limiting external motivational support. Other barriers include work pressure, production targets, and limited innovation-supporting infrastructure.

One possible mediator of the correlation between self-efficacy, intrinsic motivation, and innovative work behavior (IWB) is work engagement, which is a measure of employees' interest and passion on the job. Workers that are highly engaged tend to be more creative because they are enthusiastic, dedicated, and engrossed in what they are doing. The mediating role of job engagement in enhancing innovative work behavior (IWB) is also emphasized by Arica et al. (2023).

This theory aligns with prior research that have looked at similar variables. Work engagement significantly affects the motivation-to-innovative work behavior (IWB) link, according to Afsar et al. (2021). According to research by Prihantoro et al. (2022), IWB (innovative work behavior) is positively affected by self-efficacy. Among 243 employees in the Finnish public sector, Viitala et al. (2023) found that managerial coaching had an effect on innovative work behavior through the mediation of job engagement. Dinillah (2025) found that out of 210 employees in Indonesian digital organizations, work engagement and job autonomy simultaneously reduce the impact of learning agility and inclusive leadership on innovative work behavior (IWB). In a study involving 180 government employees, Putra and Putra (2025) found that among LMX and IWB, work engagement acted as a mediator. Employees with proactive personalities are more likely to exhibit innovative work behavior when work engagement controls the negative relationship between workplace conflict and such conduct (Yelgin and Geylan, 2024). Extrinsic benefits, as highlighted by Lestari and Wibowo (2023), greatly increase involvement in the workplace, which in turn boosts IWB.

Considering the growing literature, there is a paucity of investigations investigating the relationship among self-efficacy, extrinsic rewards, and innovative work behavior (i.e., taking work engagement into consideration as a mediator) in the context of energy companies in North Sumatra. To effectively foster innovation in the workplace through human resource development, it is essential to have a firm grasp of these dynamics.

LITERATURE REVIEW

Self-Efficacy

A person's confidence in their capabilities to plan and execute the actions necessary to achieve specific performance goals is known as self-efficacy, according to Bandura's social cognition theory (Schunk et al., 2010). A person's self-efficacy is their belief in their own abilities to carry out tasks, reach goals, and produce the outcomes they seek (Baron and Byrne, 2004). In a similar vein, Santrock (2009) characterizes it as "the belief that I can." Individuals possessing elevated self-efficacy typically maintain confidence in the face of uncertainty, exhibit perseverance, and trust in their cognitive abilities to surmount obstacles (Jannah, 2013). Unrealistic expectations might result in disappointment and potentially despair (Rachmawati, 2012). Measurements (Widiyanto, 2022): Confidence in one's capacity to accomplish activities, Self-motivation in executing tasks, Perseverance and diligence in confronting problems, along with resilience in surmounting hurdles and recuperating from failure.

Extrinsic Reward

Extrinsic rewards are organizational incentives given in recognition of good performance and to stimulate desirable behavior (Malik et al., 2015). Unlike controlling factors, informational extrinsic motivators encourage autonomy and can work synergistically using intrinsic drive to augment creativity (Deci & Ryan, 1985; Amabile & Pratt, 2016).

Rewards can be financial or non-financial, and their effectiveness depends on how they are perceived. Excessive financial rewards may harm intrinsic motivation (Gagné & Deci, 2005). However, well-structured rewards can enhance employee competence and promote creativity, particularly when they coincide with intrinsic motivation and self-efficacy (Zhou et al., 2011; Malik et al., 2015). Dimensions (Rivai, 2014): Bonus: Additional financial incentives to encourage higher performance, Salary: Fixed compensation related to job responsibilities, Additional benefits: Non-cash rewards such as health insurance, housing, paid leave, and pensions.

Work Engagement

To be engaged in one's work is to have a positive and fulfilling mental state defined by enthusiasm, dedication, and total engagement in one's profession (Schaufeli et al., 2002; Ahmed et al., 2024). It is considered a key component of employee motivation and is strongly linked to job performance (Chen & Peng, 2021; Lambert et al., 2021). Employees that are engaged exhibit heightened concentration, committed, and willing to take initiative, and this involvement helps organizations build strategic growth through improved efficiency and novel concepts (Yadav et al., 2022). Dimensions (Susanto et al., 2022): Participation: Involvement in decision-making and contribution to innovation, Communication: Interaction with colleagues and supervisors, Sense of belonging: Psychological ownership of the organization, feeling valued: Perception of being appreciated and recognized for contributions.

Innovative Work Behaviour

The development and innovation of products or services within an organization require the contribution of individual employees. According to Janssen et al. (2004), innovative work behaviour (IWB) denotes acts inside the workplace that encompass the creation, advocacy, and execution of novel ideas. West and Farr (1989) characterize creative behavior as the deliberate introduction or implementation of unique areas, products, methods, and protocols by individuals within their job responsibilities, work units, or organizations. Innovative Work Behaviour is typically categorized into three dimensions: idea generation, concept promotion, and idea execution (Yuan & Woodman, 2010; Krizaj, Brodnik, & Bukovec, 2014; Thurlings, Evers, & Vermeulen, 2015).

Previous Study and Hypothesis

The Impact of Self-Efficacy on Innovative Work Behavior (IWB)

Among 178 industrial workers in Indonesia, Prihantoro et al. (2022) discovered that self-efficacy had a positive and statistically significant effect on innovative work behavior. The results demonstrated that employees with higher levels of self-confidence were more inclined to suggest and execute novel ideas while on the job. According to Afsar et al. (2021), self-efficacy plays a crucial role in fostering employee engagement and innovation.

H1: Innovative work behavior (IWB) is positively impacted by self-efficacy.

The Impact of Extrinsic Incentives on Innovative Work Behavior (IWB)

Chaudhary and Panda (2022), in a study involving 198 IT professionals in India, showed that extrinsic rewards—such as bonuses, recognition, and incentives—positively influence innovative work behaviour. Fair and appropriate rewards can boost employees' external motivation to contribute innovatively. This is also supported by Yelgin and Geylan (2024), who found that relevant and fair external rewards enhance employee engagement and innovation.

H2: Extrinsic reward exerts a beneficial influence on innovative work behavior (IWB).

The Effect of Self-Efficacy on Work Engagement

Putra and Putra (2025) determined that self-efficacy had a favorable effect on engagement at work. Employees with self-efficacy are more invested emotionally and intellectually in their profession, according to their research of Indonesian local government workers. In a similar vein, Afsar et al. (2021) found that self-efficacy significantly predicted higher levels of involvement at work.

H3: Self-efficacy exerts an advantageous impact on work engagement.

The Effect of Extrinsic Reward on Work Engagement

Yelgin and Geylan (2024), through a study of 312 private-sector employees in Turkey, found that the use of extrinsic rewards had a beneficial effect on professional engagement. When employees perceive their compensation as equitable, they are generally more dedicated and enthusiastic about their work. This reinforces the notion that both tangible and social incentives are crucial in influencing employee engagement.

H4: Extrinsic rewards positively influence labor engagement.

The Effect of Work Engagement on Innovative Work Behaviour (IWB)

According to Afsar et al. (2021), Work engagement is positively and significantly correlated with innovative work behavior (IWB). Workers that feel invested in their work are more likely to provide significant contributions, including innovative efforts. Similarly, Dinillah (2025) emphasized the importance of engagement as a psychological factor that drives innovation, particularly in Indonesia's digital sector.

H5: Work engagement contributes to innovative work behavior (IWB).

The Mediating Role of Work Engagement between Self-Efficacy and Innovative Work Behaviour (IWB)

Putra and Putra (2025) found that there is a correlation between believing in one's abilities and engaging in creative actions on the job is mediated by job engagement. Confidence, boosted by self-efficacy, leads to inventive behavior when combined with strong work involvement. According to Afsar et al. (2021), participation in the workplace mediates between the connection between personality traits and creative actions on the job.

H6: The relationship between self-efficacy and innovative work behavior (IWB) is mediated by work engagement

The Mediating Role of Work Engagement between Extrinsic Reward and Innovative Work Behaviour (IWB)

According to Yelgin and Geylan (2024), although extrinsic rewards can directly influence IWB, their effect becomes stronger when mediated by work engagement. Fair rewards enhance employees' emotional connection to their work, which fosters innovation. This aligns with findings by Chaudhary and Panda (2022), who emphasized that recognition improves employee creativity and innovation through enhanced engagement.

H7: Extrinsic rewards and innovative work behavior are linked by work engagement.

RESEARCH METHODS

This study utilizes a descriptive quantitative methodology. The subject of the study comprises Pertamina personnel in the Northern Sumatra region (Sumbagut), encompassing both head office and regional office sites. Data was gathered via a cross-sectional survey employing an online questionnaire (Google Form). This study employs descriptive statistics and hypothesis testing through Structural Equation Modeling (SEM). The study population comprises all employees of Pertamina in the Sumbagut region. The sample was chosen using purposive sampling, adhering to established criteria pertinent to the research objectives—specifically, employees of Pertamina in the Sumbagut region. According to Hair et al. (2020), the advised sample size for Structural Equation Modeling (SEM) ranges from 5 to 10 times the total number of questions in the questionnaire. The necessary sample size for 26 items ranges from 130 to 260 respondents. This study obtained 141 replies, satisfying the minimum criterion for SEM analysis. This research examined seven hypotheses utilizing Structural Equation Modeling (SEM) with the support of SPSS and AMOS software. Structural Equation Modeling (SEM) facilitates the simultaneous investigation of intricate interactions among several variables.

RESULT AND ANALYSIS

Table 1
Respondent Characteristic

Profile	Category	Frequency	Percentage (%)
Gender	Male	133	94.3%
	Female	8	5.7%
Total		141	100%
Age	20–≤30 years	4	2.8%
	31–≤40 years	122	86.5%
	41–≤50 years	11	7.8%
	>50 years	4	2.8%
Total		141	100%
Education	High School (SMA)	4	2.8%
	Diploma	13	9.2%
	Bachelor's (S1)	113	80.1%
	Master's (S2)	11	7.8%
Total		141	100%
Years of Service	1–≤10 years	90	63.8%
	11–≤20 years	26	18.4%
	21–≤30 years	24	17.0%
	>30 years	1	0.7%
Total		141	100%
Job Position	Staff	135	95.7%
	Assistant Manager	5	3.5%
	Manager	1	0.7%
Total		141	100%

Source: Data processed through SPSS

The socioeconomic attributes of the respondents in this study offer essential context for interpreting the results. Based on gender distribution, the majority of participants were male (94.3%), while only 5.7% were female. This imbalance reflects the male-dominated nature of the workforce in the energy sector, particularly in operational roles that often demand long and inflexible working hours—conditions that may pose challenges for female employees who typically bear greater family responsibilities.

In terms of age, most respondents (86.5%) were between 31 and 40 years old, indicating a predominantly young and productive workforce. Only 2.8% were aged 20–30 and above 50, respectively. This suggests that Pertamina's workforce in the Sumbagut region is comprised largely of employees who are in the prime of their careers, likely to be energetic, adaptable, and open to innovation—qualities essential for organizational development and sustainability.

Educational background also supports this profile, among the respondents, 80.1% own a bachelor's degree (S1), followed by 9.2% with diplomas, 7.8% with master's degrees, and a minority of 2.8% who have completed only high school. This suggests that most employees have a considerable level of education, providing them with the

knowledge and abilities required to execute their responsibilities efficiently and contribute significantly to corporate objectives.

Regarding years of service, 63.8% of respondents had worked for 1–10 years, followed by 18.4% with 11–20 years, 17.0% with 21–30 years, and only 0.7% with over 30 years of service. This shows that most employees are in the nascent to intermediate phases of their professions, underscoring the necessity for continuous training and development initiatives to augment professional advancement and optimize their potential inside the organization.

Lastly, based on job position, 95.7% of respondents were in staff-level roles, while only a small portion were assistant managers (3.5%) or managers (0.7%). This implies that the study largely captures the perspectives of frontline employees, who are directly involved in operational activities. These results are consistent with the demographic patterns observed in age, education, and tenure, reinforcing that the sample predominantly consists of young, well-educated staff in technical or field-level positions.

Hypothesis Testing Results

Table 2. Hypothesis Testing Results

Hypothesis	Estimate	p-value	Conclusion
H1	0.495	0.000	Supported
H2	0.949	0.000	Supported
H3	0.560	0.000	Supported
H4	0.913	0.000	Supported
H5	0.796	0.000	Supported
H6	0.445	0.000	Supported
H7	0.726	0.000	Supported

Source: Processed Data (AMOS)

The rationale for each hypothesis, as stated in the table above, is as follows:

Hypothesis 1 (H1):

This hypothesis intended to evaluate the beneficial impact of self-efficacy on innovative work behavior (IWB). The study yielded an estimated coefficient of 0.495 with a p-value of 0.000, signifying a substantial positive correlation. Employees exhibiting elevated self-efficacy are inclined to exhibit enhanced inventive behavior. Consequently, H1 is substantiated.

Hypothesis 2 (H2):

H2 examined the impact of extrinsic rewards on innovative work behavior (IWB). The estimated value of 0.949, accompanied by a p-value of 0.000, substantiates those extrinsic benefits, including bonuses, recognition, and promotions, considerably augment employees' inventive behavior. Consequently, H2 is endorsed.

Hypothesis 3 (H3):

The proposed theory investigated the correlation between self-efficacy and work engagement. Given a probability of 0.560 and a test statistic of 0.000, the results show that self-efficacy significantly boosts employee engagement in their work, making H3 supported.

Hypothesis 4 (H4):

H4 explored the influence of extrinsic rewards on worker engagement. The outcome, with a statistic of 0.913 and a statistical significance level of 0.000, indicates a robust positive effect. Employees that perceive equitable compensation typically exhibit increased engagement, hence corroborating H4.

Hypothesis 5 (H5):

The present study analyzed the effect of work engagement on innovative work behavior (IWB). The results, with a probability of 0.796 and an odds ratio of 0.000, suggest that highly engaged individuals are more inclined to demonstrate innovative behaviors in the workplace. Therefore, H5 is accepted.

Hypothesis 6 (H6):

This hypothesis explored the intermediary function of job engagement in the correlation between self-efficacy and innovative work behavior (IWB). The mediation effect was statistically significant with a significance level of 0.000. The direct effect of self-efficacy on IWB (estimate = 0.495) was higher than the indirect effect through work engagement (estimate = 0.445), suggesting partial mediation. This means work engagement enhances the effect of self-efficacy on IWB, and its role is necessary to strengthen the relationship. H6 is thus supported.

Hypothesis 7 (H7):

Finally, H7 tested the mediating effect of work engagement between extrinsic reward and IWB. The p-value of 0.000 affirms a substantial mediation. The immediate impact of extrinsic rewards on innovative work behavior (IWB) (estimate = 0.447) was slightly lower than the indirect effect via work engagement (estimate = 0.726), indicating partial mediation. This suggests that while extrinsic rewards influence IWB directly, the impact is stronger when employees are also highly engaged. H7 is supported.

Discussion

The Impact of Self-Efficacy on Innovative Work Behavior (H1)

Self-efficacy, defined as one's belief in their capability to organize and execute the necessary actions for achieving performance goals (Bandura in Schunk et al., 2010), was measured through dimensions of confidence, perseverance, self-motivation, and resilience (Widiyanto, 2022). There is strong evidence that self-efficacy influences innovative work behavior. With a p-value of 0.000 and an estimate value of 0.495. Workers who believe in their own skills are more likely to speak out when they have an idea, promoting, and implementing innovation. This supports previous studies by Zahra et al. (2017), Rulevy & Parahyanti (2016), and Nurmala & Widyasari (2021), which emphasize that confidence in one's abilities encourages proactive innovation. Bandura's theory also supports this, indicating that belief in personal capabilities can influence how individuals think, act, and persevere, especially in complex work environments.

The Effect of Extrinsic Rewards on Innovative Work Behavior (H2)

Extrinsic rewards are organizational incentives designed to encourage desirable performance, which may include salary, bonuses, and non-financial benefits (Rivai, 2014; Malik et al., 2015). Extrinsic rewards have the strongest direct effect on creative behavior on the job, with a p-value of 0.000 and an estimate of 0.949. Financial and material incentives such as bonuses, promotions, and recognition serve as powerful motivators. This finding aligns with Laursen & Foss (2003), Mahaney & Lederer (2006), and Janssen (2000), who argue that employees rewarded fairly and appropriately are more predisposed to demonstrate innovative behavior. It also reflects the Situational Strength Theory, which states that structured reinforcement like rewards helps shape desired behaviours.

The Influence of Self-Efficacy on Work Engagement (H3)

Work engagement is defined as a positive mental state of dedication and enthusiasm at work (Schaufeli et al., 2002). A probability ratio of 0.560 and a test statistic of 0.000 suggest that self-efficacy significantly affects work engagement. Employees who have confidence in their capability to handle job demands are more likely to be dedicated and enthusiastic at work. This supports findings from Bresó et al. (2011), Saputra et al. (2024), and Anam & Anggarani (2023), who showed that higher self-efficacy correlates with stronger engagement through increased motivation, dedication and occupational contentment.

4.4.4 The Relation between Extrinsic Reward and Work Engagement (H4)

Extrinsic rewards significantly influenced work engagement. This aligns with Yelgin & Geylan (2024). While some argue extrinsic rewards can undermine intrinsic motivation, this study finds otherwise: in Pertamina, rewards stimulate greater enthusiasm and involvement. This provides originality by contextualizing Social Exchange Theory within Pertamina's organizational culture. The fourth hypothesis is also supported, with an estimate of 0.913 and p-value of 0.000. Extrinsic rewards have a strong effect on work engagement, motivating employees through tangible benefits. Although some argue that extrinsic rewards might reduce intrinsic motivation (Bakker & Demerouti, 2009), this study confirms the opposite — that rewards can enhance engagement if designed appropriately. According to Social Exchange Theory, when organizations reward their employees, they reciprocate with higher involvement and performance.

The Influence of Work Engagement on Innovative Work Behaviour (H5)

There is a positive correlation between work engagement and inventive conduct on the job, with a substantial estimate of 0.796 ($p = 0.000$). Employees who are engaged — defined by energy, commitment, and immersion — are more inclined to conceive and execute innovative ideas successfully. This is corroborated by Schaufeli et al. (2002), Sharma & Nambudiri (2020), and Ramli & Azizan (2018), who emphasize the role of engagement in fostering proactive and creative behaviours. This demonstrates that engaged employees channel their energy into idea generation, promotion, and implementation. The result supports Afsar et al. (2021) and Dinillah (2025). The originality here is that Pertamina employees' innovative contributions are strongly driven by psychological engagement, not just job roles.

Work Engagement as an Interface between Self-Efficacy and Innovative Work Behavior (H6)

The mediation effect was found significant with an estimate of 0.445 and p-value of 0.000. This suggests that self-efficacy enhances innovative work behaviour through increased work engagement. While the direct effect (0.495) is higher than the indirect one, the mediating role of engagement remains meaningful. Studies by Karatepe et al. (2019) and Uppathampracha & Liu (2022) support this finding, suggesting that belief in one's abilities enhances involvement at work, which in turn fosters innovation. The originality lies in proving that Pertamina employees' innovation emerges through a two-layer process: confidence → engagement → innovation.

Work Engagement as a Mediator between Extrinsic Reward and IWB (H7)

Similarly, work engagement mediates the effect of extrinsic reward on IWB, with an indirect estimate of 0.726 ($p = 0.000$). This implies that when employees receive fair compensation and recognition, they feel more engaged, which leads to greater innovation. Research by Bakker et al. (2018), Saks & Gruman (2014), and Orgambidez et al. (2020) reinforces this dynamic. However, because the direct effect (0.949) is greater than the indirect one, the mediation is partial. The originality of this finding is that Pertamina's structured reward system creates a dual impact: it directly motivates innovation and indirectly fosters it through engagement.

Tabel 3
Summary of Direct and Indirect Effects

Hypothesis	Path	Estimate
H2	Extrinsic Reward → IWB	0.949
H1	Self-Efficacy → IWB	0.495
H6	Self-Efficacy → Work Engagement → IWB	0.445
H7	Extrinsic Reward → Work Engagement → IWB	0.726

The strongest direct impact on IWB came from extrinsic rewards, underscoring the importance of tangible incentives in motivating innovation. Meanwhile, self-efficacy had the weakest direct influence, suggesting the need for strategies to enhance employees' confidence, such as mastery experiences.

Although both mediation paths were significant, their effects were weaker than the direct paths, indicating partial mediation. This may suggest that the work environment in Pertamina Sumbagut does not fully support strong emotional engagement due to challenges such as workload or lack of creativity space. Therefore, fostering a more supportive and participatory work climate is essential to strengthen the intermediary function of labor engagement in driving innovative behaviours

CONCLUSION

Conclusion

This research, carried out at Pertamina in the Sumbagut region, studied the effect of intrinsic motivation and self-efficacy on creative problem-solving on the job with Work Engagement as a mediating variable. The sample was dominated by male employees aged 31–40 with 1–10 years of service. All seven proposed hypotheses were supported. The findings revealed that both Self-Efficacy and Extrinsic Reward positively and significantly influence IWB. Additionally, Self-Efficacy and Extrinsic Reward also enhance Work Engagement, which in turn fosters more innovative behaviour. Work Engagement was recognized as a partial mediator of the effects of Self-Efficacy. Self-Efficacy and Extrinsic Incentives on Innovative Work Behavior. Among all variables, Extrinsic Reward had the strongest direct effect on IWB, while Self-Efficacy had the weakest, indicating the need for targeted strategies to boost employees' confidence in their abilities. The results suggest that a combination of individual psychological strengths and external organizational support is essential in fostering a highly engaged and innovative workforce.

Suggestion

Based on the limitations identified in this study, several recommendations can be proposed for prospective investigations. It is recommended that analogous study be undertaken in other public sector institutions or private sector organizations such as banking, education, manufacturing, or technology-based companies. This will help assess the consistency of the effects of self-efficacy, extrinsic rewards, and work engagement on innovative work behaviour (IWB) across different organizational contexts. Second, future studies are encouraged to expand the number of independent variables by including other potential factors that may influence IWB, such as intrinsic motivation, proactive personality, organizational support, leadership style, or innovation climate in the workplace. Lastly, researchers should consider incorporating additional mediating variables outside work involvement, such as trust, psychological empowerment, or job happiness. These variables may yield a more thorough comprehension of the mechanisms that affect inventive work behavior and provide enhanced insights into how firms might more effectively cultivate creativity among their employees.

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