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WORK ENGAGEMENT AND MOTIVATION THROUGH PLANNED BEHAVIOR CONSTRUCTS IN A PRIMATE BREEDING COMPANY

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Abstract

This study examines whether work engagement strengthens employe work motivation directly or through the psychological mechanisms represented by work attitude, subjective norm, and perceived behavioral control. The research applied a quantitative explanatory design to a saturated sample of 138 employees of a primate breeding company. Data were collected using a five-point Likert questionnaire and analyzed through Partial Least Squares Structural Equation Modeling with SmartPLS 4.0. The measurement model demonstrated satisfactory convergent validity, discriminant validity, and internal consistency. The structural model explained 67.1% of the variance in work motivation. Work engagement did not have a statistically significant direct effect on work motivation; however, it positively affected work attitude, subjective norm, and perceived behavioral control. Each of these constructs positively influenced work motivation. The indirect effects through work attitude, perceived behavioral control, and subjective norm were all significant, with the strongest mediation paths occurring through work attitude and perceived behavioral control. These findings indicate a full mediation pattern in which engagement becomes motivational when employees evaluate their work positively, perceive supportive social expectations, and believe that they possess sufficient control and resources to perform their duties. The study extends the application of planned behavior constructs in human resource management and highlights the need for organizations to combine engagement initiatives with meaningful work design, supportive norms, capability development, autonomy, and adequate work resources.

JEL Classification: M12; M54; J24
Keywords: *Work engagement, Work motivation, Work attitude, Subjective norm, Perceived behavioral control*

INTRODUCTION

Ex situ conservation and wildlife breeding organizations operate under conditions in which biological outcomes depend heavily on organizational reliability. The quality of animal care, record keeping, reproductive planning, reporting, and coordination is shaped not only by physical facilities and technical knowledge but also by the consistency of employee behavior. Indonesian wildlife breeding enterprises have also faced substantial sectoral fluctuation. Statistics Indonesia reported that the number of active plant and wildlife breeding companies declined from 103 in 2020 and 104 in 2021 to 72 in 2022, recovered to 81 in 2023, and then fell to 27 in 2024 (BPS, 2025). Such volatility increases the importance of organizational capacity and a workforce capable of maintaining accurate, responsible, and continuous operations.

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Human resources are especially consequential in primate-breeding operations because husbandry, veterinary, record-keeping, administrative, and field functions are operationally interdependent. Employees must implement standard operating procedures consistently, maintain accurate population, health, and husbandry records, coordinate across technical and managerial units, and respond promptly to animal-welfare and operational risks. In Indonesia, Ministerial Regulation No. 18 of 2024 places wildlife breeding within a formal regulatory framework that encompasses licensing, record-keeping, auditing, monitoring, and periodic reporting, making accountability and documented procedural compliance essential organizational capabilities (Kementerian Lingkungan Hidup dan Kehutanan, 2024). Research on captive-primate management likewise emphasizes systematic welfare assessment, staff training, cross-functional responsibility, and a strong culture of care as foundations for continuous facility improvement (Paterson et al., 2024; Prescott et al., 2023; Turner & Bayne, 2023). More broadly, conservation effectiveness depends on a multi-skilled workforce supported by professional standards, organizational capacity, and continuous professional development (Appleton et al., 2022; Loffeld et al., 2022).

Work engagement is frequently positioned as a critical psychological resource in this context. Kahn (1990) and Pincus (2023) conceptualized personal engagement as the physical, cognitive, and emotional expression of the self during work-role performance. Furthermore, Pincus (2023) subsequently operationalized work engagement as a positive and fulfilling work-related state characterized by vigor, dedication, and absorption. Employees who experience energy, meaningfulness, and sustained concentration in their work are more likely to invest discretionary effort, persist when difficulties arise, and connect their daily responsibilities with broader organizational objectives. Consistent with the job demands–resources theory, adequate job resources can initiate a motivational process that promotes work engagement and contributes to positive individual and organizational outcomes (Bakker et al., 2014; Bakker & Demerouti, 2017).

Work motivation refers to the processes that determine the intensity, direction, and persistence of an individual's effort toward attaining a goal (Brockner et al., 2024). In a primate-breeding organization, motivation may be reflected in employees' willingness to sustain effort during routine work, remain resilient when operational obstacles arise, and take initiative when problems cannot be resolved through standard procedures alone. Although work engagement and motivation are closely related, their conceptual boundaries remain debated. Work engagement is commonly treated as a positive work-related psychological state, whereas motivation concerns the forces and processes that activate, direct, and sustain goal-oriented behavior. Pincus (2023), however, argued that employee engagement is more appropriately understood as a work-specific manifestation of human motivation, while cautioning that engagement research frequently conflates its antecedents, underlying psychological mechanisms, and consequences. Prior research has generally associated engagement with desirable organizational outcomes.

The Theory of Planned Behavior (TPB) offers a structured explanation of these mechanisms. Ajzen (2020) proposed that behavior is shaped by intention, which is formed by attitude toward the behavior, subjective norm, and perceived behavioral control. Attitude captures an individual's favorable or unfavorable evaluation of performing a behavior. Subjective norm represents perceived social expectations from important referents. Perceived behavioral control reflects the perceived ease, capacity, and control associated with performing the behavior. Perceived control is also closely related to self-efficacy, which influences effort, persistence, and responses to obstacles (Ajzen, 1991, 2020).

This study adapts, rather than fully reproduces, the original TPB structure. Work attitude, subjective norm, and perceived behavioral control are positioned as parallel mediators between work engagement and work motivation. The model does not include behavioral intention or an observed behavioral outcome. Its purpose is to test whether engagement first changes how employees evaluate their work, interpret organizational expectations, and perceive their ability to act, before those mechanisms generate motivation. This adaptation addresses a research gap because the three TPB constructs have rarely been examined simultaneously as mediating mechanisms in the relationship between engagement and motivation, particularly in a wildlife breeding organization.

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Accordingly, the study investigates direct and indirect relationships among work engagement, work attitude, subjective norm, perceived behavioral control, and work motivation among employees of PT Biomedika Nusantara Indah in Lampung. The expected contribution is twofold. Theoretically, the research clarifies why engagement may not automatically become motivation. Practically, it identifies whether management should focus primarily on increasing engagement or on ensuring that engagement is translated into positive evaluations, supportive work norms, and a strong sense of capability and control.

Literature Review and Hypothesis Development

Work Engagement and Work Motivation

Engagement involves energetic and meaningful involvement in work, while motivation concerns the direction and persistence of effort. Employees who display vigor, dedication, and absorption should be more willing to invest effort and persist in achieving organizational objectives (Schaufeli et al., 2002). The motivational pathway in job demands-resources theory likewise suggests that engagement supports positive performance-related outcomes when employees possess sufficient work resources (Rożnowski & Wontorczyk, 2024). Based on this reasoning, work engagement is expected to increase work motivation.

H1: Work engagement has a positive effect on work motivation.

Work Engagement and Planned Behavior Constructs

Engaged employees invest cognitive and emotional resources in their roles, which may encourage them to interpret their work as meaningful and valuable and, consequently, develop more favorable work attitudes. Recent evidence supports a reciprocal resource-gain process: a weekly longitudinal study found that work engagement predicted subsequent job crafting, while job crafting also predicted later engagement; similarly, dyadic evidence showed that the combination of work engagement and job autonomy was associated with greater job crafting and improved performance (Jindal et al., 2022; Lopper et al., 2023). Because job crafting involves self-initiated changes in how employees organize and perform their work, these findings suggest that engaged employees are more likely to actively reinforce positive evaluations of their jobs. Engagement is also embedded in a social context. Longitudinal evidence indicates that support from supervisors and colleagues, together with organizational identification, predicts subsequent work engagement, suggesting that engagement and perceived collective expectations may operate as mutually reinforcing rather than independent processes (Simbula et al., 2023). At the control level, recent research has identified a positive association between work engagement and self-efficacy, indicating that energetic involvement and mastery experiences may strengthen employees' beliefs that they possess the competence and resources needed to perform effectively (Rożnowski & Wontorczyk, 2024). Taken together, these evaluative, social, and control-related processes are consistent with the attitude, subjective norm, and perceived behavioral control components identified by Ajzen (1991, 2020), thereby supporting the expectation that work engagement may enhance work attitude, subjective norm, and perceived behavioral control.

H2: Work engagement has a positive effect on work attitude.
H3: Work engagement has a positive effect on subjective norm.
H4: Work engagement has a positive effect on perceived behavioral control.

Planned Behavior Constructs and Work Motivation

A favorable attitude toward work should make the expenditure of effort appear valuable and worthwhile, thereby strengthening employees' motivation to pursue organizational goals. Recent evidence indicates that compatibility between employees' values and the work environment is associated with stronger work attitudes and greater employee effort, suggesting that positive evaluations of work provide an important motivational foundation (Abdelmoteleb, 2020; Kim et al., 2020). Subjective norms may further strengthen motivation when supervisors, peers, and organizational culture communicate clear behavioral expectations and provide consistent social support. Social influence operates through both descriptive norms perceptions of what others commonly do, and injunctive norms

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perceptions of what important others believe should be done (Cialdini & Goldstein, 2004). Contemporary workplace research also shows that social support can generate positive affective reactions, strengthen interpersonal relationships, improve performance, and buffer the adverse effects of demanding work conditions (Jolly et al., 2021). Perceived behavioral control should likewise promote motivation because employees are more willing to invest and sustain effort when they believe they possess the competence, resources, opportunities, and autonomy required to complete their tasks and overcome obstacles. This proposition is consistent with self-efficacy theory, which maintains that perceived capability shapes goal choice, effort, persistence, and resilience when difficulties arise (Bandura, 2006). More recent research similarly indicates that employees' perceptions of both motivation and ability jointly influence their work attitudes and behavior, while empirical evidence shows that self-efficacy contributes positively to initiative and effective workplace behavior (Brockner et al., 2024; Rożnowski & Wontorczyk, 2024).

H5: Work attitude has a positive effect on work motivation.
H6: Subjective norm has a positive effect on work motivation.
H7: Perceived behavioral control has a positive effect on work motivation.

The Mediating Roles of Planned Behavior Constructs

The direct influence of work engagement on work motivation may depend on whether engagement is translated into more specific psychological states. Engaged employees may become more motivated because they develop favorable evaluations of their work, perceive that supervisors, colleagues, and other important organizational actors support high-quality performance, and believe that they possess the competence, resources, and control required to manage the work process. Accordingly, work attitude represents an evaluative mechanism, subjective norm captures the perceived social support and expectations surrounding work behavior, and perceived behavioral control reflects employees' confidence in their capacity to perform effectively despite operational constraints. If these mechanisms explain how engagement is converted into sustained goal-directed effort, the specific indirect effects of work engagement on work motivation through work attitude, subjective norm, and perceived behavioral control should be statistically significant. Mediation should therefore be assessed by estimating each specific indirect effect and evaluating its bootstrapped confidence interval rather than relying solely on the significance of the total or direct effect (Rasoolimanesh et al., 2021; Sarstedt et al., 2020; Zhao et al., 2010). Bootstrapping is appropriate because the sampling distribution of an indirect effect is often asymmetric, while bootstrap procedures provide a more direct assessment of whether the estimated indirect effect differs from zero; robust bootstrap procedures may also improve inference when data contain influential observations or violations of conventional distributional assumptions (Alfons et al., 2022).

H8: Work attitude mediates the effect of work engagement on work motivation.
H9: Subjective norm mediates the effect of work engagement on work motivation.
H10: Perceived behavioral control mediates the effect of work engagement on work motivation.

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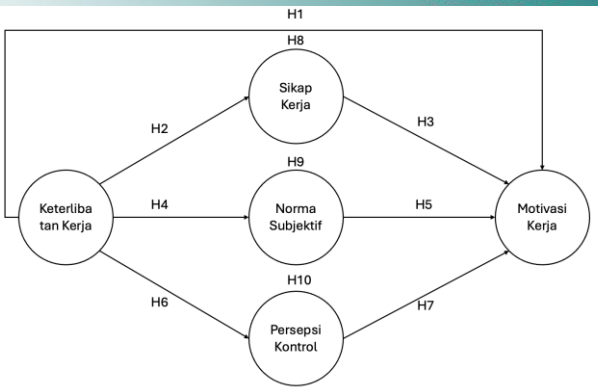

Figure 1. Research Conceptual Framework

METHODS

Research Design

The study employed a quantitative explanatory design to test the theoretically proposed direct and indirect relationships among work engagement, work attitude, subjective norm, perceived behavioral control, and work motivation. Quantitative explanatory research is appropriate when a study seeks to examine relationships among measurable constructs and evaluate hypotheses derived from an established theoretical framework. Data were collected from employees at a single point in time; therefore, the study adopted a cross-sectional design. Cross-sectional research enables researchers to measure multiple variables simultaneously and examine patterns of association efficiently, but it does not establish temporal precedence between predictors, mediators, and outcomes (Wang & Cheng, 2020). Primary data were obtained through a structured employee questionnaire designed to capture respondents' perceptions of the study constructs, whereas secondary information was drawn from relevant academic publications, government reports, and organizational documents to support the theoretical, regulatory, and contextual foundations of the research. Although the proposed model specifies directional relationships, the path coefficients and indirect effects estimated from cross-sectional data should be interpreted as theory-driven statistical associations rather than definitive evidence of causality. Cross-sectional designs can provide valuable preliminary evidence for testing theoretical models, but longitudinal or experimental designs are required to establish temporal ordering and support stronger causal conclusions (Spector, 2019; Wang & Cheng, 2020).

Population and Sample

The population consisted of all employees of PT Biomedika Nusantara Indah. A saturated sampling or census technique was applied because the population was accessible and relatively limited. All 138 employees were included as respondents. The sample contained 94 men (68%) and 44 women (32%). The largest occupational groups were operational staff (25%), technical or field staff (22%), and administrative staff (20%). Most respondents were 31-35 years old (30%), held a bachelors degree (40%), and had worked for the company for four to six years (31%). These characteristics indicate that the respondents had sufficient organizational and operational experience to evaluate the constructs in the model.

Measures and Data Collection

The questionnaire comprised 23 reflective indicators rated on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Work engagement was measured through vigor, dedication, and absorption (Kahn, 1990; Schaufeli et al., 2002). Work attitude, subjective norm, and perceived behavioral control were each measured with five indicators developed from the Theory of Planned

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Behavior (Ajzen, 1991, 2020) (Ajzen, 1991). Work motivation was assessed through effort, goal orientation, intrinsic satisfaction, resilience, and initiative. All constructs were specified as reflective measures (Shmueli et al., 2019).

Data Analysis

The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) in SmartPLS 4.0. Measurement model evaluation examined indicator loadings, average variance extracted (AVE), Cronbach's alpha, composite reliability, the Fornell-Larcker criterion, and the heterotrait-monotrait ratio (HTMT). Indicator loadings of at least 0.70, AVE values of at least 0.50, reliability values of at least 0.70, and HTMT values below 0.90 were treated as acceptable (Fornell & Larcker, 1981; Hair et al., 2017; Henseler et al., 2015). The structural model was assessed through path coefficients, R-squared, effect size, Q-squared predictive relevance, and bootstrapping. A relationship was considered significant when the t-statistic exceeded 1.96 and the p-value was below 0.05 (Hair et al., 2019; Sarstedt et al., 2020). Specific indirect effects were used to evaluate the three mediation hypotheses.

RESULTS AND DISCUSSION

Evaluation of the Measurement Model

All 23 indicators exceeded the recommended loading threshold. Indicator loadings ranged from 0.865 to 0.928, indicating that each item strongly represented its intended construct. The AVE values ranged from 0.788 to 0.841, while Cronbach's alpha ranged from 0.901 to 0.953 and composite reliability ranged from 0.938 to 0.964. The measurement model therefore demonstrated convergent validity and internal consistency (Table 1).

Table 1. Evaluation of the Measurement Model

Construct	Items	Loading Range	AVE	Cronbach Alpha	Composite Reliability
Work Attitude	5	0.865-0.914	0.788	0.933	0.949
Work Engagement	3	0.912-0.916	0.835	0.901	0.938
Work Motivation	5	0.879-0.915	0.813	0.943	0.956
Perceived Behavioral Control	5	0.908-0.928	0.841	0.953	0.964
Subjective Norm	5	0.883-0.906	0.799	0.937	0.952

Discriminant validity was also supported. For each construct, the square root of AVE was greater than its correlations with the other constructs. All HTMT values were below 0.90; the highest value was 0.712 for the relationship between perceived behavioral control and work motivation. The constructs were therefore empirically distinguishable and suitable for structural model testing.

Evaluation of the Structural Model

The model explained 34.3% of the variance in work attitude, 23.3% in subjective norm, 27.4% in perceived behavioral control, and 67.1% in work motivation. The explanatory power for work motivation was moderate and approached the strong category, while the three mediator constructs showed weaker R-squared values because work engagement was their only predictor. All Q-squared values were positive, indicating predictive relevance for the endogenous constructs (Table 2).

Table 2. Structural Model Evaluation

Endogenous Construct	R-squared	Adjusted R-squared	Q-squared
Work Attitude	0.343	0.338	0.673
Work Motivation	0.671	0.661	0.708
Perceived Behavioral Control	0.274	0.268	0.748
Subjective Norm	0.233	0.227	0.688

Effect-size analysis showed that work engagement had a large contribution to work attitude (f-squared = 0.521) and perceived behavioral control (f-squared = 0.377), and a moderate contribution to subjective norm (f-squared = 0.304). Perceived behavioral control had the largest effect on work

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motivation (f-squared = 0.394), followed by work attitude (f-squared = 0.290). The direct contribution of work engagement to work motivation was very small (f-squared = 0.019), while the effect of subjective norm was small (f-squared = 0.044).

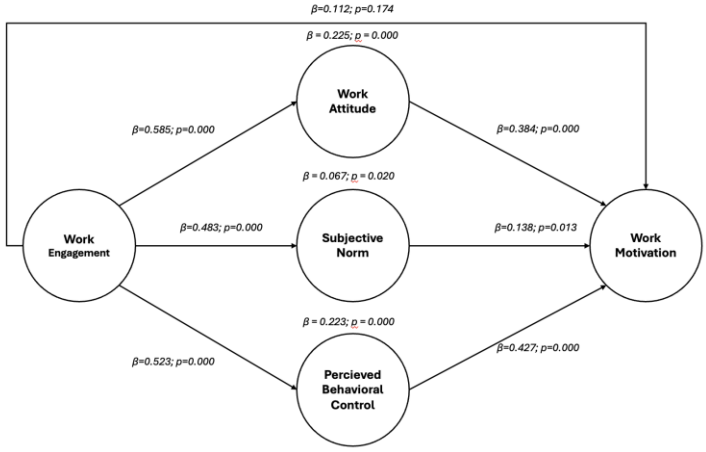

Figure 2. Structural Model and Path Coefficients

Hypothesis Testing

Bootstrapping results revealed that six of the seven direct relationships were significant. Work engagement did not directly affect work motivation, but it significantly influenced each planned behavior construct. Work attitude, subjective norm, and perceived behavioral control each had positive effects on work motivation. All three specific indirect effects were significant (Table 3).

Table 3. Results of Direct and Indirect Hypothesis Testing

	Relationship	Beta	t-statistic	p-value	Decision
H1	Work Engagement -> Work Motivation	0.112	1.361	0.174	*Rejected*
H2	Work Engagement -> Work Attitude	0.585	11.046	0.000	Accepted
H3	Work Engagement -> Subjective Norm	0.483	8.155	0.000	Accepted
H4	Work Engagement -> Perceived Behavioral Control	0.523	8.088	0.000	Accepted
H5	Work Attitude -> Work Motivation	0.384	6.539	0.000	Accepted
H6	Subjective Norm -> Work Motivation	0.138	2.486	0.013	Accepted
H7	Perceived Behavioral Control -> Work Motivation	0.427	7.598	0.000	Accepted
H8	Work Engagement -> Work Attitude -> Work Motivation	0.225	5.841	0.000	Accepted
H9	Work Engagement -> Subjective Norm -> Work Motivation	0.067	2.340	0.020	Accepted
H10	Work Engagement -> Perceived Behavioral Control -> Work Motivation	0.223	5.643	0.000	Accepted

The Influence of Work Engagement on Work Motivation

The direct relationship between work engagement and work motivation was positive but not statistically significant (β = 0.112, p = .174); therefore, H1 was not supported. This result suggests that vigor, dedication, and absorption do not automatically translate into persistent, goal-directed effort once

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the proposed psychological mediators are included in the model. Although engagement has often been conceptualized as a motivational state, Pincus (2023) cautioned that engagement research frequently conflates the construct with its antecedents, underlying psychological mechanisms, and consequences. In the present context, employees may remain emotionally attached to the organizational mission and cognitively absorbed in their duties but still exhibit limited persistence or initiative when they perceive insufficient autonomy, inadequate resources, repetitive work, or weak social reinforcement. The negligible direct effect further supports an indirect-only mediation interpretation: after work attitude, subjective norm, and perceived behavioral control were entered simultaneously, engagement made little unique contribution to work motivation. A nonsignificant direct effect does not preclude mediation when the specific indirect effects are significant (Zhao et al., 2010). Accordingly, management should not expect motivational improvements from initiatives that merely increase enthusiasm or organizational attachment. Engagement interventions should also improve employees' evaluations of their work, strengthen supportive expectations from supervisors and colleagues, and increase employees' confidence that they possess the competence, resources, and control required to perform effectively.

The Influence of Work Engagement on Work Attitude, Subjective Norm, and Perceived Control

Work engagement had a strong positive effect on work attitude ($\beta = 0.585$; $p = 0.000$), supporting H2. Employees who invest energy and identity in their roles are more likely to interpret their work as meaningful, valuable, and aligned with organizational objectives. This result is consistent because psychological presence and dedication should strengthen favorable cognitive and affective evaluations of the job. The large effect size also indicates that attitude is the planned behavior construct most strongly shaped by engagement in this model (Adams et al., 2022; Ajzen & Schmidt, 2020).

Work engagement also positively affected subjective norm ($\beta = 0.483$; $p = 0.000$), supporting H3. Engaged employees are more connected to supervisors, colleagues, and organizational values, which increases their sensitivity to expected standards of behavior. The result is compatible with social influence theory, which explains that perceived expectations and observed group behavior shape an individual (Cialdini & Goldstein, 2004). Nevertheless, its R-squared value was relatively low, implying that leadership communication, peer cohesion, organizational culture, and formal policies probably contribute to subjective norm beyond engagement alone.

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The positive effect of work engagement on perceived behavioral control ($\beta = 0.523$; $p = 0.000$) supported H4. Engaged employees appear more likely to feel capable of handling their duties, using available resources, and overcoming obstacles. Vigor and absorption may increase task familiarity and mastery, while dedication can encourage employees to seek solutions when difficulties arise. This interpretation is consistent with Ajzen (2020), who links perceived capability with effort and persistence. However, because perceived control also depends on actual resources and authority, organizations must support engagement with training, equipment, information, and appropriate decision latitude.

The Influence of Planned Behavior Constructs on Work Motivation

Work attitude positively affected work motivation ($\beta = 0.384$; $p = 0.000$), supporting H5. Employees who evaluate their work as meaningful and worthwhile are more willing to invest effort, remain persistent, and pursue organizational goals. This result supports the evaluative mechanism in TPB, although the outcome in this adapted model is work motivation rather than behavioral intention. It also indicates that communicating the conservation value of routine tasks, recognizing employee contributions, and providing development opportunities can transform positive evaluations into sustained motivation.

Subjective norm had a positive but comparatively weaker effect on work motivation ($\beta = 0.138$; $p = 0.013$), supporting H6. Clear expectations from supervisors, supportive relationships with coworkers, and consistency between organizational values and expected behavior can encourage employees to meet established performance standards. Workplace social support provides emotional,

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informational, and instrumental resources that can strengthen employee attitudes, facilitate performance, and reduce the adverse effects of demanding work conditions (Jolly et al., 2021).

Perceived behavioral control had the strongest direct effect on work motivation (β = 0.427; p = 0.000), supporting H7. Employees were more motivated when they believed that they had sufficient competence, resources, autonomy, and organizational support to complete their duties. This finding is consistent with the self-efficacy mechanism described by Bandura (1997) and with the control component of TPB (Ajzen, 2020). For a regulated organization with technical and administrative responsibilities, motivation is likely to decline when employees understand the importance of a task but believe that they lack the authority, information, equipment, or skills required to perform it.

The Mediating Roles of Work Attitude, Subjective Norm, and Perceived Control

Work attitude positively affected work motivation (β = 0.384, p < .001), supporting H5. Employees who regard their work as meaningful and worthwhile are more likely to invest effort, persist in completing tasks, and pursue organizational objectives. This finding supports the evaluative mechanism of TPB, although the outcome in the adapted model is work motivation rather than behavioral intention (Ajzen, 2020). Recent evidence similarly shows that meaningful work is associated with greater self-reported effort and stronger beliefs that employees should perform at their best (Cnossen & Nikolova, 2025). Thus, communicating the conservation significance of routine activities, recognizing employee contributions, and providing development opportunities may help transform favorable work evaluations into sustained motivation.

Subjective norm had a positive but comparatively weaker effect on work motivation (β = 0.138, p = .013), supporting H6. Clear expectations from supervisors, supportive relationships with coworkers, and consistency between organizational values and expected behavior can encourage employees to comply with performance standards. Workplace social support may provide emotional, informational, and instrumental resources that facilitate positive employee attitudes and behavior (Jolly et al., 2021). However, the small effect size suggests that normative expectations and social support serve as supplementary rather than dominant motivational forces. Employees in this context appear to rely more strongly on their evaluations of the work and their perceived capability than on social expectations alone.

Perceived behavioral control had the strongest direct effect on work motivation (β = 0.427, p < .001), supporting H7. Employees were more motivated when they believed that they possessed sufficient competence, resources, autonomy, and organizational support to complete their responsibilities. This result is consistent with TPB, which proposes that perceived behavioral control reflects beliefs about the capacity and opportunity to perform a behavior, and with self-efficacy theory, which links perceived capability to effort, persistence, and resilience (Ajzen, 1991, 2020; Bandura, 2006). Contemporary evidence also identifies self-efficacy as an important personal resource in the workplace, although its effects may vary according to individual and contextual conditions (Rożnowski & Wontorczyk, 2024). For a regulated organization with technical and administrative responsibilities, motivation may therefore decline when employees recognize the importance of a task but believe that they lack the authority, information, equipment, or skills required to complete it effectively.

CONCLUSION

This study concludes that work engagement does not directly increase work motivation among employees of the primate breeding company. Instead, engagement strengthens motivation through work attitude, subjective norm, and perceived behavioral control. Work attitude and perceived control constitute the most influential mediation paths, while subjective norm provides a smaller but significant social pathway. These findings refine the engagement-motivation relationship by showing that engagement operates as an upstream psychological resource that must be translated into favorable work evaluations, supportive social expectations, and a sense of capability and control. The adapted planned behavior model therefore contributes to human resource management by explaining why highly engaged employees may still display limited persistence or initiative when they do not value the work positively or lack sufficient control over its execution.

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Managerially, PT Biomedika Nusantara Indah should combine engagement initiatives with interventions that make work meaningful, recognize contributions, clarify organizational expectations, strengthen supervisor and peer support, build competence, provide adequate resources, and grant proportional autonomy. Particular attention should be given to persistence, resilience, and employee initiative. The findings are limited by the single-company, cross-sectional, and self-report design and by the omission of behavioral intention from the original TPB structure. Future research should incorporate intention and observable work behavior, use longitudinal or mixed-method designs, and test the model in other conservation, breeding, and operational organizations.

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