**Information Management and Business Review (ISSN 2220-3796)**
**Vol. 18, No. 4(S), pp. 55-63, 2026**

# Examining the Role of Self-Determination Theory in Enhancing Employee Motivation in a Malaysian Public Listed Construction Company

Muhammad Akmal Tarmizi Abdul Razak, *Murni Zarina Mohamed Razali, Dilla Syadia Ab Latiff, Norlelawati Jamaluddin
Universiti Teknologi Mara, Malaysia
Email: 2023869296@uitm.edu.my, *murnizarina@uitm.edu.my
Corresponding Author: Dr Murni Zarina Mohamed Razali

**Abstract:** Employee motivation has been recognized as a vital component for productivity and organizational performance, particularly in the construction industry where employees often face high-pressure work conditions and rigid hierarchies. This study investigated the role of Self-Determination Theory (SDT) in understanding employee motivation in a Malaysian publicly listed construction company, focusing on the psychological needs of autonomy, competence and relatedness. Despite extensive global research on motivation, there has been limited focus on SDT's application within Malaysia's construction sector. This study addressed this gap by conducting a quantitative analysis involving a census of 200 employees from one publicly listed construction company. Data were collected using structured questionnaires and analyzed using SPSS, employing descriptive statistics, reliability testing, Pearson correlation, t-Test analysis, and multiple regression. The findings revealed that all three psychological needs were significantly correlated with employee motivation. Competence emerged as the strongest predictor of motivation, followed by autonomy, while relatedness showed a significant correlation but did not contribute uniquely to the regression model. Additionally, significant differences in motivation levels were found based on demographic factors such as gender, education level, marital status, and job position. These results provide evidence that fulfilling employees' needs for competence and autonomy plays a critical role in enhancing motivation within construction settings. The study offers practical insights for HR practitioners and policymakers to design targeted strategies aimed at fostering a more motivated and productive workforce.

**Keywords:** *Self-Determination Theory, Employee Motivation, Autonomy, Competence, Relatedness.*

## 1. Introduction

This study investigates the critical issue of employee motivation within Malaysia's construction industry by focusing on three essential psychological needs identified in Self-Determination Theory, which are autonomy, competence, and relatedness. The construction sector plays a vital role in Malaysia's economic growth, contributing significantly to national employment and development. However, despite substantial investments and strong recovery efforts following the COVID-19 pandemic, the industry continues to face persistent workforce challenges.

One of the most pressing concerns is the low level of motivation among employees, which stems from high-pressure working environments, limited opportunities for decision-making, and a lack of structured career development. Workers are often subjected to rigid project schedules and hierarchical management structures that restrict autonomy and limit their ability to take ownership of their tasks. This leaves many employees feeling undervalued and disengaged.

In addition, many construction workers report a lack of competence due to inadequate training and insufficient upskilling programs. This undermines their confidence and affects their ability to meet project demands effectively. Furthermore, the project-based nature of construction work often disrupts team cohesion and weakens interpersonal relationships, leading to a lack of relatedness and connection to the organization.

These challenges have serious implications for workforce stability, safety, productivity, and overall organizational performance. While job satisfaction and performance have been widely studied in the construction sector, there is a clear lack of research that focuses specifically on how psychological needs influence motivation, particularly in the Malaysian context.

This study is therefore both timely and necessary. It aims to close this research gap by examining the

relationship between autonomy, competence, and relatedness and employee motivation in publicly listed construction companies in Malaysia. This study also aims to determine the most influential factors among these variables. The findings are expected to provide meaningful insights for human resource professionals and organizational leaders, offering practical strategies to foster a motivated, resilient, and high-performing workforce. Addressing these motivational needs is not only crucial for employee well-being but also essential for achieving long-term success and sustainability in one of Malaysia's most demanding industries.

## 2. Literature Review

Employee motivation plays a critical role in ensuring productivity, retention, and satisfaction, especially in high-pressure sectors such as construction. Self-Determination Theory (SDT), developed by Deci and Ryan (1985), identifies three psychological needs essential to intrinsic motivation: autonomy, competence, and relatedness. This study adopts SDT as its theoretical foundation and focuses on how these three factors influence employee motivation in the Malaysian construction sector. Motivation is the dependent variable, while autonomy, competence, and relatedness serve as the independent variables.

### Self-Determination Theory

Self-Determination Theory (SDT), introduced by Deci and Ryan (1985), explains that motivation is driven by the fulfillmentof three basic psychological needs, which are autonomy, competence, and relatedness. When these needs are satisfied, individuals are more likely to experience intrinsic motivation, leading to greater engagement, well-being, and performance atwork (Ryan & Deci, 2020). In high-pressure industries such as construction, meeting these psychological needs is especially important due to demanding workloads, tight deadlines, and hierarchical structures (Rahman et al., 2023). Autonomy allowsemployees to feel in control of their work, competence builds confidence through skill development, and relatedness fostersa sense of connection with colleagues and supervisors (Van den Broeck et al., 2016; Howard et al., 2021). Research in Malaysian workplaces confirms that SDT-based practices such as participative leadership and continuous training can enhance motivation and reduce burnout (Guo & Chelliah, 2024). Therefore, SDT provides a strong foundation for understanding how psychological needs influence employee motivation in the construction sector.

### Autonomy and Employee Motivation

Autonomy refers to the degree of control employees have over their tasks and decisions. Employees who are allowed to exercise self-direction are more likely to experience intrinsic motivation and engagement (Deci & Ryan, 1985). In the construction sector, rigid project structures and top-down management often restrict autonomy, which leads to disengagement (Rahman et al., 2023). However, research shows that autonomy-supportive leadership, including participative decision-making and flexible scheduling, can enhance motivation and performance (Slemp et al., 2014; Olafsen et al., 2021). For example, employees involved in planning and execution demonstrate greater ownership and job satisfaction (Hamid & Amir Ishak., 2022).

**H1:** There is a relationship between autonomy and employee motivation.

### Competence and Employee Motivation

Competence reflects an employee's belief in their ability to perform tasks effectively. Employees who feel capable andadequately skilled are more likely to show initiative, persistence, and satisfaction in their roles (Howard et al., 2021). In construction, many employees report lacking the necessary training and upskilling opportunities, which negatively impacts motivation (CIDB Malaysia, 2024; Rahman et al., 2023). Providing structured development programs, regular feedback, and career progression opportunities helps strengthen perceived competence and intrinsic motivation (Lim et al., 2021; Zulkifli et al., 2023). This then relates to the second hypothesis of the study as below:

**H2:** There is a relationship between competence and employee motivation.

### Relatedness and Employee Motivation

Relatedness is the need to feel connected to others in the workplace. When employees experience trust, support, and a sense of belonging, they are more likely to be motivated and engaged (Deci & Ryan, 1985; Van den Broeck et al., 2021). Inconstruction, the transient and project-based nature of work often disrupts

social bonds, contributing to isolation and lower morale (Shamsuddin et al., 2023). However, team-building activities, open communication, and inclusive leadership have been shown to improve relatedness and strengthen motivation (Rahman et al.,2023; Husin & Shamsuddin, 2023). Thus, the third hypothesis of this study:
**H3:** There is a relationship between relatedness and employee motivation.

**Gender and Employee Motivation**
Gender differences can influence how employees respond to motivational drivers. Women in construction often face barriers such as underrepresentation in leadership, exclusion from decision-making, and limited development opportunities (CIDB, 2024; Ismail et al., 2023). These challenges reduce their sense of autonomy, competence, and relatedness, affecting motivation. Inclusive HR practices, mentorship, and gender-sensitive leadership are associated with improved motivation among female employees (Muthambi et al., 2025). Hence, a hypothesis is formed as below:
**H4:** There is a significant difference in employee motivation between male and female employees.

**Dominant Predictor of Motivation**
While autonomy, competence, and relatedness are all critical, studies suggest that in certain industries or organizational settings, one factor may emerge as the most significant predictor of motivation. Understanding the most influential factor canhelp organizations prioritize their interventions (Howard et al., 2021; McAnally & Hagger, 2024).
**H5:** There is one factor that significantly predicts employee motivation more than the others.

## 3. Methodology

This study adopts a quantitative approach to examine the impact of autonomy, competence, and relatedness on employee motivation at one of the construction companies in Malaysia. The study focuses on employees working in key departments such as Project Management, Design and Technical, and General Workers, all of whom are directly involved in high-pressure construction projects. The entire population of 200 employees was included using a census sampling method to ensure comprehensive coverage and accurate findings (Creswell, 2014).

Data were collected using a structured, self-administered questionnaire distributed via Google Forms, which included sections on demographics,employee motivation, autonomy, competence, and relatedness.

The questionnaire was adapted from validated instruments including the Work Extrinsic and Intrinsic Motivation Scale (WEIMS) and SDT-based subscales (Tremblay et al., 2009; Deci & Ryan, 1985; Baard et al., 2004). All items used a 5-pointLikert scale ranging from "Strongly Disagree" to "Strongly Agree". The instrument underwent a pilot test for clarity and reliability. Content and construct validity were ensured through expert reviews.

Data were analyzed using Social Science Statistics Version 29 (SPSS 23). Descriptive statistics summarized the demographic profile of respondents. Inferential statistics, including Pearson correlation, multiple regression, and t-test analyses, were used to testthe hypotheses and evaluate the relationships between the independent variables (autonomy, competence, and relatedness) and the dependent variable (employee motivation). This robust methodology supports accurate, generalizable insights into the motivational drivers in Malaysia's construction sector.

## 4. Findings and Discussion

This chapter presents the analysis and findings derived from the data collected through the structured questionnaire distributedto the respondents. The results are organized to address the research objectives and hypotheses concerning therelationship between autonomy, competence, relatedness, and employee motivation. The analysis is divided into several key sections, which are the demographic profile of respondents, reliability of instruments, normality tests, descriptive statistics of variables, correlation analysis, and regression analysis.

**Demographic Profile of Respondents**

The demographic profile of the 200 respondents illustrates a moderately balanced workforce with some notable patterns. The gender distribution shows that 54.0% of respondents were male and 46.0% female, reflecting the traditionally male-dominated nature of the construction industry, though the gap appears to be narrowing. In terms of marital status, 50.5% of the participants were single while 49.5% were married, suggesting a fairly even split that may correspond with different career stages across the employee base. Age-wise, the majority of respondents were between35 and 45 years old (33.5%), closely followed by those aged 25 to 35 (33.0%), indicating that the workforce largely consists of mid-career professionals. A further 26.0% were aged between 45 and 55, and only 7.5% were aged 55 to 65, highlighting a limited representation of older employees. Regarding educational background, most respondents held a bachelor's degree(46.5%), with 25.0% possessing a master's degree, 2.5% a PhD, and 26.0% holding other qualifications such as diplomas or professional certifications. This distribution reflects a highly educated workforce with substantial academic grounding. In terms of work experience, 34.0% of respondents had 11 to 20 years of experience, 33.5% had 6 to 10 years, and 24.5% had less than 5 years, indicating a strong presence of experienced staff alongside a significant group of early-career professionals. Only 8.0% had more than 21 years of experience. Lastly, job position data revealed that the largest group wereTechnical Staff (27.5%), followed by On-site Workers (25.0%), Management roles (24.5%), and Administrative Staff (23.0%), demonstrating a diverse mix of technical and support functions across the organization.

**Means and Standard Deviations after Factor Analysis**

As shown in Table 1, this section presents the Means and Standard Deviations for the primary variables used in the study, following factor analysis. The independent variables derived from Self-Determination Theory (SDT) include Autonomy, Competence, and Relatedness, while Employee Motivation represents the dependent variable. All constructs were measured using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

**Table 1: The Means and Standard Deviations after Factor Analysis**

| Construct | Mean | Standard Deviation |
|---|---|---|
| Employee Motivation (Dependent variable) | 3.99 | .376 |
| Autonomy (Independent variable) | 4.02 | .335 |
| Competence (Independent variable) | 4.02 | .324 |
| Relatedness (Independent variable) | 4.05 | .269 |

As shown in Table 1, all constructs recorded relatively high mean scores, indicating overall positive responses from participants. Among the independent variables, Relatedness recorded the highest mean (M = 4.05, SD = 0.269), suggesting that employees generally feel supported and connected in their work environment. This was followed by both Autonomy andCompetence, each with identical mean values of 4.02, indicating that employees feel confident in their capabilities and perceive a degree of control over their tasks. Their standard deviations of 0.335 and 0.324, respectively, also reflect consistentperceptions across respondents. The dependent variable, Employee Motivation, had a mean score of 3.99 with a standard deviation of 0.376, suggesting that employees in the studied construction firm are generally well-motivated, though slightly lower compared to the psychological need constructs. These findings confirm that the instrument remains valid and reliable even after factor analysis, and the measured constructs contribute meaningfully to understanding motivation in the construction sector.

**Reliability after Factor Analysis**

Table 2 presents the results of the reliability analysis conducted after factor analysis, using Cronbach's Alpha (α) to assess the internal consistency of each construct. Cronbach's Alpha values above 0.70 are generally considered acceptable, with values above 0.80 regarded as good, and values exceeding 0.90 considered excellent (Pallant, 2020; Ursachi et al., 2013).

**Table 2: Summary of Reliability Analysis after Factor Analysis (n=200)**

| Construct | N of Items | Cronbach's Alpha |
|---|---|---|
| Employee Motivation | 11 | .916 |
| Autonomy | 10 | .891 |
| Competence | 10 | .897 |
| Relatedness | 10 | .867 |

As shown in Table 2, all four constructs demonstrate high levels of internal consistency, with Cronbach's Alpha values ranging from 0.867 to 0.916. The dependent variable, Employee Motivation, achieved the highest reliability score of 0.916,indicating excellent internal consistency among the 11 items measuring this construct. This confirms that the scale effectively captures the motivational perceptions of respondents. Autonomy recorded a Cronbach's Alpha of 0.891, suggesting that the items used are strongly aligned in measuring employees' sense of independence and self-regulation at work. Similarly, Competence demonstrated a high reliability score of 0.897, confirming the consistency of items used to evaluate respondents' perceived skills and capability in performing job tasks. Lastly, Relatedness scored 0.867, which alsofalls within the good reliability range, supporting the internal consistency of the scale in assessing social connection and workplace relationships. In summary, the measurement instruments used in this study can be deemed reliable and valid, providing a strong foundation for further statistical analysis and interpretation of the relationships among the studied constructs.

**Pearson Correlation Analysis**

Table 3 presents the Pearson's Product-Moment Correlation Coefficients between the independent variables (Autonomy, Competence, and Relatedness) and the dependent variable (Employee Motivation). The analysis was conducted to determinethe strength and direction of linear relationships between the constructs, as guided by the assumptions of normality and the requirements of parametric testing. Pearson's correlation coefficient (r) ranges from −1 to +1, where values closer to ±1 indicate stronger relationships.

**Table 3: Correlation Analysis**

| No | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| **1** | 1 | | | |
| **2** | .826** | 1 | | |
| **3** | .828** | .848** | 1 | |
| **4** | .638** | .790** | .719** | 1 |

**. Correlation is significant at the 0.01 level (2-tailed).
1 = Employee Motivation, 2 = Autonomy, 3 = Competence, 4 = Relatedness

As seen in Table 3, all variables were positively and significantly correlated at the $p < 0.01$ level. Among the three psychological needs, Competence showed the strongest positive correlation with Employee Motivation ($r = .828$, $p < .01$). This indicates that when employees feel competent and confident in their abilities, their level of motivation at work tends toincrease significantly. The strength of this relationship supports the argument that feeling effective and skilled in one's tasksis essential for fostering intrinsic motivation among employees in the construction industry.

Autonomy also demonstrated a very strong and statistically significant positive correlation with Employee Motivation ($r = .826$, $p < .01$). This suggests that the more employees perceive they have control and choice in their work environment, the more likely they are to be motivated. This result aligns with the core principle of SDT that autonomy supports psychologicalwellness and work engagement, especially in structured sectors like construction, where autonomy is often limited.

In comparison, Relatedness exhibited a slightly lower but still statistically significant correlation with Employee Motivation($r = .638$, $p < .01$). Although weaker than the other two constructs, this relationship confirms that employees who feel a senseof belonging and interpersonal connection with colleagues are

more likely to feel motivated. This is especially relevant in project-based environments where team dynamics frequently shift, potentially disrupting workplace bonds.

Furthermore, strong intercorrelations were observed among the independent variables themselves. Autonomy was highly correlated with competence (r = .848) and Relatedness (r = .790), while Competence also showed a strong correlation withRelatedness (r = .719). These relationships suggest that the psychological needs of autonomy, competence, and relatedness tend to co-exist and reinforce one another, further validating SDT's framework. Overall, the correlation analysis highlights the critical role of these three constructs in shaping employee motivation within Malaysia's construction sector.

**Multiple Regression Analysis**

To further understand the extent to which the independent variables, autonomy, Competence, and relatedness, predict Employee Motivation, a multiple regression analysis was performed. This statistical method allows for evaluating the collective and individual contributions of the predictors to the dependent variable. Table 4 summarizes the regression model'sperformance.

**Table 4: Multiple Regression Analysis**

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|
| **.860** | .739 | .735 | .193 |

***Predictors**: (Constant), Relatedness (IV3), Competence (IV12), Autonomy (IV1)*

The results of the regression analysis reveal that the model produced an R value of 0.860, indicating a strong positive correlation between the combination of the three predictors and Employee Motivation. The R-squared value was 0.739, suggesting that 73.9% of the variance in Employee Motivation can be explained by Autonomy, Competence, and Relatedness. This high R-squared indicates that the model fits the data well. The Adjusted R-square, which adjusts for the number of predictors in the model, was 0.735, affirming the model's robustness and generalizability.

The standard error of the estimate was 0.193, which indicates a relatively small degree of residual variance, meaning the predictions made by the model are reasonably accurate. In addition, the F-statistic for the overall model was 185.45 with a significance level of $p < .001$, indicating that the model as a whole was statistically significant. This means that, collectively, the independent variables reliably predict Employee Motivation.

These results affirm that Autonomy, Competence, and Relatedness significantly and jointly contribute to explaining Employee Motivation among employees in the construction sector. The findings are consistent with the assumptions of Self- Determination Theory (SDT), reinforcing that fulfilling these psychological needs has a powerful influence on employee motivation.

**Summary of Hypotheses**

This study tested three hypotheses to examine the relationship between the independent variables Autonomy, Competence, and Relatedness and the dependent variable, Employee Motivation. Pearson's Correlation and Multiple Regression Analyses were used to validate these hypotheses. Table 5 summarizes the results of the hypothesis testing based on the Pearson correlation coefficients and the corresponding significance values.

**Table 5: Summary of Hypotheses**

| Hypothesis | Hypothesis Statement | Result |
|---|---|---|
| **H1** | There is a relationship between Autonomy and Employee Motivation | **Accepted** |
| **H2** | There is a relationship between Competence and Employee Motivation | **Accepted** |
| **H3** | There is a relationship between Relatedness and Employee Motivation | **Accepted** |

**Most Influential Predictor of Motivation**

Based on the results of the multiple regression analysis, competence was identified as the most influential predictor of employee motivation among the variables examined. Although autonomy and relatedness were also included in the regression model, competence demonstrated the highest standardized beta coefficient ($\beta = 0.450$, $p < .001$), indicating that it made the strongest unique contribution to predicting motivation, after controlling for the effects of the otherindependent variables.

This result implies that employees who perceive themselves as capable, effective, and able to meet job demands are significantly more likely to report higher levels of motivation in their roles. In the context of the organization, this emphasizes the importance of nurturing employees' sense of competence through work-related experiences that challenge and validate their skills. The detailed regression coefficient for competence is presented in Table 6 below.

**Table 6: Regression Coefficient of the Most Influential Predictor on Employee Motivation**

| Predictor | Unstandardized Coefficients Beta | Std. Error | Standardized Coefficients Beta | t | Sig. |
|---|---|---|---|---|---|
| Competence | .521 | .082 | .450 | 6.364 | < .001 |
| Autonomy | .487 | .082 | .434 | 5.936 | <.001 |
| Relatedness | .019 | .075 | .014 | .255 | .799 |

The high beta value associated with competence suggests that improvements in employees' perceived ability to perform their tasks could lead to substantial gains in motivation levels. This aligns with the principles of Self-Determination Theory, which underscores competence as a core psychological need that drives intrinsic motivation. Consequently, this finding supports the strategic importance of enhancing competence among employees through structured training programs, continuous upskilling opportunities, consistent performance feedback, and formal recognition initiatives. Strengthening competence not only contributes to individual development but also serves as a powerful driver of motivation, ultimately benefiting organizational performance and employee engagement at large.

## 5. Conclusion and Recommendations

This study explored how autonomy, competence, and relatedness influence employee motivation at a construction company, grounded in Self-Determination Theory (SDT). The results confirmed that all three psychological needs are significantly and positively related to motivation, consistent with extensive literature demonstrating that satisfying these needs enhances intrinsic motivation (Gagné et al., 2014). In particular, competence emerged as the strongest predictor, aligning with recent empirical findings that the need for competence has the most powerful positive influence on work performance and motivation (Lintunen et al., 2025; Olafsen et al., 2015).

The dominance of competence as a predictor indicates that employees who perceive themselves as capable and effective in meeting job demands are more likely to be highly motivated. While autonomy and relatedness also contributed positively, their effects were less pronounced. This pattern is supported by recent HR research highlighting that competence-supportive HR practices have significant associations with employee engagement and motivation across contexts (Smith et al., 2024).

In summary, the findings offer practical and theoretical implications. The construction company should focus on enhancing employee competence through structured training, continuous feedback, and recognition initiatives. They should support autonomy through participative decision-making and foster a supportive environment that encourages interpersonal relatedness. Addressing these needs can yield sustainable improvements in motivation, well-being, andorganizational performance, in line with the core propositions of SDT.

**Future Research**

Future studies ought to reconsider a longitudinal study design to address the shortcomings of time as an independent variable in the study. This is because longitudinal research would allow consistency of data being collected to be measured at differenttimes; hence, it can examine how autonomy, competence, and relatedness are the factors that affect motivation as it varies with time. That would be even stronger evidence of causal relationships and would shed further light on whether alterations in thesatisfaction of psychological needs precede alterations in motivation or conversely.

Longitudinal methods are particularly useful in the organizational context, where change measures such as leadership coaching, working flexibly, or training programs in employee development can take weeks or months to influence motivation. Recording these cumulative impacts will allow future research to produce more practical knowledge for HR practitioners.

Moreover, time-centric designs allow researchers to investigate the sustainable intervention of motivational interventions that have not been exhaustively studied in SDT studies in Southeast Asia. Moreover, future studies might also note the use of time-lagged structural equation modeling (SEM) or growth modeling to study the diversion of developmental trends within motivation, escalation points, or measuring developmental traces across varied employee proportions. Such sophisticated methods of statistical analysis would greatly enhance the motivation picture as a fluid concept and give empirical information on how to construct resilient, adaptive, and supportive working environments.

**References**

Ahmad, S. Z., & Hussain, M. (2022). The role of autonomy and leadership in enhancing employee motivation:Evidence from Malaysian service organizations. Journal of Applied Management and Entrepreneurship, 17(2),103-118.

Ali, M. A. M., Zaini, N. A. M., & Hashim, N. (2023). Enhancing employee motivation through empowerment practices in the Malaysian construction industry. Journal of Construction in Developing Countries, 28(1), 103–118.

Aziz, F. A., Mahir, A. A., & Rasid, M. (2021). The impact of work-life balance on employee motivation: Evidence from Malaysia. Journal of Human Resource and Sustainability Development, 9(3), 224-238.

Bakar, N. A., Ali, A. H., & Ismail, N. (2021). The role of autonomy in enhancing job satisfaction: Evidence fromMalaysian manufacturing companies. Asian Academy of Management Journal, 26(3), 77-95.

Construction Industry Development Board (CIDB). (2024). Annual Construction Industry Report 2024. CIDBMalaysia. https://www.cidb.gov.my

Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed methods approach (4th ed.). Sage Publications.

Deci, E. L., & Ryan, R. M. (1985). Intrinsic motivation and self-determination in human behavior. Springer. https://doi.org/10.1007/978-1-4899-2271-7

Deci, E. L., & Ryan, R. M. (2000). Self-determination theory: Basic psychological needs in motivation, development, and wellness. American Psychologist, 55(1), 68–78.

Deci, E. L., Olafsen, A. H., & Ryan, R. M. (2017). Self-determination theory in work organizations: The state ofscience. The Annual Review of Organizational Psychology and Organizational Behavior, 4(1), 19–43.

Guo, L., & Chelliah, S. (2024). The impact of self-determination theory on work motivation: A critical review. *Global Business and Management Research*, *16*(4s), 1916-1936.

Hamid, S. F., & Amir Ishak, N. (2022). Work-life balance on career satisfaction among digital entrepreneurs. *ASEAN Entrepreneurship Journal (AEJ)*, *8*(1), 14-20.

Howard, J. L., Gagné, M., Morin, A. J. S., & Van den Broeck, A. (2020). Motivation profiles at work: A self-determination theory approach. Journal of Vocational Behavior, 117, 103312. https://doi.org/10.1016/j.jvb.2019.103312

Howard, J. L., Ryan, R. M., & Vansteenkiste, M. (2021). Recent developments in self-determination theory. *Journal of Educational Psychology, 113(6),* 1136–1142. https://doi.org/10.1037/edu0000661

Ismail, F., Yusof, N., & Zulkifli, N. (2023). Challenges faced by women engineers in the Malaysian

constructionindustry. *Journal of Engineering Science and Technology, 18(2),* 1–12.

McAnally, P. L., & Hagger, M. S. (2024). Basic psychological needs and performance in organizational settings:A self-determination theory perspective. Journal of Organizational Behavior, 45(2), 145–162. https://doi.org/10.1002/job.2681

Michael Page. (2024). Workplace gender equity in Malaysia: What women want. Michael Page Malaysia. https://www.michaelpage.com.my/advice/management-advice/diversity-and-inclusion/workplace-gender-equity- Malaysia-women

Milyavskaya, M., Koestner, R., & Côté, S. (2019). Autonomy, competence, and relatedness in the workplace: Areview of literature and applications in organizational settings. Journal of Applied Psychology, 104(6), 888- 904.

Ministry of Human Resources Malaysia. (2024). Report on occupational health and safety in the Malaysian construction sector. Retrieved from https://www.mohr.gov.my/

Mohamed Razali, S. N. N. (2020). A study on the relationship between employees' benefits and their effect on employees' productivity in PERKESO [bachelor's thesis, Universiti Teknologi MARA]. UiTM InstitutionalRepository. https://ir.uitm.edu.my/id/eprint/41206

Muthambi, L., Agumba, J. N., & Adebowale, O. J. (2025). Motivating factors for professional women in construction career progression. *International Journal of Manpower*, *46*(5), 853-866.

Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, *61*, 101860.

Rahman, R., Zolkafli, A. H., & Hamid, F. (2023). Employee motivation and challenges in Malaysia's construction industry. *Construction Management Research Journal, 15(2),* 45–67.

Rahman, M. N. A., Yahya, K. K., & Ismail, F. (2023). Autonomy and employee retention in Malaysian construction projects. Built Environment Journal, 20(1), 15–25. https://bej.uitm.edu.my/

Shamsuddin, A., Rahman, N., & Goh, M. (2023). Building a competent workforce: Addressing the skills gap in Malaysia's construction sector. International Journal of Construction Education and Research, 19(1), 75-89.

Olafsen, A. H., Halvari, H., & Frølund, C. W. (2021). The basic psychological need satisfaction and frustration at work scale: A validation study. *Frontiers in Psychology*, *12*, 697306.

Slemp, G. R., & Vella-Brodrick, D. A. (2014). The relationship between autonomy support and well-being: A self-determination theory perspective. *Motivation and Emotion, 38(4),* 383-397.

Tremblay, M. A., Blanchard, C. M., Taylor, S., Pelletier, L. G., & Villeneuve, M. (2009). Work Extrinsic and Intrinsic Motivation Scale: Its value for organizational psychology research. *Canadian Journal of Behavioral Science/Revue canadienne des sciences du comportement*, *41*(4), 213.

Van den Broeck, A., Ferris, D. L., Chang, C. H., & Rosen, C. C. (2016). A review of self-determination theory's basic psychological needs at work. *Journal of Management*, *42*(5), 1195-1229.

Zulkifli, Z., Purwati, A. A., Renaldo, N., Hamzah, Z., & Hamzah, M. L. (2023). Employee performance of Sharia Bank in Indonesia: The mediation of organizational innovation and knowledge sharing. *Cogent Business & Management*, *10*(3), 2273609.