

RESEARCH ARTICLE

EXPLORING THE EFFECT OF EMPLOYEE ENGAGEMENT ON THE SOCIAL ASPECT OF FIRM SUSTAINABILITY: EVIDENCE FROM THE MALAYSIAN CONSTRUCTION INDUSTRY

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ABSTRACT - This study examined how various dimensions of employee engagement influence the social sustainability of firms operating within the Malaysian construction industry. It focused on employees working in construction firms registered with the Construction Industry Development Board (CIDB) within the Federal State of Kuala Lumpur and Putrajaya. Simple random sampling was used for respondents selection followed by the distribution of an online questionnaire created using Google Forms. The data was analysed using Structural Equation Modelling via SmartPLS. The results indicated a favorable impact of behavioral employee engagement to firm social sustainability. In a broader sense, these findings shed light on the strategies required to enhance employee engagement for the sake of firm sustainability within the construction sector. It offers valuable insights into the leadership of construction organisations, specifically emphasising the significance of firm social sustainability and how it is influenced by employee engagement. A distinctive feature of this study is its segmentation of employee engagement into cognitive, behavioral, and emotional dimensions. Additionally, it addresses an aspect of sustainability that has received comparatively less attention—construction-related social sustainability—thus contributing to a more comprehensive understanding of the subject when compared to existing research.

ARTICLE HISTORY

Received : 20-06-2023

Revised : 11-09-2023

Accepted : 11-11-2023

Published : 21-03-2024

KEYWORDS*Employee engagement**Firm sustainability**Construction industry**Malaysia*

1.0 INTRODUCTION

The abrupt changes in business environments and high level of competition have prompted attempts from firms across all sectors to achieve the sustainability status. However, the COVID-19 pandemic has imposed more difficulties towards such effort (Szmigiera, 2021). Many academicians and practitioners, including managers and social entrepreneurs, are currently facing challenges to contribute in the social sustainability of organisations (Schaltegger et al., 2016). These challenges are more acute in industries that cause environmental degradation, climate change, and interdependent human-related societal issues (Seebode et al., 2012). Construction is one of these industries, which has the potential to contribute towards the imbalanced eco-system by generating pollutants that can harm the social sustainability status of individuals and society.

Generally, sustainability refers to meeting the needs of present time without compromising the needs of future generations. In the construction industry, the concept of sustainable construction describes the ability of firms to construct building assets in ways that improve the quality of life and customer satisfaction (Adetunji et al., 2003). Construction firms are facing the pressure to follow sustainable practices from various stakeholders because of their increased expectations and awareness on the global challenges imposed by the industry. In this regard, firms are responsible for healthy building environments by employing reasonable resources and following ecological principles (Adetunji et al., 2003). Firms should take solid measures regarding the well-being of the overall society in construction projects, which is only possible by considering construction sustainability measures. This involves taking various steps at different life cycles of construction projects, which may include the selection of building materials, procurement of building materials, construction site planning, sewerage planning, recycling of waste materials, and minimisation of waste and energy-related concerns. Likewise, Slack et al. (2015) indicate that social justice is one of the most difficult aspects of construction firms as it belongs to the legal, ethical, and moral requirements. Additionally, Malaysia has taken steps regarding construction social sustainability through the Construction Industry Master Plan (CIMP, 2006-2015). Nevertheless, these measures could never be implemented effectively without the support of important stakeholders, especially construction employees.

Employee engagement is one of the important aspects observed by firms across the globe. The recent Gallup survey (2022) reported an average of 21% employees who were engaged at work all over the world. However, Malaysia only recorded 18% of employee engagement in the workplace. It is argued that employees tend to perform something useful and meaningful (e.g., charity or volunteer works) either to satisfy or increase their self-worth and self-esteem (Kahn & Heaphy, 2013; Yeoman, 2014; Nazir & Islam, 2020). However, Slack et al. (2015) argue that employees range from those

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who take active participation in social sustainability issues to those who take less or even no interest. Thus, social sustainability is a kind of trade-off between personal and societal gains. Notably, it is difficult to understand the psychology of individual employees because of the different self-construing behaviours. This highlights the importance of examining the impact between employee engagements with recent sustainability issues especially in construction firms, which can potentially affect the well-being of society as a whole.

Past studies have mentioned the key role of employees in achieving the sustainability targets of underlying organisations (Slack et al., 2015). For example, the study of Farrukh et al. (2020) highlighted employees as strong stakeholders for organisations to analyse, perceive, evaluate, and react to socially sustainable programs. Moreover, previous literature is filled with studies on the relationship between employee engagement and performance outcomes, such as profitability, productivity, and retention (Ali et al., 2020). However, studies examining the relationship between employee engagement and the social sustainability concerns of construction firms are rare.

This study contributes in various ways. It has been observed that the link between employee engagement and sustainability is examined bi-directionally. Some studies believe that social sustainability is an outcome of employee engagement (Slack et al., 2015; Kim et al., 2016), while others think that employees will be more engaged when firms are involved in social sustainability programs (Glavas, 2016). Interestingly, the framework of this impact remains confusing because of the lead and lag relationship between variables. Previous studies also examined employee engagement as a single construct and did not account for its dimensions, such as cognitive, behavioural, and affective. Conversely, the results obtained can be misleading because it is obvious that employees are different concerning their intelligence and emotional quotients. The second-order categorisation in this study can provide better results regarding the link between employee engagement and the social sustainability of construction projects. Additionally, findings obtained through the Structural Equation Modelling (SEM) technique could provide implications for human resource managers, strategic managers, and social entrepreneurs.

The remainder of this paper is outlined as follows. Section 2 reviews past studies and develops the hypothesis accordingly. Section 3 outlines the methods employed in this study. Section 4 describes the main findings of this paper. Finally, Section 5 concludes the paper by describing the implications, limitations, and future research directions.

2.0 LITERATURE REVIEW

2.1 Theoretical Discussion

The philosophy of Maslow's hierarchy of needs is applied to the current study in such a way that employees' engagement is subject to the level of fulfilment of their needs (Shuck, 2011). The continuum of needs ranges from basic needs on one hand to self-actualisation needs on the other hand. The core idea of this theory posits that employee engagement is linked with the level of needs an employee is fulfilling. Logically, an individual tends to engage with more intensity if he/she is attempting to fulfil top-rank needs of self-esteem and self-actualisation. It signifies that highly satisfied employees are more likely to engage and stay loyal to the underlying organisation. Interestingly, the basic needs of employees, such as food, clothing, and shelter, can be fulfilled by a majority of employers while few employers have the ability to provide confidence and esteem to their employees, which consequently helps them to reach the self-actualisation stage (Lester, 2013). Therefore, an employee will be less engaged if the motive is to fulfil basic needs with greater chances to disengage. Another extreme example could be that employees, through highly engaged actions, help to provide a competitive advantage. It means that Maslow's hierarchy of needs plays a vital role in determining employees' current and future state of mind along with their behavioural actions. Employee engagement concerns the psychological interactions of employees within themselves and their surroundings (De Lacy, 2009). It is pertinent to mention that an individual might fulfil more magnitude of one need as compared to another need. Therefore, this study believes that employee engagement can help achieve the social sustainability motive of an organisation.

2.2 Employee Engagement

The concept of employee engagement is vague and unclear because of its multidimensionality. It also overlaps with employee role constructs, such as job involvement, employee commitment, and employee motivation (Ting et al., 2020). The major reason for this overlap could be due to common outcomes like satisfaction from job and high level of productivity from employees. Some researchers believe that employee engagement is the outcome of physical, cognitive, and emotional efforts (Kahn, 1990; Ting et al., 2020). This means that an employee would be considered engaged if he/she performs physically, presents mentally, and is involved emotionally. Furthermore, Ferguson and Carstairs (2007) claim that engagements can be affective, behavioural, and cognitive. Affective engagements are related to employees' emotions, behavioural engagements are linked with employees' actions, and cognitive engagements are linked with employees' thoughts. Likewise, the concepts of vigour, dedication, and absorption introduced by Schaufeli et al. (2002) are relevant to the mental, physical, and feeling-related struggles of the employees (Ting et al., 2020). This study undertakes the classification of cognitive, behavioural, and affective employee engagement as discussed in Anitha (2014).

2.2.1 Cognitive Employee Engagement

Ensuring the alignment of the minds of organisation members with the organisational vision is of utmost importance. Cognitive engagement helps employees to become rational and mentally aware of their task roles for achieving

organisational goals (Lu et al., 2016). Similarly, Kahn (1990) highlighted that cognitively engaged employees have a clear understanding of the vision and strategies of their firms. Thus, cognitive abilities are the intellectual capital of an organisation which has the capacity to produce novel ideas and innovative solutions. Having the same meaning as cognition, Lu et al. (2016) proposed the term 'vigour' which indicates that employees are exerting a full level of energy by employing mental endurance. The visual and acoustic senses of employees are highly active while cognitively engaged. Cognitive employee engagement helps to cope with challenges at the workplace and increases the resilience and confidence of employees. For instance, employees having no fear in their cognition will put in efforts without the fear of failure (Kahn, 1990). Similarly, the positive perception of employees helps them to maintain constant faith on their employers and motivates them to perform in uncertain situations. The psychological state of mind is more individualistic in nature rather than collective (Davis & Van der Heijden, 2023). Thus, the employee himself/herself is the focus of cognitive engagement.

2.2.2 Behavioural Employee Engagement

Behavioural engagement is one of the critical dimensions of employee engagement, which is related to the actions of employees of an organisation. De Lacy (2009) argues that behavioural employee engagement refers to the adaptive attitude of employees of an organisation that helps to achieve organisational goals. It is notable that adaptive employees are more flexible and proactive. Therefore, flexible and proactive employees tend to be more engaged physically and perform extra roles voluntarily. Among the outcomes of behavioural employee engagement include extra-role performances, volunteer performances, sniffing critical issues in advance, taking initiatives, and strong loyalties (Kahn, 1990; Lu et al., 2016; Ting et al., 2020). Hence, behavioural employee engagement promotes employees' dedication towards their organisation.

2.2.3 Affective Employee Engagement

Emotions are a strong internal stimuli for most employees of an organisation. According to Kahn (1990), employees can be emotionally engaged with their employers, while Naicker (2013) mentioned that employees can also be emotionally connected with their colleagues and work circumstances. Emotionally connected employees are likely to create positive interpersonal relations with other employers and co-workers. These positive interpersonal relations help in generating feelings of respect, trust, and security, which further cultivates cohesive teams and groups. Meaningfulness towards employees' work clearly leads towards a high level of employee engagement (Ting et al., 2020). Therefore, it is obvious that employees' emotions are strong drivers of their performances.

2.3 Hypotheses Development

The concept of sustainability has become apparent all over the world. It is obvious that the overall effect of firm sustainability improves society as a whole. In this vein, employee engagement plays a pivotal role in achieving corporate sustainability (Mirvis, 2012; Kim et al., 2016). The three dimensions of employee engagement (cognitive, behavioural, and affective) can affect the sustainable aspects of organisations. For instance, highly engaged employees are more energetic and enthusiastic towards their work roles (May et al., 2004; Macey & Schneider, 2008; Kim et al., 2016). The phenomenon of firm sustainability requires workers to perform their jobs consistently and competently (Kim et al., 2013; Kim et al., 2016). Therefore, highly engaged employees are more capable to perform their jobs with a high level of competence. Likewise, Osborne and Hammoud (2017) highlighted that the longevity of a business depends on the engagement of employees of an organisation and it has further potential to affect firm profitability. Therefore, this study attempts to identify the impact of employee engagement on firm social sustainability in construction firms, which is a less addressed dimension of sustainability.

2.3.1 The Effect of Cognitive Employee Engagement on Firm Social Sustainability

Sustainability practices are much needed in construction industries because these industries have more inclination towards contributing to ecological and climate systems (Bamgbade et al., 2017). For example, construction firms potentially contribute to the degradation of ecological optimum balances by exerting atmosphere gases and other water pollutants. The development of environmental sustainability practices in construction industries is notable. However, social sustainability practices such as constructing favourable building environments which cause less risks to human beings are less. Cognitive employee engagement can assist social sustainable practices of construction firms in multiple ways. By exerting a high level of mental energy, cognitively engaged employees can create innovative and technological solutions to social sustainability issues of construction firms (Ye, Liu, & Tan, 2022). Tan et al. (2011) mentioned that technological innovation is key for achieving sustainability practices in construction processes. Thus, the cognitive engagement of employees will offer innovative, efficient, and safe construction methods and provide a better working environment in an organisation. Additionally, cognitively engaged employees are more aware of the mission and vision of their organisation. Perception also derives from the cognition of employees of an organisation. In this view, Farrukh et al. (2020) argue that employees' engagement depends on how they perceive social responsibility issues. Logically, what employees think is the result of what they observe and listen. The active visual and acoustic capabilities of employees contribute in the proactive planning of social sustainability needs. Therefore, this study aims to predict the positive effect of cognitive employee engagement on the social aspect of firm sustainability.

H₁: The cognitive dimension of employee engagement has a positive effect on the social aspect of firm sustainability.

2.3.2 The Effect of Behavioural Employee Engagement on Firm Social Sustainability

Sustainable behaviours lead towards sustainable success (Uusiautti & Hyvärinen, 2021). Along with mental commitments, behavioural commitments also contribute in achieving the social sustainability of construction firms. Bakker and Demerouti (2008) mentioned that highly engaged employees create their own positive feedback in terms of appreciation, recognition, and success. They tend to perform extra roles and put extraordinary efforts in social sustainability issues. For example, behaviourally engaged employees contribute in developing sophisticated construction designs by following standard operating procedures (SOPs) and ethical concerns. They behave proactively towards issues regarding building materials, safety measures, and the hygienic issues of buildings. Notably, employees are the key stakeholders of an organisation and are personally involved in making policies regarding social sustainability (Slack et al., 2015). Behavioural employee engagement can also be linked with the organisational citizenship behaviour of employees (De Lacy, 2009). Raza et al. (2021) argue that engagement helps employees to act voluntarily regarding the pro-environmental issues of companies. Accordingly, employees will show cooperation, courtesy, and a high level of participation with respect to co-workers, people, community, and society. Thus, social sustainable culture prevails in an organisation. Transformational leadership style can also be attributed as the behavioural engagement of employers, which transfers signals of sustainable measures and actions towards employees. In this sense, Muralidharan and Pathak (2018) found a positive relationship between transformational leadership and social entrepreneurship. Therefore, the following hypothesis was formulated:

H₂: The behavioural dimension of employee engagement has a positive effect on the social aspect of firm sustainability.

2.3.3 The Effect of Affective Employee Engagement on Firm Social Sustainability

Behaviours are the manifestation of feelings by the employees of an organisation (Mutonyi et al., 2022). The subject of psychology deals with the nature of human beings. The intelligence domain is related to the mind of employees of an organisation, while the emotional domain is linked to their heart (Goleman, 2001). Logically, emotions trigger the bodily actions of employees of an organisation and act as a stimulus for employee engagement. Affective employee engagement helps to build connections with employers, colleagues, and companies (Kahn, 1990; De Lacy, 2009; Ting et al., 2020). It is obvious that emotionally involved employees will be more caring and have a sense of sympathy than disengaged employees. On the contrary, dissident employees tend to care less about occupational health and safety issues. Bamgbade et al. (2017) claimed that social justice is one of the most challenging aspects of construction-related sustainability as it deals with the legal, moral, and ethical issues of construction firms. Emotionally engaged employees tend to address these issues more actively because of their active emotional vigilance. Similarly, when predicting the relationship, issues pertinent to the environment, health, safety, and community of construction firms are likely to be resolved proactively under the emotional dimension.

H₃: The affective dimension of employee engagement has a positive effect on the social aspect of firm sustainability.

Figure 1 presents the research framework of the study.

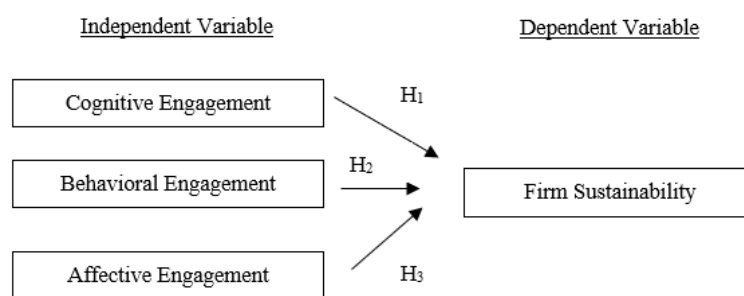


Figure 1. Research framework

3.0 DATA AND METHODOLOGY

3.1 Measures and Scale

This study utilised the quantitative research design to investigate the effect of employee engagement on the social aspect of firm sustainability. The questionnaire items were adapted and adopted from previous studies and modified to fit the scope of this study (Schaufeli & Bakker, 2003; Islam et al., 2012; Kim & Park, 2017; Ting et al., 2020). The latent variable of employee engagement was measured with the help of three dimensions, namely cognitive employee engagement, behavioural employee engagement, and affective employee engagement. Meanwhile, cognitive, behavioural, and affective engagements were measured with six (6), five (5), and six (6) items, respectively. Hence, the employee engagement dimension was measured by a total of seventeen (17) items. Moreover, the social sustainability dimension was measured using three (3) items of values and transparency, seven (7) items of workplace, five (5) items related to corporate governance practices, four (4) items concerning the environment, and six (6) items about community. Thus, social sustainability was measured by a total of twenty-five (25) items. The composite score was computed from the relevant indicators of constructs. The underlying assumption of indicators and constructs was reflective, which means

that the values of all these items were reflected in the constructs. A 5-point Likert scale was used for measuring the variables, ranging from (1) = Strongly disagree, (2) = Disagree, (3) = Neutral, (4) = Agree, and (5) = Strongly agree.

3.2 Sample and Data Collection

The key respondents of this study were project directors, managers, engineers, and quantity surveyors from various construction firms in Malaysia. The selection of respondents was based on random sampling. The data was collected through the online distribution of Google Forms via social media platforms such as WhatsApp, Twitter, and LinkedIn to reach the respondents who were working within the construction industry.

3.3 Data Analysis

The Structural Equation Modelling (SEM) technique was administered through the Smart PLS 3 software (Hair Jr et al., 2017). Correlation analysis was performed to analyse the impact of three employee engagement dimensions (affective, behavioural, and cognitive engagement) on the dependent variable (social aspect of firm sustainability). Validity refers to checking whether the underlying variables reflect what is meant to be measured, while reliability describes the consistency of the results obtained (Sekaran & Bougie, 2016). This study assessed the content, convergent, and discriminant validity as well as the composite reliability of the underlying constructs of this study. The measurement model and structural model were reported separately.

4.0 RESULTS AND FINDINGS

4.1 Demographics of Respondents

Table 1 presents the demographic profile of the respondents. A total of 120 online responses were received after the period of three months. This value of responses exceeded the suggested number of 119 respondents computed from the G-Power software. The majority of the responses were from private sector employees with 88 respondents (73.33%). Additionally, 46 respondents (38.33%) were from firms that have been operating for 15 years, while 13 employees (10.83%) were from 5 or less than 5 years old firms. Most of the respondents came from firms with more than 200 employees (64 employees, 53.33%). Furthermore, 28 out of the 120 employees (23.33%) were engineers and only 2 employees (1.67%) were working as executives. Concerning working experience, 67 employees (55.83%) had the experience of three to five years, whereas 45 employees (37.50%) have been working only for two years or less with the current organisation.

Table 1. Demographic profile of the respondents

Demographic Profile	Count	Percent
Gender		
Female	74	61.67%
Male	46	38.33%
Education Level		
Bachelor's degree	79	65.83%
Diploma	18	15.00%
Master's degree	3	2.50%
SPM	20	16.67%
Sector		
Private	88	73.33%
Public	32	26.67%
Age of the Organisation		
0 – 5 years	13	10.83%
6 – 10 years	42	35.00%
11 – 15 years	19	15.83%
> 15 years	46	38.33%
Number of Employees		
0 – 100 employees	22	18.33%
101 – 200 employees	34	28.33%
> 200 employees	64	53.33%
Position		
Assistant Manager	17	14.17%
Construction Worker	17	14.17%

Table 1. (cont.)

Demographic Profile	Count	Percent
Engineer	28	23.33%
Executive	2	1.67%
General Worker	23	19.17%
Head of Department	10	8.33%
Middle-Level Manager	14	11.67%
Senior Manager	9	7.50%
Years of working experience in the current position		
0 – 2 years	29	24.17%
3 – 5 years	67	55.83%
> 5 years	24	20.00%
Years of working in the current organisation		
0 – 2 years	45	37.50%
3 – 5 years	42	35.00%
> 5 years	33	27.50%
Grand Total	120	100.00%

4.2 Reliability and Validity

Table 2 shows the reliability and validity results of the cognitive employee engagement, behavioural employee engagement, affective employee engagement, and social sustainability dimensions. The internal consistency was verified with the values of Cronbach's Alpha and composite reliability (CR) measure. Notably, the Cronbach's Alpha values of all constructs were greater than the cut-off values of 0.70, except for the affective employee engagement dimension. According to Nunnally and Bernstein (1994), CR value of 0.7 or greater is adequate. Similarly, Sarstedt, Ringle, and Hair (2014) mentioned that CR values greater than 0.6 are acceptable. In the present study, the CR values for all constructs were greater than 0.70, hence deemed acceptable. It signifies that all the constructs employed in this study were reliable.

Table 2. Summary of convergent validity

Construct	Cronbach's Alpha	CR	AVE
C	0.7003	0.8335	0.6285
B	0.7066	0.8288	0.6180
A	0.6443	0.8453	0.7328
CSR	0.9138	0.9396	0.4426

Note: A = affective, B = behavioural, C = cognitive, CSR = corporate social responsibility

Furthermore, this study assessed convergent and composite validity using the average variance extracted (AVE) and Heterotrait-Mnotrait Ratio (HTMT) criteria tests. The AVE values above the cut-off value of 0.5 show that the variables are convergently valid (Hair Jr et al., 2017). Table 3 shows the inter-construct correlations while the diagonal bold values indicate the square roots of AVE values. The criteria for discriminant validity is that the square root of AVE should be greater than the correlation between construct variables (Ahmed et al., 2020). This subsequently denotes that the discriminant validity assessment in this study provided satisfactory results.

Table 3. Discriminant validity - HTMT

	A	B	C	CSR
A	0.8560			
B	0.5872	0.7861		
C	0.5502	0.5022	0.7928	
CSR	0.4732	0.5355	0.3429	0.6653

Note: A = affective, B = behavioural, C = cognitive, CSR = corporate social responsibility

4.3 Hypothesis Testing

Hypothesis testing is a process of drawing inferences about population parameters from a given sample, hence providing a probability whether to reject or not to reject the null hypothesis. This study conducted hypothesis testing

through the bootstrapping approach by utilising the Smart PLS-3 software. According to the 95% confidence interval, the value of t-statistic should be greater than 1.645 and the respective p-value should be less than 0.05. The outer loadings of the PLS path model that were less than 0.5 were then removed after PLS Algorithm was run to calculate the data, resulting in the model illustrated in Figure 2. This ensured that the data was reliable, accurate, and appropriate.

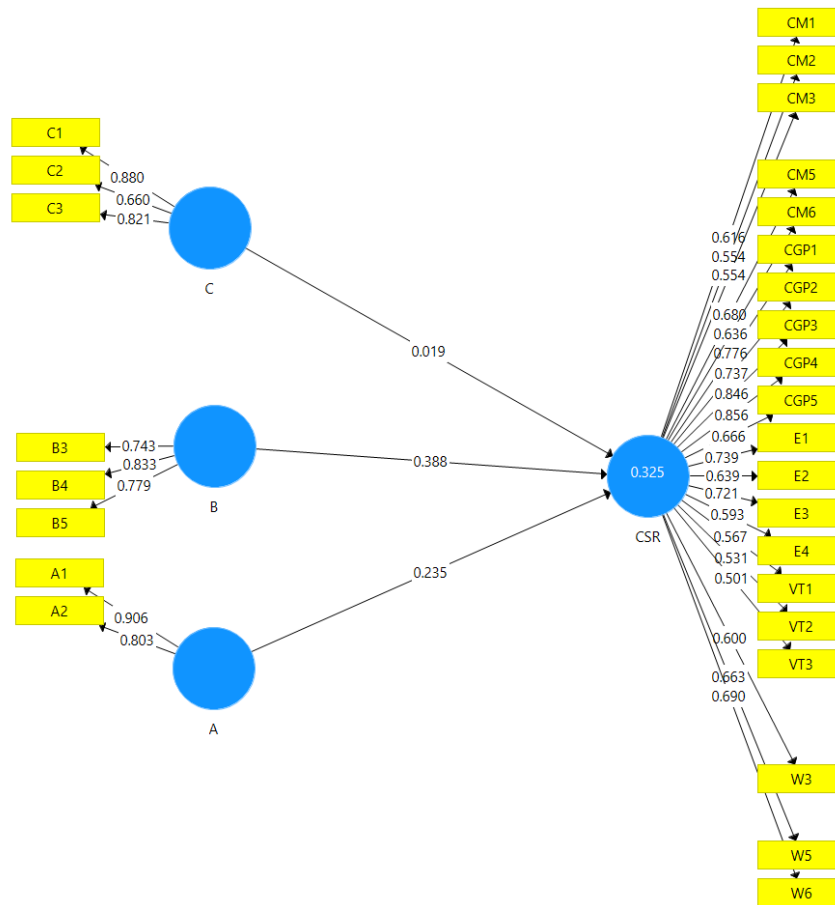


Figure 2. Modified PLS path model

The main findings of the hypothesis testing are shown in Table 4. The results indicated that cognitive employee engagement (0.0186, $p = 0.4510$) had a positive but insignificant association with the social sustainability of firms. Moreover, behaviour employee engagement (0.3881, $p = 0.0039$) had a significant positive link with the social sustainability of construction firms in Malaysia. Affective employee engagement (0.2351, $p = 0.1235$) also had a positive but insignificant effect with the social sustainability aspect of Malaysian construction firms. Overall, the findings suggest that the social sustainability dimension of Malaysian construction firms can be effectively achieved through the behavioural engagement of employees. Employees who are engaged tend to be more energetic and enthusiastic about their work-related roles (May et al., 2004; Macey & Schneider, 2008). The results of this study also support the arguments of Kim et al. (2016).

Table 4. Summary of hypotheses testing

Hypotheses	Path	Std. Beta	Std. Error	t	P	Bias	Confidence Interval (%)		Decision
							5.00%	95.00	
H ₁	C -> CSR	0.0186	0.1515	0.1232	0.4510	0.0037	-0.2383	0.259	Unsupported
H ₂	B -> CSR	0.3881	0.1451	2.6742	0.0039	-0.0017	0.1008	0.5837	Supported
H ₃	A -> CSR	0.2351	0.2028	1.1592	0.1235	0.0164	-0.1532	0.5226	Unsupported

4.4 Discussion

This study examined the impact of three dimensions (cognitive, behavioural, and affective employee engagement) on the social sustainability of construction firms. Three hypotheses were designed in line with the research objectives. The first objective was to examine the impact of cognitive employee engagement towards the firm social sustainability of Malaysian construction firms. The second objective was to analyse the impact of behavioural employee engagement on the firm social sustainability of Malaysian construction firms. The last objective was to examine the impact of affective employee engagement towards the firm social sustainability of Malaysian construction firms.

The findings of this study indicate that employee engagement is an important driver for the social sustainability of construction firms in Malaysia. Achieving sustainable status is one of the most desirable aspects of construction firms because these firms contribute to the degradation of ecological systems by generating pollutants in air and the sewerage system (Bamgbade et al., 2017). Apart from environmental concerns, construction firms also face social sustainability issues such as the occupational safety of workers, safe built environments, well-being of society, and improving the overall standard of living of human beings.

This study found that cognitive employee engagement has a positive yet insignificant association with the social sustainability of construction firms in Malaysia. Employees who are aware of their organisational mission and task roles often attempt to solve social sustainability issues with a realistic approach. Employee engagement relies on how employees perceive the social sustainable issues of companies (Farrukh et al., 2020). The results of this study are supported by the argument that the cognitive effort of employees can help respective organisations to provide creative and technological solutions to their social-related sustainability issues (Tan et al., 2011). Chuang and Huang (2018) also argue that firms that are more committed towards social issues tend to invest more in human and technological capitals.

It is also evident that behavioural employee engagement is positively linked with the social-related sustainability issues of Malaysian construction firms. Interestingly, employee engagement could be different from organisational engagement (Slack et al., 2015). In this view, Raza et al. (2021) contend that corporate social responsibility is an innovative way to tie the relationship between various stakeholders. Moreover, taking part in social activities may lead to a high level of motivation among employees. This allows them to create their own positive feedbacks (Bakker & Demerouti, 2008), thus addressing the social issues of society with resilience and motivation. Employees also proactively contribute in designing sophisticated construction procedures which are safe and hygienic. Improving social sustainability issues can also be an outcome of the prevailing perceived culture of an organisation (Farrukh et al., 2020). For instance, employees cooperate with their co-workers and consider the general public with courtesy while making construction-related social policies. Following skills which are part of behavioural engagement can help them to follow the footsteps of organisational leaders. In this respect, Muralidharan and Pathak (2018) argue that transformational leadership contributes significantly in social entrepreneurship. The extant findings contend that behaviourally-engaged employees can better address social responsibility concerns. These findings are consistent with Raza et al. (2021) who argue that employees' positive perception about social measures leads to voluntary sustainability measures.

Self-construal refers to how individuals define themselves in an organisation. More specifically, they define themselves as separate from other employees or connected with them (Gupta, 2017). Therefore, approaches to address social sustainability issues could lie on two extremes of a continuum - employees could be active corporate social entrepreneurs who take initiatives on their own, while dissident employees could also hinder social sustainability measures. Despite statistical insignificance, affective employee engagement shows a positive association with the social sustainability of Malaysian construction firms. There is no doubt that affectively engaged employees will be more caring and express sympathetic attitudes as compared to disengaged employees. Achieving social justice is one of the difficult aspects as it is related to the legal, moral, and ethical issues of construction firms (Bamgbade et al., 2017). Furthermore, the affective engagement of employees will proactively address the social justice issues of construction firms. The possible reasons of these findings could be poor communication of sustainability requirements, weak perception of sustainability measures, and diversity of personal and business objectives of employees.

5.0 CONCLUSION AND IMPLICATIONS

5.1 Conclusion

The main objective of this study was to examine the role of employee engagement in achieving the social sustainability of Malaysian construction firms. Employee engagement was divided into three dimensions: cognitive, behavioural, and affective engagement. The findings suggest that employee engagement of all forms helps in achieving the social sustainability of Malaysian construction firms. Kim et al. (2016) argue that highly engaged employees are expected to perform their tasks more efficiently and effectively, which may lead to the sustainability of the whole organisation. The findings of this study further denote that behavioural engagements are more effective rather than cognitive and affective engagements in Malaysian construction environments. The topic of employee engagement is less addressed in Malaysia like other Asian countries (Gupta, 2017). Moreover, the concept of construction social sustainability is also in its infancy stage. These results can be attributed to the sample of this study and the infancy of Malaysian construction rules and regulations. It is notable that rules regarding social justice are in the developing phase, especially in developing countries.

5.2 Research Implications

The findings of this study provide implications for human resource managers, strategic managers, and policymakers to comprehend how employee engagement helps in achieving the social sustainability of construction firms. It also implies that firms should not consider the first-level concept of employee engagement. However, better insights can be attained by dividing employee engagement into cognitive, behavioural, and affective dimensions. This will allow stakeholders to gain awareness regarding the relative importance of each employee dimension in a particular construction environment (Boakye & Adanu, 2022). Moreover, firms and managers can decide on the proportional amount of investments across various dimensions of employees as individuals are idiosyncratic as per their intelligence quotient and emotional quotient

(Quintillán & Peña-Legazkue, 2020). Often, employees' thoughts potentially help to make things of an organisation and cognitive engagement assists in developing creative solutions to construction-related social issues (Carmeli, Dutton, & Hardin, 2015). Additionally, employees can exert positive or negative behaviours within an organisation. Positive behaviours include all those skills that are likely to increase the level of success and satisfaction at the workplace (Carr et al., 2002). It is difficult to measure the manifestation of thoughts, actions, and feelings; therefore, the findings of this study provide guidelines on how to invoke thoughts, control actions, and stimulate the feelings of employees of an organisation to achieve particular goals. The findings of this study also provide solid directions with respect to various training programs that can be initiated by firms to enhance the thinking, attitudinal, and emotional skills of their employees. According to motivation theories, firms can design performance appraisal systems that can stimulate employees' engagement to enhance society-related sustainability.

5.3 Limitations and Future Suggestions

The present study focuses on analysing the influence of employee engagement on the social dimension of sustainability. However, there are several potential avenues for future research that can expand upon and enhance this understanding. One area for future investigation is the incorporation of a more comprehensive sustainability indicator that encompasses various dimensions beyond the social aspect. This will offer a broader perspective on how employee engagement affects the overall sustainability of organisations. By considering environmental and economic dimensions alongside the social aspect, researchers can provide a more holistic view of the interplay between employee engagement and organisational sustainability.

Furthermore, the present study is cross-sectional in nature, capturing a snapshot of the relationship at a specific point in time. Longitudinal studies can be employed in the future to gain a deeper understanding of how employee engagement evolves over time and its lasting impact on sustainability. By introducing a time element, researchers can uncover trends, patterns, and causal relationships that might not be evident in a single snapshot. The current study drew its sample from construction firms in Kuala Lumpur and Putrajaya. While these findings provide valuable insights within this context, future studies can enhance the generalisability of results by expanding the sample size and including a more diverse range of construction firms from different regions or even industries. Exploring whether cultural, geographic, or sectoral differences influence the relationship between employee engagement and social sustainability can yield intriguing findings.

Gender differences are another aspect that future research could delve into. Investigating how the cognitive, behavioral, and emotional dimensions of employee engagement vary between male and female employees shall uncover nuanced insights. Conducting group analysis studies by considering gender as a factor can provide a deeper understanding of how engagement influences sustainability across different groups. Lastly, future studies can explore the mediating and moderating relationships in the context of employee engagement and social sustainability. Factors like personality traits, organisational culture, or leadership style might mediate or moderate the relationship, potentially altering its nature and strength. By delving into these complexities, researchers can provide a more nuanced and sophisticated understanding of the dynamics between employee engagement, organisational sustainability, and the influencing factors that shape this relationship.

6.0 ACKNOWLEDGEMENT

The authors wish to thank the anonymous reviewers for their constructive comments in improving this article. Our appreciation also goes to the editor for granting the opportunity to publish this article in the International Journal of Industrial Management.

7.0 CONFLICT OF INTEREST

The authors have no relevant financial or non-financial interests to disclose.

8.0 AUTHOR CONTRIBUTIONS

Each author involved and contributed evenly to this manuscript. All authors read and approved the final manuscript.

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