

## EVALUATION OF EMPLOYEE ENGAGEMENT TOWARDS WORK PERFORMANCE IN A HYBRID WORKING MODEL IN THE SRI LANKAN CONSTRUCTION INDUSTRY

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### ABSTRACT

*There are various alternative hybrid working models in practice for middle-layer employees in the construction industry due to post-pandemic work arrangements. This calls for an evaluation of the suitability of alternative working models since hybrid working models encompass a wide range of activities. However, a paucity of literature is observed when it comes to recommending the most effective model to achieve higher work performance and employee engagement. Additionally, there is a scarcity of literature when investigating the factors influencing effective employee engagement towards work performance when hybrid working models are employed. The current study evaluates the moderating effect of gender on the main relationship between employee engagement and work performance. The population is defined as the middle-layer employees of the construction industry in Sri Lanka. Due to the prevailing economic challenges in the Sri Lankan construction industry, a convenient sampling technique was used. The study employed a survey methodology and collected responses from 142 self-administered questionnaires. The one-way ANOVA test results show that out of the four alternative hybrid working models—'at will model,' 'split week model,' 'shift work model,' and 'week by week model'—the shift work model is the best-fit hybrid working model for middle-layer construction employees. From the linear regression analysis, it was found that employee engagement has a positive relationship with work performance. Concerning the challenges faced by middle-layer construction employees, the results reveal that female employees face the challenges more than their male counterparts. However, the results of the interaction effect in the regression analysis show that gender has no effect on the relationship between employee engagement and work performance. The findings of the study help top-level managers in the construction industry make decisions related to enhancing work performance. They can also choose the most appropriate hybrid working model for their projects based on specific considerations and the expected employee engagement in such scenarios.*

**Keywords:** Construction industry, Employee engagement, Hybrid working models, Work performance

## 1. Introduction

The COVID-19 pandemic vastly obstructed many industries, and the construction industry was no exception. During the pandemic period, the greatest number of employees worldwide were forced to work remotely in the construction industry (Alsharef et al., 2021). Since then, most of the employees have become comfortable with the remote work setup and their impression of physical work was displeasing when the situation turned back to normal. As a solution for these clashes, the working practices changed from a virtual platform into a “Hybrid Working Model (HWM)” (Adhikari et al., 2021). In the construction industry, four alternative hybrid working setups are used, namely; ‘at will model,’ ‘split week model,’ ‘shift work model’ and ‘week by week model’.

HWM is widely used by middle-layer employees in the construction industry. The HWM under which they work has a greater impact on their job satisfaction, work comfort, psychological well-being, and work-life balance. Therefore, the working hours have a significant impact on their work performance. An evaluation of employee engagement towards work performance in HWMs is therefore vital (Pirzadeh & Lingard, 2021; Sellar & Peiris, 2021).

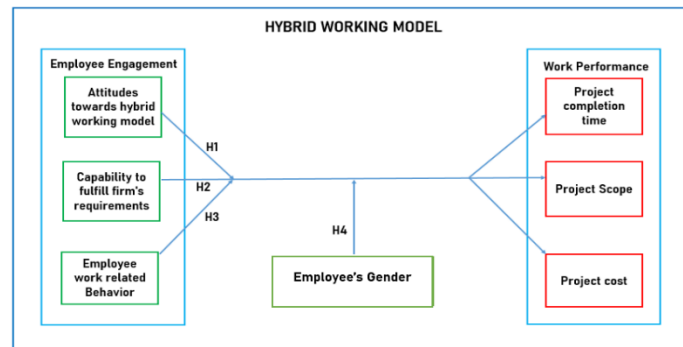
From different HWMs practiced in the construction industry, there are misperceptions when selecting a suitable one for middle-layer employees. The level of employee engagement in the four HWMs predominantly varies with each other, and if a project fails to choose the appropriate HWM, it affects the work performance (Townsend et al., 2011; Townsend et al., 2012). HWMs encompass a wide range of activities, yet there is a paucity of literature on recommending the most effective one to achieve work performance, and higher employee engagement (Surma et al., 2021). Nicca & Carlos (2021), highlighted the need to study factors influencing effective employee engagement towards site performance under HWMs. Thus, this study aims to recognize the best HWM suitable for effective employee engagement among middle-layer construction employees towards high work performance. It also expects to identify the factors influencing effective employee engagement towards site performance under each HWM.

## 2. Literature Review

### 2.1. Work performance in construction projects

Work performance in construction projects can be defined as the overall assessment of its achievements in terms of *project completion time*, *project scope*, *project cost* and accomplishment of necessary requirements and objectives of the project (Sellar & Peiris, 2021). The desire to maximize work performance in construction projects is a topic of global interest, particularly with the increased attention towards post-pandemic work performance improvements. Additionally, the success of a project is reflected in determining its triple constraints: *project completion time*, *project scope*, and *project cost* (Sellar & Peiris, 2021).

### 2.2. Employee engagement



**Figure 1. The conceptual framework consists of three variables: independent variable, dependent variable, and proposed moderator.**

In the current competitive business environment, employee engagement is a critical driver of success in a business. However, there is no one-size-fits-all employee engagement strategy in practice. In the context of HWM, employee engagement can be described as an overall assessment of employee responses towards their work under the HWM which varies based on employees' attitudes towards the HWM, employees' capability to fulfil the firm's requirements, and the employee work-related behavior (Pirzadeh & Lingard, 2021; Chanana & Sangeeta, 2020).

### 2.3. Impact of gender on employee engagement and work performance

The relationship between employee engagement and work performance in a HWM can be affected by many factors; gender is one such. The literature supports the notion that there is a difference between males and females in their work engagements in the context of HWMs. This difference in their work experience in HWMs can emerge from the working environments, strategy implementations by organizations, psychological aspects of the employees, and the challenges in work-life balance, etc. (Oo & Lim, 2021; Nidhi et al., 2021; Toscano & Zappala, 2021).

Considering work performance, employee engagement, and the impact of gender in construction projects, this study adopted the lens of the Theory of Planned Behavior (TPB) to conduct further investigations and to conceptualize the impact of work performance, employee engagement, and employee gender in HWM.

### 2.4. Theory of planned behavior in understanding human behavior

According to the TPB, people's behavior is influenced by intentions, such as attitudes, subjective norms, and perceived behavioral control. These behaviors depend solely on an individual's control and can change due to external factors (Ajzen, 1991). In the context of HWMs in the construction industry, these behaviors can include work performance and employee engagement. Following Ajzen (1991), and the aspects from the original work of TPB, attitudes, subjective norms, perceived behavioral control, and employee engagement with respect to HWM are identified as attitudes towards HWM, capability to fulfill the firm's requirements, and employee work-related behavior.

Employee attitudes towards HWMs may be either negative or positive. For instance, while one middle-level employee prefers to work in a HWM, another might prefer to work in a Traditional Working Arrangement (TWA). In such a situation, if the construction firm has decided to use an HWM, it may create an impact on work performance (Lenka, 2021; Surma et al., 2021). On the other hand, the capability to fulfill a firm's requirements may vary depending on the selected HWM. As an example, the selected HWM may be convenient for employees, irrespective of its support to achieve the construction firm's requirements of sustaining the workflow, meeting the deadlines, ensuring employees' health and safety, etc. Thus, it may negatively affect work performance (Lenka, 2021; Surma et al., 2021).

In accordance with the firm's requirements, employees must adjust their attitudes to work in the selected work setting; from TWA to HWM. In such a scenario, employee work-related behaviour represents their perceived behavioral control—a controlled behaviour to receive the optimum work performance similar to TWA. For instance, in the shifted HWM context, employee work-related attitudes should ensure the achievement of team coherence, effective communication, accurate decision-making, etc. similar to the TWA setting (Lenka, 2021; Surma et al., 2021).

It is therefore evident that employee engagement which is reflected in attitudes towards HWM, capability to fulfill the firm's requirements and employee work-related behavior decides work performance. Furthermore, the magnitude of the relationship between employee engagement and work performance may be altered depending on the gender of the employees. Thus, in this study, employee engagement is the independent variable influencing work performance—the dependent variable in the context of HWM. Derived from the propositions proposed by Ajzen (1991) and Oo & Lim (2021), this relationship may differ due to external factors; the gender of the employee. Gender can function as an influencing factor, causing changes in the relationship's direction and strength (Baron & Kenny, 1986). Thus, gender acts as a moderator in the relationship between employee engagement and work performance in HWM (Toscano & Zappala, 2021).

### **3. Methodology**

#### **3.1. Hypotheses of research**

Employee attitudes toward HWM are crucial in completing a project on time. If the employees have positive attitudes towards their adopted HWM for the project, they may complete their jobs with more energy and efficiency, resulting in a completed contract within the agreed period. Attitudes towards HWM seemingly have a positive relationship with project completion time (Sellar & Peiris, 2021). With the right attitude towards HWM, meeting project goals, achieving project deliverables, and meeting quality requirements and specifications are possible. As Alsharif et al. (2021) noted, attitude towards HWM has a positive relationship with project scope being achieved. On the relationship between attitudes towards HWM and the project cost, when employees have positive attitudes towards their work, the cost of reworks can be mitigated, and the project will be completed well within the budget. As Sellar & Peiris (2021) found, attitude towards HWM has a positive relationship with the project scope.

Going in line with the arguments from the literature, the following hypotheses are proposed regarding the attitude towards HWMs:

1. H1a: Attitude towards a hybrid working model is positively associated with the project completion time.
2. H1b: Attitude towards a hybrid working model is positively associated with the project scope.
3. H1c: Attitude towards a hybrid working model is positively associated with the project cost.

In any construction project, there are mandatory requirements to be fulfilled by a construction firm that has an impact on the project completion time. For instance, meeting deadlines set for each employee's individual work is a main requirement by any construction firm. In fact, the capability to fulfill a firm's requirements for employees has a positive relationship with the project completion time (Surma et al., 2021). However, in reaching the capability to fulfill the firm's requirements and project scope, an employee needs to balance both office work and site work by sustaining the workflow, which is an essential requirement of any construction firm. When these are balanced, a project can effortlessly meet project deliverables. Therefore, the capability to fulfill a firm's requirements and project scope seemingly has a positive relationship (Alsharif et al., 2021; Surma et al., 2021). On the other hand, every construction firm is interested in mitigating the project cost to make more profit for the company. As Surma et al. (2021) mentioned, the capability to fulfill a firm's requirements and project cost have a positive relationship.

Therefore, the following three hypotheses are proposed with respect to the capability to fulfill the firm's requirements.

4. H2a: The capability to fulfil the firm's requirements is positively associated with the project completion time.
5. H2b: The capability to fulfil the firm's requirements is positively associated with the project scope.
6. H2c: The capability to fulfil the firm's requirements is positively associated with the project cost.

Employee work-related behavior is linked to project scope as well. For instance, if communication and knowledge sharing among each employee is implemented properly in HWM, it helps reach the expected level of quality. When in-house knowledge is lacking, assistance from external parties (mentor, trainer, instructor, etc.) can be obtained while effectively sharing knowledge among employees. Knowledge-seeking and sharing behaviour are identified as positive work-related behaviours. There is a positive relationship between employee work-related behavior and the completion of project scope (Sellar & Peiris, 2021; Surma et al., 2021). Similarly, rising conflicts at a construction site is a typical incident. However, making appropriate decisions and working with minimum conflicts save an enormous amount of resources by mitigating the cost of re-works and by maximizing resources. Dealing with labour shortage at a site is one such scenario which is linked to the project cost. Therefore, making correct decisions and working with minimum conflicts are vital in the industry. As Chanana &

Sangeeta (2020) and Alsharif et al. (2021) recently concluded, employee work-related behavior and project cost have a positive relationship.

As per the above literature, the following hypotheses are proposed.

7. H3a: Employee work-related behavior is positively associated with the project completion time.
8. H3b: Employee work-related behavior is positively associated with the project scope.
9. H3c: Employee work-related behavior is positively associated with the project cost.

Regarding the employee gender-related challenges towards the relationship between employee engagement and work performance in a HWM, it is evident that factors such as family commitments, mental well-being, personal time management, etc., are negatively affecting female employees more than their male counterparts when working from home. Therefore, as explained earlier, employee gender has a moderating impact on the aforementioned relationship (Oo & Lim, 2021; Surma et al., 2021) and the following hypothesis is proposed:

10. H4: Employee's gender moderates the effect of employee engagement on work performance in hybrid working models.

### **3.2. Sample**

This study used the survey-based approach, and the target population is the middle-layer employees in the construction industry in Sri Lanka. The employees work on various types of projects such as building construction projects, road construction projects, and water resources projects all around the country using alternative HWMs. Using a convenient sampling technique covering nine provinces in Sri Lanka, data were collected from both male and female employees through a self-administered questionnaire. A total of 156 responses were collected for the study.

### **3.3. Measures**

The measurement instrument utilized a 5-point Likert-type scale of 1 (strongly disagree) to 5 (strongly agree) to measure the variables: employee engagement (independent variable), and work performance (dependent variable). The instrument was validated through a pilot study. After rectifying a few labeling errors, the questionnaire was distributed to collect the responses. The data analysis was implemented through SPSS software since it provides an effective and credible solution in such a scenario.

## **4. Results and Discussion**

Among the collected 156 responses, the total valid responses were 142. Regarding the experience of the respondents in all four HWMs, 63.4% are experienced in all four types of HWMs, 21.8% have worked in three out of four HWMs, 12% have worked in two HWMs and only 2.8% have worked in one HWM. Notably, 85.2% of the respondents have worked with at least three HWMs.

**Table 1. Reliability and validity test.**

<b>Hybrid working model</b>	<b>Cronbach's alpha value</b>	<b>Significant value</b>
At will model	0.989	0.000
Split week model	0.991	0.000
Shift work model	0.990	0.000
Week by week model	0.986	0.000

#### **4.1. Respondent profile**

Of the respondents, 56.3% were male and 43.7% were female; out of which, 23.2% were civil engineers, 20.4% were quantity surveyors, 9.2% were project managers, and 3.5% were architects. Surveyors were 7.7% and 11.3% were draught persons. Of the respondents, 14.1% were technical officers, 1.4% were structural design engineers, 4.2% were planning engineers, and 2.1% were interior architects. Procurement officers were 0.7% and 2.1% were safety officers. Regarding the type of projects respondents worked for, 30.3% were building-related projects, 28.9% were road projects, 26.1% were water projects, and 14.8% were individual housing projects.

#### **4.2. Reliability and validity tests**

To be considered reliable and valid, Cronbach's alpha value should be greater than or equal to 0.7 with a p-value of less than 0.005 (Cronbach, 1951; Pallant, 2013). According to Table 1, Cronbach's alpha values in all the HWMs are greater than 0.7 at the p-values of less than 0.005. Therefore, internal consistency is achieved concluding that the instrument is reliable and valid.

#### **4.3. Regression analysis**

A simple linear regression analysis is recommended to assess the individual relationships of hypotheses (Hayes & Rockwood, 2017; Pallant, 2013). Accordingly, a simple linear regression analysis and a correlation analysis have been performed for all nine hypotheses (except for the moderator) for all four types of HWMs (at-will model, split week model, shift work model, and week by week model). According to the results, all the hypotheses were accepted which show positive relationships in all the four HWMs

#### **4.4. One-way ANOVA test**

According to the regression analysis, it shows that for all four HWMs positive relationships are observed for employee engagement and work performance. In order to identify the most suitable HWM to achieve a maximum level of employee engagement and work performance, a one-way ANOVA test is performed by comparing four different HWMs (Hayes & Rockwood, 2017; Keppel & Wickens, 2004; Pallant, 2013). The results show that there is a significant difference in the mean values of the HWMs (significance value =  $0.000 < 0.05$ ) at a 5% level of significance.

**Table 2. Summary of post hoc test for employee engagement and work performance.**

Hybrid working model	Hybrid working model	Employee Engagement			Work Performance		
		(Sig. value) attitudes towards HWM	(Sig. value) Capability to fulfill firms requirements	(Sig. value) Employee work related behavior	(Sig. value) Time	(Sig. value) Scope	(Sig. value) Cost
At will model	Split week model	0.901	0.751	0.765	0.430	0.564	0.964
	Shift work model	0.000	0.000	0.000	0.000	0.000	0.000
	Week by week model	1.000	1.000	1.000	0.951	0.998	1.000
Split week model	At will model	0.901	0.751	0.765	0.430	0.564	0.964
	Shift work model	0.000	0.000	0.000	0.000	0.000	0.000
	Week by week model	0.906	0.759	0.777	0.760	0.678	0.964
Shift work model	At will model	0.000	0.000	0.000	0.000	0.000	0.000
	Split week model	0.000	0.000	0.000	0.000	0.000	0.000
	Week by week model	0.000	0.000	0.000	0.000	0.000	0.000
Week by week model	At will model	1.000	1.000	1.000	0.951	0.998	1.000
	Split week model	0.906	0.759	0.777	0.760	0.678	0.964
	Shift work model	0.000	0.000	0.000	0.000	0.000	0.000

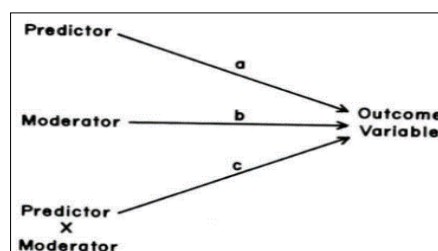
#### 4.5. Post hoc test

From the one-way ANOVA test, it was found that there is a difference in mean values among HWMs. The post hoc test is used to identify what are those HWMs. Among various types of post hoc tests, Tukey's Honest Significant Difference test was used. This test assumed that if there is no significant difference between groups, the p-value will be greater than 0.05 (Keppel & Wickens, 2004).

According to the post hoc test results shown in Table 2, since the p-value is less than 0.05, the null hypothesis is rejected. Therefore, it reveals that the means values are not equal and at least one HWM differs from others. As found in Table 2, it is the shift work model. Consequently, the shift work model was identified as the best-fit HWM to get maximum employee engagement and work performance among middle-layer construction employees.

#### 4.6. The moderating effect of gender

To assess the moderator's impact on the relationship between employee engagement and work performance, the analytical framework proposed by Baron & Kenny (1986) was used.



**Figure 2. Analytic framework for moderator impact testing (Baron & Kenny, 1986).**

According to Figure 2, the relationship has been evaluated in three paths. Path A tested the direct relationship between the predictor and the outcome variable, path B tested the relationship between the moderator variable and the outcome variable, while path C tested the interaction of predictor and moderator towards the outcome variable (Baron & Kenny, 1986). In this study, the predictor variable is employee engagement, the outcome variable is work performance and the employees' gender is the moderator. The moderator impact was tested on the entire model instead of each HWM separately. To



evaluate this in SPSS, a regression analysis was used. If there is a moderator impact, the adjusted R- R-squared values in path A, path B, and path C should be different while the relationship is statistically significant ( $p$ -value < 0.05) (Hayes & Rockwood, 2017).

**Table 3. Results of moderator impact analysis.**

		Report					
Gender		EG1	EG2	EG3	EG4	EG5	EG6
Male	Mean	1.98	2.03	1.90	1.94	3.35	3.56
	N	80	80	78	80	80	80
	Std. Deviation	.636	.779	.766	.785	.956	1.029
Female	Mean	3.69	3.05	3.15	3.40	3.49	3.29
	N	61	61	61	62	61	62
	Std. Deviation	1.104	1.007	.963	1.016	.960	.965
Total	Mean	2.72	2.47	2.45	2.58	3.41	3.44
	N	141	141	139	142	141	142
	Std. Deviation	1.215	1.018	1.058	1.151	.957	1.007

(EG1)- Impact of family commitments for employees in working in the HWM.

(EG2)- Mental well-being of employees in working in the HWM.

(EG3)- Personal time management of the employees in working in the HWM.

(EG4)- Ability to manage the employees' social life in the HWM.

(EG5)- Ability to manage workload when working in the HWM.

(EG6)- Career growth of the employees working in the hybrid working model.

According to the results of Table 3, the adjusted R-squared values in path A, path B, and path C are equal (0.827), and all three models are statistically significant ( $p$ -value < 0.05, at a 95% confidence level). Employee gender does not exhibit a moderator effect on employee engagement and work performance in HWMs, since there is no difference in path A, path B, and path C.

**Table 4. Mean comparison – Challenges faced by the middle-layer construction employees in HWM.**

Path	Adjusted R-Squared value	Significant value
Path A	0.827	0.000
Path B	0.827	0.000
Path C	0.827	0.000

#### 4.7. Challenges faced by middle-layer construction employees in hybrid working model setting

To comprehend the challenges faced by the middle-layer construction employees working in HWMs, the study collected some data under six questions (EG1 to EG6) on a 5-point Likert-type scale (1=strongly disagree, 5= strongly agree) and a mean comparison was performed to discuss the results.

According to Table 4, it was concluded that female employees suffer more from gender-related challenges than their male counterparts when working in the HWM set-up. However, the responses for EG5 show a decent indication that both female and male employees are able to manage their workload in the HWM compared to TWA, and responses for EG6 show that both male and female employees working in HWMs more or less equally believe that HWMs support their career growth.

An overview of the results shows that the simple linear regression and correlation analyses used to test the nine hypotheses across all four types of HWMs revealed positive relationships. The one-way ANOVA test results indicate that the '*shift work model*' is the best HWM among the four alternative models for achieving maximum employee engagement and work performance from middle-layer employees. This HWM is crucial in

scenarios like project delays. Compared to TWA, limited working hours per day are used to complete a project. The shift work model allows a set of employees to work in the day shifts while others to work in night shifts allowing the company to receive maximum output throughout the day. As previous studies concluded, compared to other alternative HWMs, the shift work model saves more time, and cost and helps to complete a project comprehensively (Townsend et al., 2011; Townsend et al., 2012).

In the shift work model, employees receive the chance to stay at home in day times which they can use to manage their personal commitments. Compared to other alternative HWMs and TWA, the shift work model offers benefits, allowing employees to spend more time conveniently with family, manage their social life, and contribute to their mental well-being (Townsend et al., 2012). This makes top-level managers, directors, etc. easily manage the construction work while ensuring maximum employee engagement and work performance. This is because the shift work model offers flexible working hour arrangements (Townsend et al., 2012).

To evaluate the moderator effect of gender on employee engagement and work performance in HWMs, a simple linear regression analysis was performed. The interaction results show that there is no moderating impact of gender on employee engagement and work performance. This indicates that though the Sri Lankan construction industry currently has a scarcity of female employees, it can open doors wider for female employees who are ready to work under HWMs. As (Surma et al., 2021) concluded, gender will have no effect if an employee can extend a maximum level of engagement towards work performance. However, it is impossible to deny the challenges female employees face more than their male counterparts when working in HWMs. Previous studies (Surma et al., 2021) have concluded that females can effectively manage workload and work towards career growth by managing burdens at their hands.

## **5. Conclusion**

The post-COVID-19 pandemic has shifted the work practice from work from home to HWMs. The construction industry is no exception to this emerging trend. In such a background the current study aimed to evaluate the employee engagement towards work performance in HWMs in the Sri Lankan construction industry due to the lack of literature on the subject and to draw a conclusion on the best fit HWM for the middle-layer employees in the construction industry. Together with an investigation on the effect of gender on the relationship between work engagement and work performance, the study looked at the challenges faced by middle-layer construction employees when HWMs are applied. The data were collected through a self-administered questionnaire distributed among respondents covering all sorts of construction projects from nine provinces in Sri Lanka. The final study had total valid responses of 142.

To assess the relationship between employee engagement and work performance, first, the study looked at the factors determining each variable. The literature articulates that attitude towards HWM, capability to fulfill firm requirements and employee work-related behavior decide employee engagement in a HWM set-up, and the work performance in a

construction project can be assessed using project completion time, project scope, and project cost. Nine hypotheses were generated to assess each relationship.

As per the one-way ANOVA test results, it was found that out of the four alternative HWMs: *at will model*, *split week model*, *shift work model*, and *week-by-week model*, it is the *shift work model* that is most appropriate for the middle-layer employees in the construction industry as the statistics prove that it generates the strongest relationship between work engagement and work performance. However, when practicing the shift work model at construction projects, the top-level managers will have to decide on how many working shifts are allowed, how many day shifts and night shifts should be allowed in a duty roster for a person by using their experience, knowledge, and other considerations such as employee wellbeing. This is because, the study results revealed that family commitments, issues related to mental well-being, personal time management problems, and social life managing issues are the concerns mainly for female employees when HWMs are used. However, the moderator impact of gender on the relationship between work engagement and work performance was found to be zero, concluding that if employee engagement can be ensured, irrespective of gender it will create a greater work performance when employing HWMs.

## **6. Recommendations**

Statistically proven, the shift work model is the best-suited HWM for middle-level construction employees, the top-level managers may reconsider the stereotypes associated with the shift work model just because it allows employees to spend more time at home. Furthermore, when selecting an HWM, it should thoroughly look into the challenges employees face. For instance, employees struggle to manage their family commitments, maintain their mental well-being, etc. due to the work arrangements when applying HWMs. Since gender has no effect on creating higher work performance through employee engagement, the Sri Lankan construction industry may consider opening more opportunities for female employees.

### **6.1. Limitations of research**

The research findings must be interpreted with the awareness that this study used convenient sampling instead of the ideal method, simple random sampling. The study opted for the convenient sampling technique due to the current situation in the Sri Lankan construction industry, characterized by frequent layoffs at the middle level. Apart from that many construction sites are shut down due to the prevailing economic crisis of the country. This resulted in using valid responses of 142 for the final study. Unemployment, abandoning construction projects, etc. affected the overall response rate too.

The data analysis of this research, considered only the individual impact from the independent variables (for example, attitudes towards HWM and project completion time, attitude towards HWM and project scope, etc.). Therefore, the results and the interpretations of this study may differ from the results of a study which looked at the relationship between employee engagement and work performance taking two or more independent variables at once.

## 6.2. Future research implications

This study is limited by its focus on the association between employee engagement and work performance in an HWM. However, the results may vary if other firm-specific factors such as leadership, culture, and client interactions are taken into consideration. Thus, future research is needed to investigate the comprehensive nature of the HWM environment in relation to employee engagement and work performance in the construction industry, considering factors such as leadership, culture, and client interactions. Furthermore, more studies can be carried out and validate the finding of zero effect of gender on the relationship between employee engagement towards work performance in a HWM set-up in the construction industry.

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