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RESEARCH ARTICLE

INVESTIGATING THE RELATIONSHIP BETWEEN HUMAN CAPITAL AND ORGANIZATIONAL PERFORMANCE: INSIGHTS FROM THE CONSTRUCTION INDUSTRY IN MALAYSIA

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ABSTRACT - The Malaysian construction industry is a vital contributor to economic development, playing a key role in wealth creation and infrastructure development. This study examines the impact of human capital on organizational performance within this sector. Data for this study was collected through survey questionnaires distributed to 121 employees across different construction firms, ensuring a diverse representation of the industry. The study employed a simple random sampling method, and the data was analyzed using partial least squares structural equation modelling (PLS-SEM), a robust analytical tool suited for complex relationships and small sample sizes. The results provide compelling insights into the dynamics between human capital and organizational performance. Notably, the study found that soft skills, such as communication, teamwork, and problem-solving, along with educational advancement, have a positive and significant impact on organizational performance. These findings suggest that investment in the development of these human capital elements can lead to improved outcomes for construction firms. These insights emphasize the importance of a balanced approach to human capital development, with practical and theoretical implications for the construction sector. The study also suggests avenues for future research to further explore these dynamics.

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1. INTRODUCTION

Improving organizational performance stands as the primary goal across all business sectors, including the construction industry. In Malaysia, the construction sector serves as a pivotal contributor to the nation's economy, facilitating growth in various other industries. Despite comprising under 5% of the Gross Domestic Product (GDP), its significance lies in its extensive interconnections with other economic sectors, such as manufacturing, professional services, financial services, education, and more. Notably, the construction industry saw a notable upsurge in GDP growth, reaching 9.8% in Q1 2024 compared to 3.6% in Q4 2023, as reported by the Department of Statistics Malaysia (DOSM), signifying a resurgence in Malaysia's economic momentum post the Covid-19 pandemic. Beyond economic indicators, the construction industry plays a pivotal role in providing local amenities, fostering wealth generation, and propelling infrastructural development. Nonetheless, it grapples with challenges, particularly amidst rapid shifts in the business landscape and heightened competition. The evolving business environment of recent decades demands organizations to adapt to a new normal marked by increased fluctuations, unpredictability, intricacy, and uncertainty (Cernega et al., 2024).

Capabilities and company's edge represent the unique abilities or superior position of an organization (Lee et al., 2022). Staying ahead in the industry necessitates leveraging the workforce and embracing agile approaches to maintain an edge through various strategic activities or tools. Competitive advantage, to a significant extent, stems from scarce, high-value, and renewable resources hinges on its competitive edge and internal strengths (Holdford, 2018; Wernerfelt, 1984). Human capital (HC) has emerged as a focal point, acknowledged as the most valuable asset for nations, policies, and organizations alike (Fulmer & Ployhart, 2014; Vithana et al., 2023). HC is characterized as the cornerstone within the world of work, being a critical determinant of an organization's profitability (Tran & Vo, 2020). Consequently, firms are striving to optimize their workforce through comprehensive HC strategies, aiming to attain their business objectives and enhance organizational performance. HC skills and capabilities are critical to augment the performance of organization. In recent decades, academics have become increasingly interested in how organizations can leverage the combined effects of HC expertise, skills, and capabilities to achieve superior performance (Aman-Ullah et al., 2022; Harris & Brown, 2021). Empirical evidence further substantiates the relationship between HC attributes such as knowledge, skills, and capacity, along with organizational performance (Aman-Ullah et al., 2022; Nusari, 2019). Previous

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studies also underscore a notable connection between employee skills (Gallardo, 2020), knowledge management (Darmawan et al., 2023), as well as HC management (Kiran et al., 2022) with organizational performance.

In an ever-evolving work environment, employee knowledge and skills quickly become outdated, necessitating continuous updating. Enhancing competencies in any field and developing social communication skills are intricately linked to the ongoing acquisition and refinement of knowledge. An employee's qualifications represent a static set of competencies, but as duties become more complex, employees require a diverse array of skills to progress. By learning new skills and honing existing ones, employees enhance their performance, resulting in improved firm performance (Becker, 1993). Given the changes in economic structures, employers need to assess the impacts of hard skills, soft skills, and educational advancement on equipping employees with essential skills for their tasks and how this affects both employee and firm performance. Therefore, the objective this study is to examine the impact of human capital, specifically employees' hard skills, soft skills, and educational advancement to the organizational performance of organization in the construction industry.

To narrow the gap between labour demand and supply, the government has implemented various initiatives to enhance HC development. These include offering skills enhancing and retraining programs through institutions like Institute Kemahiran Belia Negara (IKBN), Technical and Vocational Education Training and Institute Latihan Perindustrian (ILP) (Ridzuan & Abdul Rahman, 2022). In 1993, the Ministry of Human Resources in Malaysia established the Human Resource Development Fund (HRDF), which is governed by the Pembangunan Sumber Manusia Bhd Act 2001 (PSMB Act 2001) to implement mandatory workplace workshop. In line with the vision of the Madani Economy and to address socioeconomic challenges while balancing regional development and enhancing national competitiveness, the Twelfth Malaysia Plan Mid-Term Review (12MP MTR) has realigned development expenditure (DE) by raising the ceiling from RM400 billion to RM415 billion. This adjustment is expected to lead to more infrastructure projects, boosting the order books of construction companies and serving as a catalyst for restoring economic growth, making Malaysia a more resilient and sustainable global player. This suggests that future work will likely become even more challenging, underscoring the importance of the present study.

The subsequent paper follows this structure: Section 2 will delve into an examination of prior research and formulate hypotheses based on the findings. The methodologies utilized in this study will be outlined in Section 3. The main findings of the study will be presented in Section 4. Ultimately, Section 5 serves as the conclusion of the paper, offering insights into the implications, limitations, and suggesting directions for future research.

2. LITERATURE REVIEW

2.1. Theoretical Discussion

Resource-based View (RBV) theory is applied in this study with HC positioned as a fundamental component and requirement. RBV posits that a firm must acquire and manage resources and skills that are important, uncommon, inimitable, and irreplaceable while also possessing the organizational framework to absorb and utilize them effectively to achieve sustained competitive advantage and enhance organizational performance (Barney, 2002). Expanding on the RBV perspective, the advancement of a wider Resource-based Theory (RBT) indicates organizations can improve performance not just through utilizing essential assets as well as through developing new skillset through acquiring knowledge, developing skills, and gathering both tangible and intangible assets gradually as time passes (Malhotra et al., 2024). RBV also proposes that firms which control valuable resources that are expensive and hard to replicate, will have the potential to achieve higher performance (Barney, 1991). Therefore, firms require skilled and diverse employees who are indispensable for meeting market demands (Fajaryati et al., 2020). Building on this, subsequent academic research has emphasised the influence of HC capabilities, expertise, and competencies on organizational performance, particularly in industries like hospitality (Aman-Ullah et al., 2022). This underscores the critical role of HC in driving the success of organizations within various sectors.

2.2. Human Capital (HC)

The idea of "human capital" encompasses information, competencies, capabilities, and characteristics displayed by individuals that contribute to personal, social, and economic prosperity. According Schultz (1993), HC is a vital element for enhancing the company's resources and workforce to enhance efficiency and uphold a competitive edge. Within organizations, HC serves as a means to sustain competitiveness and increase productivity through processes such as training, education, and professional development initiatives. These endeavours re geared towards enriching employees' expertise, competencies, values, and social connections, thereby fostering heightened satisfaction, productivity, and ultimately, organizational success. Rastogi (2000) emphasized that HC serves as a critical input for organizations, particularly in facilitating employees' continuous improvement, primarily in terms of knowledge, skills, and abilities. This assertion finds support in the study carried out by Masyhuri et al. (2024), whose results demonstrate a significant impact of HC on performance of organization. In the current dynamic business landscape, firms must pursue superior competitive advantages through HC, which encompasses hard skills, soft skills, and educational advancement. Soft skills, when combined with hard skills, enhance employees' effectiveness and performance (Chala & Bouranta, 2021). Generally, employees require a blend of both technical and interpersonal skills to perform a job (Saepudin et al., 2022; Ternikov, 2022). Table 1 illustrates the top 10 skills demanded by employers in 2015 and 2024.

Table 1. Top 10 skills demanded by employers by 2015 compared to 2024

	2015	2024			
a)	Proficiency in tackling intricate problems	a)	Strategic thinking		
b)	Critical thinking	b)	Negotiation		
c)	Idea generation	c)	Persuasion		
d)	HC development	d)	Presentation skills		
e)	Collaborating	e)	Critical thinking		
f)	Emotional intelligence (EQ)	f)	Mentoring		
g)	Strategic reasoning and action	g)	Emotional intelligence (EQ)		
h)	Service-minded approach	h)	Innovation		
i)	Negotiation	i)	Financial management		
j)	Cognitive flexibility	j)	Resilience		

Source: Wells (2024) and World Economic Forum (2016)

2.2.1. Hard Skills

Hard skills are observable and directly practicable types of abilities. These skills typically entail mastery of professional knowledge, often scientific or technological in nature, as well as technical skills specific to the relevant field of work. They are tangible abilities that can be created, articulated, transferred, and directly observed. Hard skills encompass technical competencies (Lamri & Lubart, 2023) and knowledge (Saepudin et al., 2022) acquired through training, practice, and education over time (Hadiyanto et al., 2020; Lamri & Lubart, 2023). According to Priyono et al. (2021), hard skills encompass proficiency in science, technology, and technical skills relevant to one's area of expertise, while Ardina et al. (2021) and Mahmudah (2016) suggest that hard skills primarily focus on enhancing intelligence quotient (IQ).

2.2.2. Soft Skills

Soft skills, in contrast, refer to abilities used in interpersonal interactions and collaboration with others, often referred to as interpersonal skills (Sancho-Cantus et al., 2023). Possessing soft skills enables individuals to have a greater impact on society (Arma et al., 2023). de Campos et al. (2020) and Tripathy (2020) refer soft skills as encompassing an individual's abilities in relating to others, including communication, emotional intelligence, language proficiency, teamwork, ethics, morals, etiquette, and spiritual skills. These skills also encompass values adherence, motivation, behavior, habits, character, and attitude (Chala & Bouranta, 2021; Lajčin et al., 2023; Manullang, 2017; Robles, 2012). Each individual possesses these soft skill attributes to varying degrees, influenced by patterns of thinking, speaking, acting, and behaving. However, these attributes can be developed through practice and exposure to new experiences. According to Garcia-Chitiva & Correa (2023) and Tang et al. (2020), some of the skills classified under the soft skill category include ethics or professionalism, leadership, creativity, collaboration, initiative, group and community facilitation, communication, critical thinking, and problem-solving. Individuals with strong mastery of soft skills demonstrate abilities beyond the limitations of their technical expertise. This capability stems from their autonomous ability to engage in internal processes that promote continuous learning, experimentation, and discovery, aiding their career and personal growth. Therefore, acquiring soft skills is crucial as they are essential for professional development (Bhati, 2022; Dean & East, 2019).

2.2.3. Educational Advancement

For present study, "educational advancement" defines as the progression of increasing, enhancing, maintaining, and promoting both person and cumulative knowledge and comprehension in particular fields of study, abilities, and proficiency, akin to continuous learning and ongoing development. The traditional education system emphasizes "lifelong learning," recognizing education as a continual journey throughout one's life. Terms commonly used to describe this concept encompass lifelong learning, adult learning, continuing education, permanent education, recurrent training, further education, remedial education, and post-graduate studies, among others (Matukhin, 2015; Williams, 1977). Employees who pursue educational advancement seek to provide innovative solutions to the constantly evolving workplace and economic landscape. Those inclined towards development and learning are motivated to broaden their knowledge base, while those committed to learning view challenges as opportunities for growth. Individuals engaged in continuous learning strive for excellence even when they have achieved a satisfactory level of performance (Maurer & Weiss, 2010; Torresan & Hinterhuber, 2023).

2.2.4. Organizational Performance

The performance of an organization is a cornerstone concept in business management, representing a fundamental variable crucial for the success and longevity of companies. At its core, the primary objective of businesses is profitability, underscoring the pivotal role of organizational performance in achieving this goal. Researchers offer varied perspectives on the nature of organizational performance. For instance, Jahanshahi (2012), Kanter and Brinkerhoff (1981), and Mafini (2015) define it as the tangible outcomes or achievements of a company, evaluated in comparison to its predetermined

objectives and goals. Conversely, Akparep et al. (2019), Udokwu et al. (2023), and Xu et al. (2022) describe performance of organization as the ability of organization to achieve its goals whilst making use resources effectively and efficiently. Furthermore, Bunteng (2022) identifies four key factors consistently influencing organizational performance, among which employee ability stands out prominently. This perspective is corroborated by Habtoor (2016) and Habtoor and Alharbi (2020), who concur with Bunteng's assertion that employees play a significant role in shaping organizational performance.

2.3. Hypothesis Development

The concept of HC holds significant importance for organizational performance, as it contributes to the enhancement of features and attributes of the organization and its management, as well as learning approaches (Aman-Ullah et al., 2022). It is evident that the overall effect of HC leads to improvements in organizational performance as a whole. Numerous scholars have recognized HC as an integral element of organizational effectiveness (Alkaabi et al., 2023; Aman-Ullah et al., 2022; Ameyaw et al., 2019; Hidayat & Widodo, 2022). Previous discussions on organizational performance have emphasized that organizations can enhance performance through adeptly managing HC, encompassing skills, experience and knowledge (Foli & Caesar, 2023; Rožman et al., 2023; Trenev, 2018; Zakiy & Kuswanjono, 2023). Within this scenario, HC is essential in enhancing organizational performance. The present study will focus on investigating the three dimensions of HC: hard skills, soft skills, and educational advancement, to determine their impact on organizational performance. For example, employees with higher abilities are likely to contribute to increased performance. It is evident that organizations can only excel when they have skilled employees. Therefore, HC is indispensable for enhancing organizational performance. Previous research has consistently discovered a notable correlation between employee skills and organizational outcomes (Chinomona, 2013; Siepel et al., 2021; Sinaga et al., 2019). Consequently, the objective of this study is to identify the influence of HC towards organizational performance of construction firms.

2.3.1. The Impact of Hard Skills on Organizational Performance

The existing body of research, including studies conducted by Anthonius (2021), Lukito (2023) and Nurdin (2023), consistently demonstrates a strong and noteworthy correlation between hard skills and performance of employee. Specifically, it has been found that hard skills significantly impact employee job satisfaction and work productivity, as concluded by Cahyono et al. (2022). When combined with soft skills, hard skills exhibit a positive relationship that can lead to successful job outcomes (Kuzminov et al., 2019; Lyu & Liu, 2021). However, Andrefson et al. (2023) reported findings that indicate hard skills do not affect employee performance. These inconsistent findings highlight the need for further investigation. To delve deeper into this area, the present study will explore the impact between hard skills and organizational performance within the construction sector.

H1: Hard skills positively affect organizational performance.

2.3.2. The Impact of Soft Skills on Organizational Performance

Based on the research conducted by Shillie & Nchang (2023) and Tee (2022), which indicate that soft skills acts as a mediator between job satisfaction and business performance, especially within the manufacturing sector, it is apparent that soft skills significantly influence employee performance. Moreover, the study conducted by Deshpande and Munshi (2020), Lee et al. (2023), and Priyono et al. (2021) confirmed the positive impact of soft skills, particularly communication skills towards work performance of employee. Additionally, the presence of resilient leadership, as highlighted by Widakdo (2022), further enhances job performance when combined with improved communication skills. Furthermore, enhancing skills like teamwork, critical thinking, communication, innovation, problem-solving, and self-management has been shown to contribute to organizational creativity, as indicated by El-Tabal (2020). Taken together, these findings suggest that soft skills are crucial for both individual and organizational performance. Given the insights from these studies, the current research aims to explore the correlation between soft skills and organizational performance within the construction industry.

H2: Soft skills positively affect organizational performance.

2.3.3. The Impact of Educational Advancement on Organizational Performance

The literature consistently highlights the significance of educational advancement or continuous learning as a critical factor in employee development and organizational success (Beer, 2012; Budhiraja, 2021; Budiningsih et al., 2022; Candy, 1996; Ho, 2008; Regan, 1998). Continuous learning not only aids employees in acquiring necessary skills and expertise but also serves as an effective means to enhance organizational performance and foster innovation (Lomineishvil, 2021). Moreover, research by Torresan and Hinterhuber (2023) underscores the pivotal role of gamification in integrating continuous learning into the workplace, with findings suggesting gamification to be a viable approach to enhancing performance of both employees and organization. Organizations that cultivate a culture of continuous learning are more likely to encourage employees to expand their knowledge and develop their full potential, ultimately leading to improved performance within the organization (Zaitouni et al., 2020). Based on these insights, the current research seeks to examine the correlation between educational advancement and organizational performance within the construction industry.

H₃: Educational advancement positively affects organizational performance.

Figure 1. Illustrates the research framework of this study

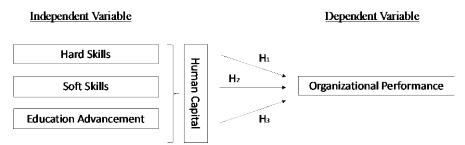


Figure 1. Research framework

3. DATA AND METHODOLOGY

3.1. Measures and Scale

The current research employed a quantitative research design to investigate the influence of HC towards performance of organization of the construction industry. The questionnaire items were derived from prior research studies (Khanna, 2015; Murdoch-Eaton et al., 2016; Richard et al., 2009; Setyawati et al., 2022) and adjusted to align with the particular context of present research. Composite scores were computed from relevant indicators of constructs. The indicators and constructs operated under the reflective assumption, implying that the values of all items reflected the constructs they were intended to measure. The use of a 5-point Likert scale involved measuring the variables, with responses ranging from (1) = Strongly disagree, (2) = Disagree, (3) = Neutral, (4) = Agree, to (5) = Strongly agree. This scale was chosen for its ability to enable respondents express neutrality rather than being coerced into selecting an answer that may not accurately represent their thoughts (Chyung et al., 2017). Additionally, it facilitates the generation of reliable quantitative data that is easy to interpret (Aybek & Toraman, 2022).

3.2. Sample and Data Collection

The study's target population comprises construction firms located in the Pahang state of Malaysia. Key respondents targeted for the study include individuals working in management-level positions such as construction managers, program managers, procurement managers, safety managers, quality assurance managers, and project managers within these firms. Data collection was conducted through the online distribution of Google Forms, with respondents selected using a simple random sampling method. The online distribution was via various online platforms, including email, WhatsApp, and LinkedIn, to reach individuals employed in the construction industry. Based on the research objectives, the questionnaire was designed, and provided respondents with the opportunity to provide answers that could be comprehensively analysed (Creswell & Creswell, 2018; Taherdoost, 2022).

3.3. Data Analysis

Using Smart PLS 3 software, the Structural Equation Modeling (SEM) technique was employed (Hair et al., 2022). Correlation analysis was utilized to examine the influence of three HC dimensions (hard skills, soft skills, and educational advancement) on the dependent variable (organizational performance). Validity is used to assess whether the underlying variables accurately reflect what is intended to be measured, and reliability, which evaluates the consistency of the obtained results (Sekaran & Bougie, 2016), were both assessed in this study. Convergent, content, and discriminant validity along with the composite reliability of the underlying constructs, were evaluated. The structural model and measurement model were reported separately to ensure a comprehensive examination.

4. RESULTS AND DISCUSSION

4.1. Demographics of Respondents

Table 2 illustrates the demographic characteristics of the survey participants. Over a span of four months, a total of 121 online responses were gathered, surpassing the recommended threshold of 119 respondents calculated through G-Power software. The majority of respondents were male, comprising 66 individuals (54.55%). Furthermore, 62 respondents (51.24%) were aged between 31 to 40 years old. Most participants hailed from companies with 10 to 50 employees, constituting 101 respondents (83.47%). Additionally, a large portion of respondents, numbering 82 (67.77%), were employed by firms aged between 6 to 10 years. Moreover, the majority of respondents, 97 individuals (80.17%), reported previous attendance in training sessions focusing on hard skills, soft skills, or educational advancement. Similarly, a significant number of respondents, 82 individuals (67.77%), indicated they had received training or education related to skills and knowledge provided by the companies they are employed with.

Table 2. Demographic profile of the respondents

Demographic Profile	Count	Percent (%)
Gender		
Female	55	45.45
Male	66	54.55
Age		
21 - 30 years	38	31.40
31 - 40 years	62	51.24
41 - 50 years	21	17.36
Firm's Size		
< 10	6	4.96
10 - 50	101	83.47
51 - 100	14	12
Firm's Age		
3 - 5 years	19	15.70
6 - 10 years	82	67.77
> 10 years	20	16.53
Do you have any training in hard skills, soft skills, or go for educational advancement before?		
No	24	19.83
Yes	97	80.17
Does your company provide training or education about skills and knowledge?		
No	39	32.23
Yes	82	67.77
Grand Total	121	100.00

4.2. Reliability and Validity

Table 3 displays the reliability and validity outcomes for the dimensions of hard skills, soft skills, educational advancement, and organizational performance. Internal consistency was assessed using Cronbach's Alpha and composite reliability (CR). Importantly, all constructs exhibited Cronbach's Alpha values surpassing the recommended threshold of 0.70. Based on (Hair et al., 2009), an acceptable CR value is 0.7 or above. Similarly, Cronbach (1951) and Hair et al. (2017) noted that CR values exceeding 0.6 are acceptable. In the current study, all constructs demonstrated CR values exceeding 0.70, indicating their reliability. Thus, it can be inferred that the constructs utilized in this study were reliable.

Table 3. Summary of convergent validity

Construct	Cronbach's Alpha	CR	AVE		
EA	0.992	0.993	0.934		
SS	0.989	0.990	0.888		
HS	0.992	0.992	0.917		
OP	0.991	0.992	0.940		

Note: HS = hard skills, EA = educational advancement, SS = soft skills, OP = organizational performance

Additionally, this study evaluated convergent and composite validity through the average variance extracted (AVE) and Heterotrait-Monotrait ratio (HTMT) criteria tests. AVE values exceeding the cut-off threshold of 0.5 indicate convergent validity of the variables (Fornell & Larcker, 1981; Hair et al., 2017). The discriminant validity of all study constructs alongside their cross-loadings is illustrated in Table 4. As depicted in Table 4, the HTMT ratio for all constructs was below the 0.85 threshold (Hamid et al., 2017; Henseler et al., 2015; Yusoff et al., 2020). Consequently, this indicates that the examination of discriminant validity of current research yielded satisfactory results.

Table 4. Discriminant validity - HTMT

			•	
	EA	HS	OP	SS
EA				_
HS	0.634			
OP	0.839	0.482		
SS	0.495	0.670	0.464	

Note: HS = hard skills, EA = educational advancement, SS = soft skills, OP = organizational performance

4.3. Hypothesis Testing

Hypothesis testing involves making inferences about population parameters based on a given sample, thereby providing a probability of whether to reject or retain the null hypothesis. In this study, hypothesis testing was carried out with the bootstrapping approach implemented in Smart PLS-3 software. According to the 95% confidence interval, the t-statistic value should surpass 1.645, while the corresponding p-value ought to be below 0.05. After running the PLS Algorithm to analyse the data, outer loadings of the PLS path model that were less than 0.5 were removed. This step ensured that the model depicted in Figure 2 was reliable, accurate, and appropriate for further analysis.

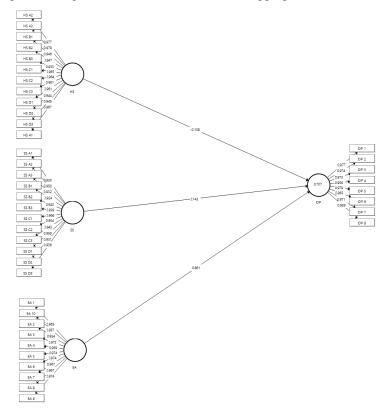


Figure 2. Modified PLS path model

The primary results of the hypothesis testing are outlined in Table 5. Three hypotheses had been examined, revealing significant associations between certain variables. Specifically, hard skills (-0.158, p = 0.019) exhibited a negative yet significant relationship with organizational performance. Conversely, soft skills (0.143, p = 0.023) demonstrated a significant positive correlation with organizational performance. Moreover, educational advancement (0.861, p = 0) displayed a strong significant and positive impact on performance of organization. The findings indicate support for two hypotheses. The findings suggest that the organizational performance of construction firms can be effectively enhanced through the cultivation of soft skills and the pursuit of educational advancement among employees. However, it is noteworthy that hard skills showed a negative association with the performance of construction firms at the organizational level in Pahang.

Table 5. Summary of hypothesis testing

	Path	Std. Beta	Std. Deviation	t	P	Bias	Confidence Interval		Decision
Hypothesis							(%)		
							5.00%	95.00%	
H1	$HS \rightarrow OP$	-0.158	0.076	2.088	0.019	-0.007	-0.275	-0.033	Not supported
H2	$SS \to OP$	0.143	0.072	1.996	0.023	0.006	0.038	0.272	Supported
Нз	$EA \rightarrow OP$	0.861	0.058	14.799	0	0.003	0.716	0.932	Supported

4.4. Discussion

This study investigated the impact of three dimensions - hard skills, soft skills, and educational advancement towards the organizational performance of construction firms within Pahang. Three hypotheses were formulated to align with the research objectives. The first objective aimed to evaluate the effect of hard skills towards performance of organization, the second objective aimed to investigate the influence of soft skills towards organizational performance, and the final objective aimed to examine the effect of educational advancement on organizational performance. Results of current study suggest that HC does indeed impact the organizational performance of construction organizations in Pahang. While soft skills and educational advancement were found to positively influence organizational performance, hard skills exhibited a negative impact on organizational performance. This implies that organizations should prioritize the enhancement of soft skills and educational advancement among employees. The results of hypotheses 2 and 3 indicate a significant and positive influence of both soft skills and educational advancement on performance of organization within the construction sector. Amidst the growth and competitiveness within the construction industry, it is essential to prioritize improving organizational performance by enhancing soft skills and educational levels of employees.

While hard skills remain important, organizational performance is influenced by various factors. Despite previous studies often show a positive relationship for hard skills and performance of organization, recent research suggests a negative relationship between hard skills and organizational performance. This discrepancy might be due to the respondents' management-level status in this study, where soft skills play a critical role in executive performance. Moreover, organizations are increasingly investing in the development of soft skills for enhanced work performance, particularly at the executive level (Homer, 2001). Additionally, it has been suggested that while hard skills are essential, deficiencies in soft skills pose significant obstacles for employees in their job performance Poláková et al. (2023). Furthermore, in today's highly competitive global workforce, researchers argue that relying solely on hard skills is inadequate for employees to thrive, emphasizing the necessity of soft skills for the modern workforce (Dean & East, 2019). It is crucial to acknowledge that organizational performance is multifaceted and not solely determined by individual skillsets. Therefore, adopting a holistic approach that considers the broader organizational context is essential for improving organizational performance effectively.

5. CONCLUSIONS

5.1. Conclusion

The principal objective of this study was to examine the influence of HC towards organizational performance within the construction firms in Malaysia. HC was analyzed through three dimensions: hard skills, soft skills, and educational advancement. Drawing from the discussions and findings, it can infer that all three dimensions - hard skills, soft skills, and educational advancement significantly impact organizational performance in Malaysian construction firms. Notably, while hard skills showed a negative relationship with organizational performance, both soft skills and educational advancement were found to positively influence it in this study. The growing acknowledgment of the significance of soft skills in recent decades is evident from the emphasis placed by organizations, as reflected in Table 1. Not only do these essential soft skills enhance organizational performance, but they also contribute to the overall value of organizations. Therefore, the results of this study emphasize the significance of improving employees' soft skills and advancing their education to enhance organizational performance.

5.2. Research Implications

The current research offers valuable understandings into the correlation between hard skills, soft skills, and educational advancement towards the organizational performance of construction employees within Pahang by applying the resource-based view theory. The findings offer implications for human resource managers, strategic managers, and policymakers, enabling them to understand how the HC of employees contributes to achieving higher organizational performance. It also suggests that firms should prioritize the development of soft skills and educational advancement, especially for management-level employees. Furthermore, professionals and stakeholders in the industry must consistently reassess and refine their human resource development strategies to adapt to the evolving skill requirements driven by global changes such as information technology. It would be beneficial for firms to determine the appropriate level of investment in developing HC, considering the heavy reliance of the construction industry on labour. Enhanced HC will enable organizations to increase production, efficiency, and overall performance. The study underscores the critical need to prioritize the development of soft skills and educational advancement, particularly among management-

level employees, to enhance organizational performance effectively. It highlights the need for continuous review and updating of human development policies by industry practitioners and stakeholders to address the evolving skill requirements brought about by global changes, such as advancements in information technology. Furthermore, given the construction industry's heavy reliance on labour, the study suggests that firms should carefully assess and decide on the suitable magnitude of investment in HC development. By enhancing HC, organizations can boost production, improve efficiency, and ultimately elevate their overall performance in the ever-changing construction sector.

5.3. Limitations and Future Suggestions

The present study offers valuable insights into the influence of HC towards organizational performance. However, there are several promising directions for future research that might be able to deepen our understanding in this area. One such direction involves expanding the scope of HC indicators to include additional dimensions such as experience and innovation ability. By incorporating a more comprehensive set of metrics, future studies can provide a more holistic view of how HC influences organizational performance. Furthermore, while the current study focused on data collected from the Pahang state in Malaysia, future research could benefit from broader geographical coverage encompassing all thirteen states and three federal territories of Malaysia. This would enable researchers to assess variations in HC dynamics across different regions, thereby enhancing the generalizability of findings. Additionally, future studies may consider extending the sample beyond managerial levels to include a broader range of employees. By examining the effect of HC towards performance of organization across different hierarchical levels, researchers can gain a better understanding of the underlying mechanisms. Lastly, upcoming study could explore the mediating and moderating relationships within the context of HC and performance of organization. Elements like organizational culture, leadership style, and organizational learning could influence the strength or direction of this relationship. Investigating these mediating and moderating variables can provide valuable insights into the underlying mechanisms driving the relationship between HC and organizational performance. Overall, by addressing these potential areas for upcoming study, scholars can deepen our comprehension of the complex interplay between HC, organizational performance, and related factors.

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CONFLICT OF INTEREST

The author(s), as noted, certify that they have NO affiliations with or involvement in any organisation or agency with any financial interest (e.g., honoraria; participation in speakers' bureaus; membership, jobs, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (e.g., personal or professional relationships, affiliations, expertise or beliefs) in the subject matter or materials addressed in this manuscript.

AUTHORS CONTRIBUTION

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

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