

Bridging Intellectual Capital to Business Performance: The Role of Digital Transformation and Mediating of Sustainable Corporate Performance

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Abstract

The purpose of this study is to develop a model of business performance grounded in intellectual capital. In a business context, companies must be responsible for building sustainable performance. Furthermore, the model is built based on the research gap between intellectual capital and business performance, adding variables of sustainable corporate performance and digital transformation. The theory that serves as the anchor in this study is the resource-based view theory. This study used managers as the unit of analysis by distributing 250 questionnaires. The analysis was then conducted using the structural equation model method with AMOS software. The results of the analysis of the developed hypotheses indicate that the results of the test of the mediating variable sustainable corporate performance are very significant, while the test of the direct effect between intellectual capital and business performance shows the opposite result, so this mediation model becomes a full mediation. The results of other hypothesis tests also show a significant effect of digital transformation on sustainable corporate performance and business performance. This research contributes, theoretically contributing to the development of a complex model on how to build a company's business performance through intellectual capital mediated by sustainable corporate performance, the contribution to business practice is to provide confidence to managers that business performance is built through sustainable corporate performance, and finally the contribution to society that the company's business performance must have an impact on society, the environment, and the economy at huge.

Keywords: intellectual capital, sustainable corporate performance, business performance, digital transformation

1. Introduction

Corporate business development is accelerating, amidst the rapid disappearance of national boundaries. Business issues within a region or country can be quickly accessed and understood by parties outside the company, without the constraints of time and space. This situation allows intellectual capital and digital transformation to drive rapid business growth and development. Intellectual capital and digital transformation are now determining variables in expanding business.

This research addresses the research gap between intellectual capital and business performance, which remains inconclusive. Smriti and Das (2018) study found that intellectual capital significantly impacts business performance, but other studies have shown no significant effect (Buallay, 2017). This inconclusiveness makes this research very interesting and important to conduct.

By developing a complex model to address this research gap, a mediating variable, sustainable corporate performance, was developed. This research is anchored in the resource-based view theory developed by Grant (1991) and (Barney, Wright, & Jr, 2001), This theory is highly appropriate as an analytical knife for completing a complex, integrated research model.

2. Literature Review

2.1 Sustainable Corporate Performance

Sustainable corporate performance is a company's sustainable performance which is not only reflected by financial performance in the form of profits, revenue growth, and company cost efficiency, but is also reflected by social performance in the form of employee satisfaction, relationships with stakeholders, and responsibility to the community, and the company's performance towards the environment in the form of compliance with environmental regulations, and responsible waste management (Yao & Wang, 2024).

Sustainable corporate performance is strongly influenced by the capabilities and skills possessed by the company's employees, in addition Sustainable corporate performance is strongly influenced by the company's knowledge in building systems and procedures that support performance (Abdullah, Sofian, & Bajuri, 2015). Sustainable corporate performance is very important, especially in this study by using dimensions of paying attention to environmental impacts, carrying out social responsibility to the community, maintaining a balance between profit and sustainability, companies implementing environmentally friendly business practices, and maintaining commitments to long-term sustainability (Noviantoro, Peranginangin, & Lusiah, 2020; Yao & Wang, 2024).

2.2 Business Performance

Business performance is the superior performance of a company where the company has inherent attributes, namely rareness, firm-specificity, difficult to imitate by competitors, and cannot be replaced (Barney, Wright, & David J. Ketchen, 2001; Peranginangin, 2015). Business performance is greatly influenced by the company's ability to maintain a balance between profits and long-term sustainability commitments (Nwankpa & Roumani, 2016).

Xu and Wang (2018) explain that a company's business performance is largely determined by the added value created by the company's ability to increase the operational efficiency of physical capital, human capital, and relational capital. A company's business performance improves through sustainable corporate performance and is driven by innovation performance and well-developed leadership within the company. Business performance is reflected in increased profitability, operational efficiency, business growth, increased company competitiveness, and overall company performance (Maletič, Maletič, Dahlgaard, Dahlgaard-Park, & Gomišček, 2015; TomSIC, Bojnec, & Simcic, 2015).

2.3 Intellectual Capital

Intellectual capital is one of the most important drivers of a company's success in building long-term business performance. Intellectual capital is now professionally managed, giving rise to

the profession we know today as Chief Knowledge Officer (Edvinsson & Malone, 1997). Intellectual capital is now professionally managed, giving rise to the profession we know today as Chief Knowledge Officer. Intellectual capital consists of intellectual material, intellectual property, and experience that can be used to sustainably increase a company's wealth (Bontis, 1998).

Pulic (2000) describes that intellectual capital provides added value called Value Added Intellectual Capital (VAIC), which consists of human capital and structural capital. Intellectual capital is reflected in employees who have high abilities and competencies, develop employee skills and knowledge, have systems and procedures that support company efficiency, have strong relationships with customers and business partners, and organizational knowledge is well managed and documented (Xu & Wang, 2018). Intellectual capital significantly influences the improvement of sustainable corporate performance and company business performance, meaning that the higher the intellectual capital owned by a company, the higher the sustainable corporate performance and business performance (Antwi-Boateng, Mensah, & Asumah, 2023; Smriti & Das, 2018).

Grounded in the prior theoretical background elaboration, the following hypotheses are developed :

H1 : The higher level of intellectual capital ensues the higher level of business performance

H2 :The higher level of intellectual capital ensues the higher level of sustainable corporate performance

H3 :The higher level of sustainable corporate performance ensues the higher level of business performance

2.4 Digital Transformation

Digital transformation is a change or movement based on digital technology. In today's business context, digital transformation is a change in business models integrated with big data, data analytics, cloud data, multiplatforms, and social media (Nwankpa & Roumani, 2016). Several factors force companies to undertake digital transformation, including cloud computing, speech recognition, artificial intelligence, online payment systems, cryptocurrency, and other factors that require companies to remain sustainable and competitive (Fabian et al., 2021).

Digital transformation has several parameters that can be used as references, including the adoption of digital technology in operations, increasing efficiency through digital technology, innovating through or integrated with digital technology, building customer experiences through digital technology, and having a clearly measurable digital transformation strategy (Vial, 2019). The results of research conducted by Lobschat et al. (2021) indicate that successful digital transformation will improve sustainable corporate performance. Furthermore, research by Li, Su, Zhang, and Mao (2017) and Kraus et al. (2022) shows that increasing digital transformation can improve a company's business performance, meaning that the higher the digital transformation, the higher the company's sustainable corporate and business performance.

Based on the research result description above, several hypotheses can be constructed as below:

H4 : The higher level of digital transformation ensues the higher level of sustainable corporate performance

H5 :The higher level of digital transformation ensues the higher level of business performance

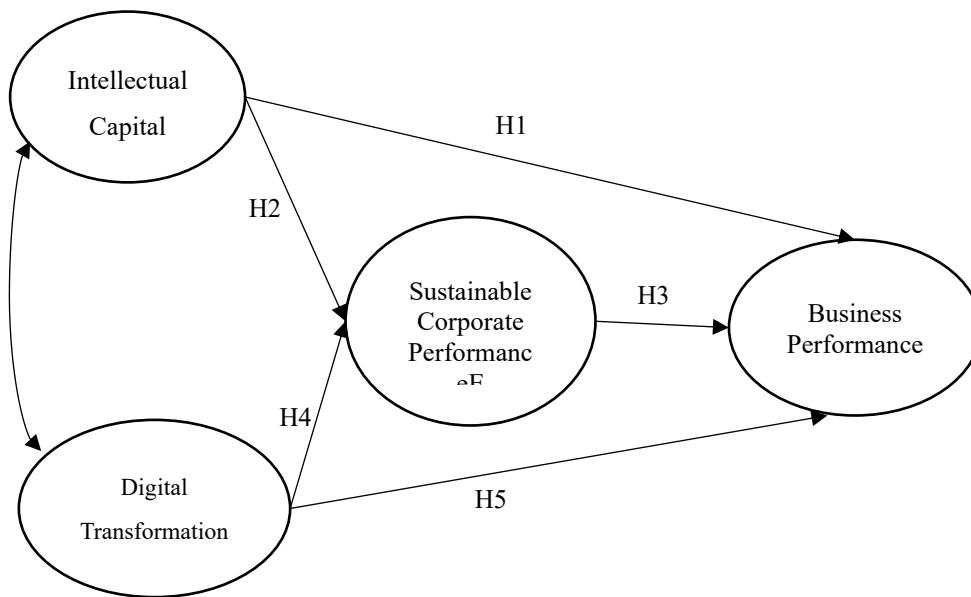


Figure 1: Proposed Empirical Model (Source: Developed for this research, 2026)

3. Research Method

This study employed a quantitative research approach. This approach was chosen because it is able to measure and predict the relationships between variables based on the hypotheses above (Sekaran & Bougie, 2016; Sembiring, Peranginangin, & Kartika, 2024). This study employed multivariate analysis, and subsequent data processing was performed using the structural equation model method with AMOS software (Hair, Black, Babin, & Anderson, 2014)

4. Finding and Discussion

The following is an explanation of the research results, namely the descriptive statistical results and the results of hypothesis testing.

4.1 Descriptive Statistics

This research was conducted on managers who hold middle manager and top manager positions, where they have the authority to make strategic decisions in the company. There were 250 questionnaires distributed and 197 questionnaires or 79% were returned, then the deemed complete questionnaires and could be processed were 185 questionnaires from respondents or 93%.

4.2 Instrument Measurement Test

The instrument measurement test was conducted using Convergent Validity (Average Variance Extracted) and Construct Reliability. The instrument measurement test was processed using standardized loading factor data for each indicator variable. The cut-off value for Convergent Validity (AVE) is ≥ 0.50 , while for Construct Reliability it is ≥ 0.70 .

The table below is the complete data processing result of the Instrument Measurement Test, consisting of Convergent Validity (Average Variance Extracted) and Construct Reliability:

Table 1. Validity and Reliability Test

No	Variable/Indicators	Std. Loading (Lamda Value)	Convergent Validity (AVE) ≥ 0.50	Construct Reliability ≥ 0.70
1	Intellectual Capital			
	IC1	0.818	0.604	0.885
	IC2	0.790		
	IC3	0.720		
	IC4	0.773		
	IC5	0.789		
2	Sustainable Corporate Performance			
	SCP1	0.804	0.561	0.842
	SCP2	0.693		
	SCP3	0.746		
	SCP4	0.653		
	SCP5	0.689		
3	Digital Transformation			
	DT1	0.772	0.659	0.906
	DT2	0.827		
	DT3	0.834		
	DT4	0.821		
	DT5	0.805		
4	Business Performance			
	BP1	0.694	0.505	0.754
	BP2	0.804		
	BP3	0.697		
	BP4	0.805		
	BP5	0.652		

Source: Data processing results (2026)

Based on the table above, it can be concluded that each indicator variable of intellectual capital, sustainable corporate performance, business performance, and digital transformation has a very

good loading factor. The results of the Convergent Validity (Average Variance Extracted) test for intellectual capital showed a figure of 0.604, for the sustainable corporate performance variable showed a figure of 0.561, for the digital transformation variable showed a figure of 0.659, and for the business performance variable showed a figure of 0.505. All variables have a Convergent Validity (AVE) value ≥ 0.50 as required, meaning that all indicators are able to reflect their variables very strongly.

For the Construct Reliability test results, the results are very good, all variables have a Construct Reliability score ≥ 0.70 . The results of the construct reliability value of the intellectual capital variable show a figure of 0.885, for the sustainable corporate performance variable shows a figure of 0.842, for the digital transformation variable shows a figure of 0.906, and for the business performance variable shows a figure of 0.754. The conclusion is that all indicators are very consistent and stable data measuring the variables in this research.

4.3 Model Fit Indices

Model fit testing was conducted using absolute fit indices and incremental fit indices, including chi-square (X^2), Cmin/DF, goodness of fit index (GFI), adjusted goodness of fit index (AGFI), comparative fit index (CFI), Tucker-Lewis index (TLI), and root mean square error of approximation (RMSEA).

The results of the model fit indices testing are as shown in the following table:

Table 2. Model Fit Indices Result

Model Indices	Fit	chi-square (X^2)	DF	Cmin/DF	GFI	AGFI	CFI	TLI	RMSEA
Measurement		351.417	167	2.104	.854	.817	.874	.857	.077
Fit Result		Good		Good	Good	Good	Good	Good	Good fit

Source: Data processing results (2026)

The results of the Model Fit Indices test in Table 2 above indicate that all model fit indices are quite good and meet the criteria required in structural equation modeling (SEM). It can be concluded that the model has conceptual and empirical suitability or fit.

4.4 Hypotheses Testing Result

The results of the hypotheses test were conducted using a critical ratio (CR) level of ≥ 1.96 , with a P-Value of ≤ 0.05 . The complete results of the hypothesis test can be seen in Table 3 below:

Table 3. Hypotheses Test

No	Hypotheses	Estimate	S.E	C.R	P	Result
1	Intellectual Capital → Business Performance	.300	.143	-2.108	.035	Rejected
2	Intellectual Capital → Sustainable Corporate Performance	.276	.008	3.459	***	Accepted
3	Sustainable Corporate Performance → Business Performance	.687	.311	2.211	.027	Accepted
4	Digital Transformation → Sustainable Corporate Performance	.396	.082	4.818	***	Accepted
5	Digital Transformation → Business Performance	.413	.166	2.496	.035	Accepted

Source: Data processing results (2026)

Based on the results of the hypotheses test described above, it shows that the influence of intellectual capital on business performance is rejected even though the P-value is 0.035 because the critical ratio value shows a different direction. Furthermore, the second hypothesis which states that there is an influence of intellectual capital on sustainable corporate performance is accepted with a P-value of *** and a critical ratio value of 3.459. The third hypothesis which states that the higher the level of sustainable corporate performance, the higher the business performance shows a critical ratio value of 2.211 and a P-value of .027, meaning this hypothesis is proven to have a significant effect/accepted. Furthermore, the fourth hypothesis which states that the higher the digital transformation, the higher the sustainable corporate performance shows a critical ratio value of 4.818 and a P-value of ***, meaning the fourth hypothesis has a very significant effect r accepted. The last hypothesis which states that the higher the digital transformation, the higher the business performance shows a critical ratio value of 2.496 and a P-value of .035, so the fifth hypothesis has a significant value or accepted.

5. Conclusion

Based on the research results as described above, it can be concluded that the influence of intellectual capital on business performance is very significant but has a negative direction. This makes the hypothesis that there is an influence of intellectual capital on business performance unproven and must be mediated by the variable sustainable corporate performance. The results show that the mediation of sustainable corporate performance is a full mediation, meaning that business performance success can only be achieved through the variable sustainable corporate performance.

The results of other hypotheses tests align with previous research, which found that digital transformation significantly impacts sustainable corporate performance. Likewise, the hypothesis that digital transformation significantly impacts business performance has been proven to have the same research position as the previous research results. Therefore, this study contributes to strengthening previous research on the hypothesis that digital transformation

significantly influences sustainable corporate performance and business performance.

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