



The impacts of intellectual capital and entrepreneurship orientation on business performance

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ABSTRAK

Pandemi Covid-19 memberikan dampak sistematis ke semua lini tidak terkecuali industri perhotelan dengan tingkat okupasi yang terendah. Untuk itu, diperlukan inovasi bagi industri perhotelan mengembangkan manajemen modal intelektual dan berorientasi kewirausahaan agar bisnisnya bisa terus bernapas di tengah pandemi global saat ini. Penelitian ini bertujuan untuk menguji pengaruh modal intelektual dan orientasi kewirausahaan terhadap kinerja bisnis pada pariwisata perhotelan di Sumatera Barat. Populasi penelitian ini seluruh hotel berbintang dan non bintang yang terdaftar pada Badan Pusat Statistik Provinsi Sumatera Barat. Hasil penelitian membuktikan bahwa human capital dan structural capital tidak berpengaruh signifikan terhadap kinerja bisnis. Sedangkan relational capital dan orientasi kewirausahaan terbukti signifikan berpengaruh terhadap kinerja bisnis perhotelan. Hasil penelitian ini memberikan kontribusi kepada pengetahuan tentang hubungan modal intelektual dalam bisnis perhotelan untuk meningkatkan kinerja bisnisnya, khususnya dalam situasi pandemi Covid-19 saat ini.

ABSTRACT

The Covid-19 pandemic has systematically impacted all lines, including the hospitality industry, which experienced the lowest occupancy rate. For this reason, innovation is needed for the hotel industry to develop intellectual capital management and be entrepreneurially oriented so that its business can continue to breathe amid the current global pandemic. This study aims to examine the effect of intellectual capital and entrepreneurial orientation on business performance in hospitality tourism in West Sumatra. The population of this study is all-star and non-star

hotels registered with the Central Bureau of Statistics of West Sumatra Province. Our results demonstrate that human and structural capital do not significantly affect business performance. Meanwhile, relational capital and entrepreneurial orientation have a significant effect on the performance of the hotel business. The results of this study contribute to knowledge about the relationship of intellectual capital in the hotel business to improve business performance, especially in the current situation of the Covid-19 pandemic.

INTRODUCTION

The Covid-19 pandemic has had a significant impact on the Indonesian tourism sector. Due to the pandemic, surviving over the last two years has been one of the biggest challenges for Indonesian tourism accommodation or hospitality industry participants. According to Indonesian Ministry of Tourism (2021), the number of foreign tourists entering Indonesia in February 2020 decreased dramatically. The lowest point was reached in April 2020, when only 158 thousand foreign tourists were in Indonesia. Similarly, domestic tourist visits decreased by 30 percent from 2019 to 2020. This factor also contributed to the decline in hotel occupancy. According to data from Statistics Indonesia (2022), the hotel occupancy rate decreased dramatically from March 2020 to April 2020, falling from 32.24 percent to 12.7 percent. According to Statistics of Sumatera Barat Province (2020)'s data, the number of foreign tourists who arrived in West Sumatra via the Minangkabau International Airport (BIM) in February 2020 was 4,038. This represents a decrease of 6.98 percent compared to January 2020, when 4,341 foreign visitors were recorded. West Sumatra and the archipelago have experienced a decline in the number of tourists' visits due to various factors, including Covid-19. Consequently, a model is required to analyze the relationship between intellectual capital (IC) and entrepreneurial orientation and the business performance of the hospitality tourism sector during the Covid-19 pandemic.

Intellectual Capital (IC) has attracted considerable interest in recent decades, including in the tourism industry. Intellectual capital is one of the non-physical resources owned by an organization that is valuable or unique. Effective management of IC is critical, particularly in service-oriented and non-manufacturing industries, as these sectors have more intangible than tangible resources. Zeglat & Zigan (2013) establish that hotels with strong, value-added, and unique resources can survive in a competitive environment. This is in line with the resource base value (RBV) as our theoretical framework. Several empirical studies have demonstrated that intellectual capital is a strategic asset and significantly affects organizational performance in various fields and perspectives, including universities (Anggraini *et al.*, 2018b, 2018a; Brusca *et al.*, 2019; Pedro *et al.*, 2022), banking (Castro *et al.*, 2021; Chahal & Bakshi, 2016; Pernamasari & Sugiyanto, 2021), manufacturing (Rosario & Mazumdar, 2022; Subagyo & Waluyo, 2020; Tsai & Mutuc, 2020; Xu & Liu, 2020), and entrepreneurship (Al-Jinini *et al.*, 2019; Arshad *et al.*, 2014; Demartini & Beretta,

2020; Gross-Gołącka *et al.*, 2021). Furthermore, prior studies have explored the critical role of IC in the hospitality tourism industry (Aboushouk & Tamamm, 2021; Bontis *et al.*, 2015; Kim *et al.*, 2012; Rudež, 2021; Zeglat & Zigan, 2013). They argue that IC can contribute to service improvement and hotel innovation for sustainable hotel development.

According to Demartini & Beretta (2020), entrepreneurship orientation is a creative effort to produce innovation, create added values, provide benefits, create jobs, and be beneficial to others. The hospitality tourism sector with an entrepreneurial orientation must compete on innovation, information systems, knowledge, organizational management, and human resources. Accordingly, it is necessary to cultivate an entrepreneurial spirit to develop new products or services that meet customers' needs and demands (Cuevas-Vargas *et al.*, 2019; Haliq *et al.*, 2018). Therefore, business organizations in hospitality must focus on knowledge assets as a form of intangible assets, also known as intellectual capital, to develop their businesses (Ognjanovic, 2016).

Intellectual capital and entrepreneurial orientation's role in the Indonesian hospitality sector's business performance remains understudied. For instance, Wardhani *et al.* (2021) investigate the impacts of innovative capabilities, knowledge management, and intellectual capital on the competitive advantage and performance of budget accommodation businesses in Semarang. Furthermore, prior studies tend to overlook current problems. Therefore, it is critical to extend prior studies in the hospitality industry. This study is expected to underscore the importance of intellectual capital in increasing the entrepreneurial orientation in the hospitality sector of the hospitality sector in West Sumatra during the Covid-19 pandemic era. Furthermore, this research offers managerial implications by highlighting the role of intellectual capital or intangible assets in improving business performance through entrepreneurial orientation. Lastly, our study contributes to the literature on the role of intellectual capital in the hotel business in improving business performance, especially in the Covid-19 pandemic era.

LITERATURE REVIEW AND HYPOTHESES FORMULATION

Intangible resources, or intellectual capital (IC), are critical for organizations to accomplish business continuity objectives (Pedro *et al.*, 2022). Bontis *et al.* (2015) argue that the hotel sector has more intangible than tangible resources. Engström *et al.* (2003) examine 16 Radisson SAS Hotels and Resorts group hotels and demonstrate that IC improves their performance. According to Krambia-Kapardis & Thomas (2006), several critical success factors in the hospitality industry can be measured, including (1) market (market share and market growth), (2) strategy (growth strategy, marketing strategy, and future growth plan), (3) value creation activities (customer satisfaction, service quality, customer retention rate, customer loyalty, advocacy,

quality management, employee development, quality training, employee satisfaction, product (service) innovation and brand value growth), and (4) business performance (benchmarks and business unit analysis). Jordão & Novas (2017) suggest that maximizing intellectual capital enables firms to add value.

Intellectual capital is the knowledge, intellectual property, information, analytical skills, competencies, and skills of an organization's employees to create a competitive advantage. Several studies have demonstrated that intellectual capital affects the performance of hospitality firms (Bontis *et al.*, 2015; Cuevas-Vargas *et al.*, 2019; Haliq *et al.*, 2018; Rudež, 2021; Zeglal & Zigan, 2013). According to Anggraini *et al.* (2018a), intellectual capital consists of human capital (HC), such as knowledge; structural capital (SC), such as information and communication systems; and relational capital (RC), such as partnerships with stakeholders and has been demonstrated to affect business performance. This indicates that related programs have contributed to business performance.

H1: Intellectual capital affects business performance.

Human capital (HC) is defined as employees' knowledge, competencies, work-related attitudes, and capacity for innovation (Rudež, 2021). According to Cuevas-Vargas *et al.* (2019), elements of human capital for hospitality organizations, such as employee competence, attitude, and innovation, are crucial because they can generate new consumer values. Other key elements of HC include technical expertise, creativity, education and experience, and motivation, which are the primary catalysts for sustaining competitive advantage. Studies underscore that HC significantly affects business performance (Ampauleng, 2021; Anggraini *et al.*, 2020; Costa *et al.*, 2020; Wardhani *et al.*, 2021). Thus, firms' HC will enhance the quality of their employees and internal operations. Based on prior studies and supporting theories, we propose the following hypothesis:

H1a: Human capital affects business performance.

Structural capital (SC) refers to organizations' physical and non-physical infrastructure, including operational systems, processes, databases, strategic plans, routines, and information technology (Rudež, 2021). According to Costa *et al.* (2020), structural capital includes critical organizational attributes such as organizational culture, management structures and processes, knowledge networks, and organizational philosophy. In other words, SC is a liaison between HC and IC. Firms' intellectual capital will not be utilized even when employees possess intellectual property if they are not supported by adequate infrastructure to implement innovations. Prior studies have demonstrated that structural capital affects hotel business performance (Anggraini *et al.*, 2018a; Bontis *et al.*, 2015; Sardo *et al.*, 2018; Sharabati

et al., 2013). Hence, SC in the tourism industry is focused on IT and new information channels powered by the internet. Rudež (2021) documents that culture, business processes, and IT are SC's critical components and significantly affect the performance of hospitality firms in the tourism sector. Firms with greater structural capital will arguably exhibit more effective human capital and eventually better performance. Accordingly, we propose the following hypothesis:

H1b: Structural capital affects business performance.

Relational capital is a harmonious and high-quality relationship between a firm and its partners, suppliers, customers, the government, and the surrounding community (Demartini & Beretta, 2020). It is believed that mutually beneficial relationships and social networks between organizations and their stakeholders positively affect business performance. Bontis *et al.* (2015) argue that relational capital strongly affects the development of the hospitality tourism sector. Firms are interested in developing networking capabilities with outsiders because they anticipate favorable benefits. According to Laing *et al.* (2010); Lee *et al.* (2023), relational capital affects the performance of the hospitality business in the US and Australia, respectively. Their results indicate that valuable resources, knowledge, and cooperation networks with various internal and external parties enable firms to seize opportunities, develop competitive positions, and encourage employees and managers to develop and exploit business opportunities. For example, investing in relational capital organizations increases network development, and cooperation between firms and partners improves hotels' business performance. Accordingly, we propose the following hypothesis:

H1c: Relational capital affects business performance.

Entrepreneurship refers to the nature, character, and characteristics of individuals with a strong desire to implement innovative ideas in the real business world. According to Demartini & Beretta (2020), entrepreneurship is the capacity to create something new and distinct. Entrepreneurship is synonymous with individuals' ability to be creative, innovative, and risk-taking. Entrepreneurship refers to the disposition, personality, and traits of someone with a strong desire to implement innovative business concepts in the real world. According to Demartini & Beretta (2020), entrepreneurship is the capacity to create something new and distinct, or the entrepreneurial principle. Al-Jinini *et al.* (2019) reveal that entrepreneurship is synonymous with being creative, innovative, risk-taking, and constantly looking for opportunities based on one's potential. Entrepreneurs dare to create new enterprises and ideas (Anggraini *et al.*, 2020). The entrepreneurial process encompasses all functions, activities, and actions associated with acquiring opportunities and forming business organizations (Al-Jinini *et al.*, 2019). Entrepreneurship arises when individuals are willing to develop new businesses and ideas. The entrepreneurial

process includes all functions, activities, and actions related to acquiring opportunities and creating business organizations (Anggraini *et al.*, 2020).

Firms with entrepreneurial orientation can formulate better business strategies to outperform their competitors and improve performance (Perlines & Araque, 2015). According to Al-Jinini *et al.* (2019); Haliq *et al.* (2018); Zehir *et al.* (2015), entrepreneurial orientation affects business performance. Thus, entrepreneurial orientation is one factor that affects the business performance of the hospitality tourism sector. Entrepreneurs must have an entrepreneurial orientation due to its importance in business performance and sustainability (Anggraini *et al.*, 2020). Accordingly, we propose the following hypothesis:

H2: Entrepreneurial orientation affects business performance.

Figure 1 below illustrates our research framework:

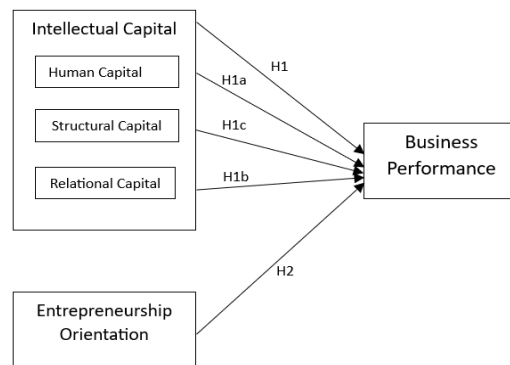


Figure 1
Research Framework

RESEARCH METHOD

Data and Sample

Our population consists of star and non-star-hotels registered with the Central Bureau of Statistics of West Sumatra Province in 2019, with 82-star hotels and 626 non-star hotels. Star hotels are hotels that have met the requirements of star hotels set forth by the Indonesian government, i.e., they have restaurants under their management. Meanwhile, non-star hotels do not meet the requirements of star hotels but satisfy the criteria as budget hotels issued by the Regional Tourism Office. The hotel business sector has been significantly affected by the Covid-19 pandemic. Accordingly, this study does not differentiate between star and non-star hotels as a research population. We utilized the purposive sampling technique to collect the data by giving all units in the population an equal chance of selection. To test the hypothesis, this study then analyzed the data using the Partial Least Square (PLS) approach with the SmartPLS program. This approach has several advantages, as Hair

et al. (2021) suggested. First, PLS-SEM is suitable because this research model uses variables that cannot be measured directly or latent variables with predictable measurement errors. Second, PLS-SEM analysis can simultaneously test this research model's multiple dependencies and independent variables. Third, component-based PLS-SEM can overcome complexity models with limited sample sizes.

Measurement of research variables

Intellectual capital is knowledge, information, intellectual property rights, and experience that can be utilized to generate wealth (Al-Jinini *et al.*, 2019; Anggraini *et al.*, 2018a; Engelman *et al.*, 2017). The variables' questionnaires used were adopted from Al-Jinini *et al.* (2019), employing a five-point Likert scale ranging from strongly agree (5) to strongly disagree (1) with a total of twenty-five question items consisting of human capital and structural capital, seven for human capital, seven for structural capital, and eleven for relational capital.

Human capital, structural capital, and relational capital are the three dimensions of intellectual capital (IC), which are defined and measured as follows. Human capital is defined as the intellectual capacity of employees with the skills, abilities, competencies, creativity, education, and high-quality qualifications, as well as the experience necessary to find practical solutions to meet customer demands. Therefore, it was measured through the creation of eight query items. Second, structural capital refers to the quantity of accumulated knowledge produced by shared values that comprise collective knowledge. Culture, routines, instructions, procedures, systems, and technological and intellectual advancements are indicators of structural capital. Lastly, relational capital is the organization's relationship with all relevant parties and stakeholders and employees' ability to build and sustain connections with affiliated parties such as customers and suppliers.

Entrepreneurial orientation is behavior and trend that seeks to exploit, identify, seize, and create opportunities by utilizing and expanding knowledge and experience (Li *et al.*, 2022). Entrepreneurial orientation is measured through innovation, autonomy, risk, competitiveness, and proactiveness. This research instrument was adopted from Al-Jinini *et al.* (2019), which consists of twenty-seven questions using a five-point Likert scale ranging from strongly agree (5) to strongly disagree (1).

The achievements of an organization in terms of profitability, market share, market position, and product elements are used to measure its business performance (Zeglat & Zigan, 2013). The questionnaire utilized a Likert scale with twenty-six questions ranging from strongly agree (5) to strongly disagree (1).

RESULTS AND DISCUSSION

Table 1 outlines the detailed procedures of collecting questionnaires, which reveals that 150 questionnaires, or 88.24 percent of the total number of respondents,

were collected and processed for this study.

Table 1
Questionnaire Collection Results

No	Description	Total	Percentage
1	Number of questionnaires distributed	170	100
2	Number of questionnaires returned	150	11.76
3	Number of questionnaires that did not return	20	88.24
4	Number of damaged/incomplete questionnaires	0	0
5	Number of questionnaires processed	150	88.24

The characteristics of the respondents who responded to the questionnaire based on Table 2 were dominated by female respondents with a total of 82 people or 54.67 percent, compared to 68 people or 45.33 percent of male respondents with most respondents below 31 years old. There are more undergraduate graduates with front office positions, as much as 85 or 56.67 percent. Most non-star hotels were identified by most respondents, as many as 97 or 64.67 percent compared to only 53-star hotels.

Table 2
Demographics of Respondents

Demographic	Total	Percentage
Gender		
Male	68	45.33
Female	82	54.67
Age		
< 31 year	77	51.33
31 – 40 year	62	41.33
41 – 50 year	11	7.34
51 – 60 year	0	0
Education		
Senior high school	15	10
Diploma degree	52	34.67
Bachelor degree	76	50.67
Master	7	4.66
Long working time		
< 2 year	28	18.67
3 - 5 year	57	38
6 - 8 year	45	30
> 9 year	20	13.33
Position		
General Manager	45	30
Assistant general Manager	20	13.33
Front Office	85	56.67
Hotel type		
Star Hotels	53	35.33
Non-Star Hotels	97	64.67
Total	150	100

In this study, the evaluation of the measurement model describing the relationship between the construct and its indicators occurred in two phases. The second phase evaluates the convergent and discriminant validity of the measurement

model.

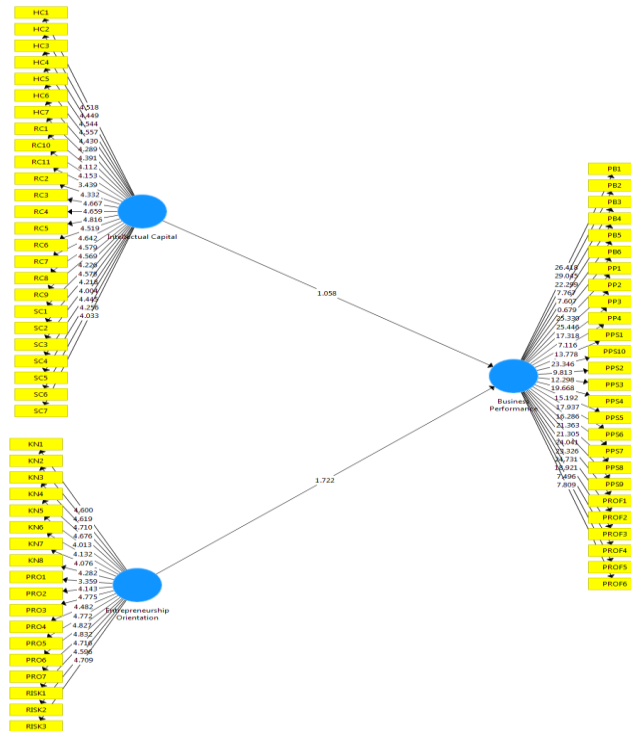


Figure 2
PLS-SEM Output

Figure 2 depicts the outcomes of the PLS-SEM output path diagrams examining the relationship between intellectual capital, entrepreneurship orientation, and business performance for hypotheses 1 and 2.

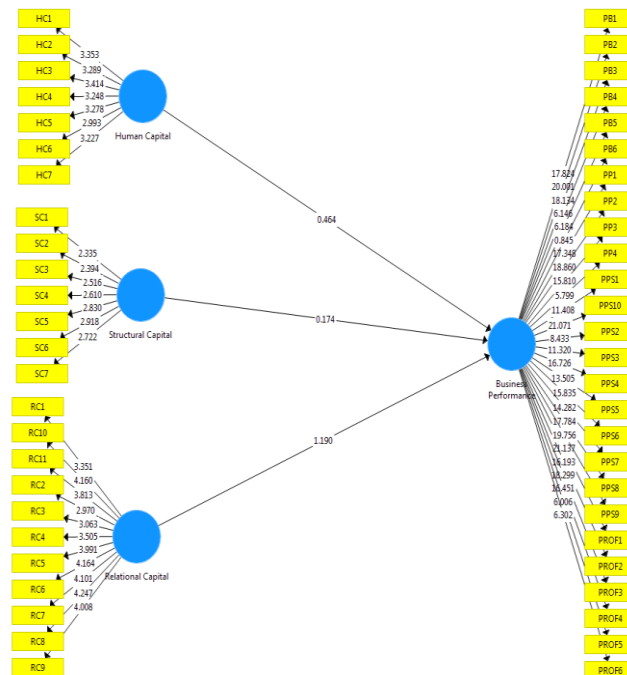


Figure 3
PLS-SEM Output

Figure 3 illustrates the impacts of human, structural, and relational capital on business performance for hypotheses 1a, 1b, and 1c. All indicators have a loading factor of 1.000, indicating their validity because the loading factor is greater than 0.70 (see Table 3).

Table 3
Loading Factor Test Results

Indicator	Intellectual Capital	Entrepreneurship orientation	Business performance	Criteria	Result
Intellectual capital	0.827			0.70	Valid
Entrepreneurship orientation		0.814		0.70	Valid
Business performance			0.890	0.70	Valid

Source: Results of data processing and SmartPLS Program

Table 4
Construct Reliability Results

Indicator	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Intellectual Capital	0.964	0.966	0.582
Human Capital	0.926	0.938	0.683
Structural Capital	0.893	0.910	0.592
Relational Capital	0.934	0.941	0.593
Entrepreneurship orientation	0.959	0.962	0.585
Business performance	0.977	0.979	0.677

Source: Results of data processing and SmartPLS Program

Table 4 indicates that Cronbach's alpha and composite reliability values are greater than 0.70, indicating that each construct's measurement is highly correlated. In addition, the results of the discriminant validity testing include cross-loading and a comparison of the AVE root to the correlation between constructs. The following are the discriminant validity results.

Table 5
Discriminant Validity

	Intellectual Capital	Entrepreneurship orientation	Business performance
Intellectual Capital	0.765		
Entrepreneurship orientation	0.158	0.765	0.212
Business performance	0.102		0.823

Source: Results of data processing and SmartPLS Program

The test results of discriminatory validity are greater than 0.70, implying that the level of accuracy of the supporting items for each variable is relatively strong. The R-squared test ensures that the research variables form an analytical model based on their proportional contribution to the test results. Table 6 suggests that the evaluation of the structural model generates an R-squared value of 0.04, suggesting that all independent variables account for four percent of the variation of the dependent variable.

Table 6
Results of R Squared

	R Squared	Adjusted R Squared
Business performance	0.040	0.050

Source: Results of data processing and Smart PLS Program

Results of PLS-SEM analysis for hypothesis

Table 7 presents the results of hypotheses testing using PLS-path analysis. The results illustrate the direct effect of the exogenous and endogenous variables.

Table 7
Hypothesis Testing Results

Model	Original Sample	Standard Deviation	T Statistics	P-values	Hypothesis Results
IC → BP	0.138	0.164	0.841	0.401	H1: not supported
HC → BP	0.042	0.149	0.281	0.779	H1a: not supported
SC → BP	-0.010	0.222	0.045	0.964	H1b: not supported
RC → BP	0.155	0.160	0.963	0.031	H1c: supported
EO → BP	0.198	0.095	2.080	0.038	H2: supported

Source: Results of data processing and SmartPLS Program

The effect of intellectual capital on business performance

Table 6 presents the results of testing the first hypothesis. The p-value of 0.401 is greater than 0.05, suggesting that the first hypothesis is not supported. In other words, intellectual capital does not affect the hotel industry's performance. The findings of this investigation do not support prior studies (Cuevas-Vargas *et al.*, 2019; Haliq *et al.*, 2018; Zeglal & Zigan, 2013). Accordingly, it is necessary to disseminate information for managers to all employees so that they understand the concept of intellectual capital in the business.

Effect of human capital on business performance

The p-value of human capital on business performance is 0.779 (> 0.05), implying that the hypothesis is not supported. In other words, the human capital variable that consists of employees' ideas, insights, and experiences does not affect the business performance of hospitality firms, likely because they already have their job description that must follow existing standards and regulations and cannot make decisions on their ideas that affect the hotel's business performance. Our results differ from prior studies Aboushouk & Tamamm (2021); Anggraini *et al.* (2018b); Costa *et al.* (2020); Rudež (2021); Sardo *et al.* (2018) which reveal that human capital affects business performance.

Effect of structural capital on business performance

Likewise, the structural capital hypothesis of 1b is not supported as the p-value is 0.964 > 0.05. Thus, hotels' structural capital in the form of procedures, routines, technology, and systems cannot improve business performance, likely because their network system and management cannot enhance the quality of their products or

services provided to customers. Our results differ from Bontis *et al.* (2015); Rudež (2021); Sharabati *et al.* (2013) who reveal that structural capital affects business performance.

Effect of relational capital on business performance

The findings indicate that relational capital significantly affects hotels' business performance, with a p-value of $0.031 < 0.05$. Hence, greater relational capital can improve business performance, indicating firms' ability to maintain relationships with customers, suppliers, shareholders, and the government (Aboushouk & Tamamm, 2021; Anggraini *et al.*, 2020). It is crucial to prioritize market-oriented customer satisfaction to increase profits because loyal customers and business partners arguably generate higher margins. Our results support Demartini & Beretta (2020); Laing *et al.* (2010); Rudež (2021), who document that relational capital affects business performance.

Effect of entrepreneurial orientation on business performance

The results suggest that the second hypothesis predicting that entrepreneurial orientation affects business performance in hospitality tourism is supported as the p-value is $0.038 < 0.05$. Hence, entrepreneurial orientation affects business performance in hospitality tourism in West Sumatra. Our results support prior studies by Al-Jinini *et al.* (2019); Li *et al.* (2022); Zehir *et al.* (2015) that entrepreneurial orientation affects business performance. Hotels with greater entrepreneurial orientation, as indicated by innovation, proactive, risk-taking, competitive aggressiveness, and greater autonomy, will likely increase asset growth and eventually improve their performance.

CONCLUSION, LIMITATIONS, AND SUGGESTIONS

Intellectual capital and its elements attract many scholars because they drive strategic organizational performance. This study contributes to current research by analyzing the relationships between intellectual capital, entrepreneurial orientation, and business performance in the hotel industry in West Sumatra Province that remain understudied. The results do not support our first hypothesis by documenting that intellectual capital does not affect hospitality business performance. Hence, it is necessary to disseminate managers' information to all employees so that they can understand the business importance of intellectual capital. Further, human capital and structural capital, as the elements of intellectual capital, also do not affect the performance of the hospitality business. Human capital owned by staff, employees, and all related parties cannot improve business performance. Likewise, structural capital in the form of procedures, routines, technology, and systems in the hotel cannot enhance business performance, likely because hotels' managers and network systems cannot improve their products or services effectively. However, our findings demonstrate that relational capital significantly affects business performance,

suggesting that these firms have maintained high-quality relationships with consumers and parties, and these relationships significantly improve business performance.

The test for the second hypothesis empirically demonstrates that entrepreneurial orientation affects business performance in hospitality tourism in West Sumatra. Hotels with greater entrepreneurial orientation, as indicated by innovation, proactiveness, risk-taking, aggressiveness, competitiveness, and autonomy, are more able to improve their performance. Thus, hotels' managers are expected to promote quality, service, and quality improvement by training hotel employees to develop their potential so that hotels' resources, including knowledge, ideas, and experience, are of sufficient quality to improve business performance.

This study recommends that hotel managers identify and evaluate their intellectual capital or intangible resources to increase hotel competitiveness, especially during the Covid-19 pandemic. As a caveat, it is not possible to generalize these results to other sectors due to the exclusive use of hotel industry data in this study, particularly in West Sumatra. Therefore, it is recommended that future research includes additional industries.

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