

**THE MEDIATING ROLE OF OPEN INNOVATION IN THE RELATIONSHIP  
BETWEEN STRATEGIC AGILITY AND HOSPITALITY PERFORMANCE:  
EVIDENCE FROM THE HOSPITALITY SECTOR IN INDONESIA**



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**Abstract**

Hotel performance is the main factor to support the sustainability of the hotel business. Therefore, companies need to continue to maintain hotel performance to survive. The research aims to examine the effect of strategic agility, open innovation, and hospitality performance in the hotel industry in Bogor, West Java, Indonesia. Open innovation is the intervening variable that will be tested. The quantitative research method approach used was used in this study. Samples were obtained from as many as 97 respondents. This study's respondents were hotel industry employees, namely Reddorz and Oyo in Indonesia. Hypothesis testing was carried out using the structural equation modeling method. Research shows that there is an influence between strategic agility on open innovation, strategic agility and open innovation have an effect on hospitality performance. The results of the study also show that open innovation mediates the effect of strategic agility on hospitality performance.

**Keywords:** Strategic Agility, Open Innovation, Hotel Performance

## INTRODUCTION

The rapid development of the internet has made business patterns change towards digital. This includes Oyo and Reddorz Hotels, better known as Virtual Hotel Operators (VHO) generally called budget hotels (Risqiadinda & Indrawati, 2020). The hotel sector is one of the tourism industry sectors that contributes to the Indonesian economy (Sosianika et al., 2021). The Central Statistics Agency (BPS) West Java (Jabar) informed that the Hotel Room Occupancy Rate (TPK) in West Java in May 2021 reached 30.58 percent, down 1.59 points compared to April 2021 TPK which reached 32.17 percent (jabarprov.go.id). With the advent of COVID-19, many hotels were forced to close because guests were no longer arriving and food and meeting businesses were no longer occupied (Diayudha, 2020). The COVID-19 pandemic has had an impact on the hospitality industry in Indonesia (Diayudha, 2020; Devie et al., 2023).

Survival in environmental conditions that are constantly changing, is necessary to improve performance in the hospitality industry. This follows what was stated by Campo et al., (2014) which states that the company must have more superior performance compared to competitors. The hospitality industry must be able to anticipate any changes that may occur at any time, uncertain environmental situations, economic crises, and changing customer demands (Melián-Alzola et al., 2020). Ivankovic et al., (2010) also stated that business in the hotel industry has its uniqueness and has an environment with a high level of competition.

To be able to continue to survive and develop, the hotel industry must continue to innovate. Currently, environmental changes are accelerating, companies are required to continue to innovate to be able to compete. The adoption of open innovation can be increased by the strategic agility of the company (Puriwat & Tripopsakul, 2021); (Gonçalves et al., 2021). Strategic agility is used as an organizational ability to identify and react to changes in the business environment. Strategic agility and its impact on company performance (Lungu, 2020). Oluwatoyin et al., (2018) Organizational strategy and capability enhancements need to be carried out to encourage increased company performance.

Innovation is one of the most important factors for a business to be successful and competitive (Sari et al., 2021). Also added by Nasution et al., (2021) innovation is the source of company success. Campo et al., (2014) also found the importance of innovation to improve

business performance. Technological innovation can improve hotel services (Davronov, 2021). Innovations made can increase customer satisfaction, as well as increase customer loyalty (Pishgar et al., 2013). Also supported by the opinion expressed by (Hameed et al., 2019) explained that competition is very important in implementing open innovation.

## **REVIEW OF LITERATURE**

### **Strategic Agility**

In general, agility can be divided into two perspectives, the first is that agility is defined as a generic, externally focused capability that allows a company to adapt its operations quickly to cope with volatile market conditions and sudden changes to meet customer needs (Braunscheidel & Suresh, 2009). Second, agility is an integrated strategy of management practices by the company (Brannen & Doz, 2012). Strategic agility can be said as strategic sensitivity, leadership unity, and resource fluidity (Clauss et al., 2021). With a sensitivity strategy, companies will become more aware of their capabilities, technologies, and new processes needed to increase customer value (Clauss et al., 2021). Strategic agility will have an impact on improving company performance (Lungu, 2020; Wangasa, 2018).

Puriwat & Tripopsakul, (2021) states that in the concept of dynamic capabilities, organizational agility can be achieved by integrating all resources in the organization. Abdel-Aty & Deraz, (2022) cited that agility is the ability of a company to respond to market uncertainty. Some of the characteristics of strategic agility are the ability to market opportunity identification, a sense of changeability, market change responses, and the ability to detect threats and opportunities (Overby et al., 2017); (Sambamurthy et al., 2003); (Queiroz et al., 2018); (Lowry & Wilson, 2016).

### **Open Innovation**

Innovation can be defined as the adoption of a new idea or behavior (Pishgar et al., 2013). Also added by YuSheng & Ibrahim, (2019) innovation means searching for and the discovery, development, improvement, and adoption of new processes, new products, and new structures of organizations and procedures. Baregheh et al., (2009) argued that innovation refers to changing something that already exists or creating something new. Furthermore, internal innovation in a company refers to the alteration of existing objects or

the creation of something new by personnel. It may also be termed as the process by which an idea or invention is converted into a product or service for which people will pay (Nemati et al., 2010). Companies must innovate to increase value and improve company performance (Angkasaputra et al., 2022).

José et al., (2015) cited that innovation in a company can be innovation of product, the innovation of process, organizational innovation, and innovation in marketing. At this time, business success cannot be separated from innovation (Siregar et al., 2019b, 2019a, 2020; Nasution et al., 2021).

### **Hospitality Performance**

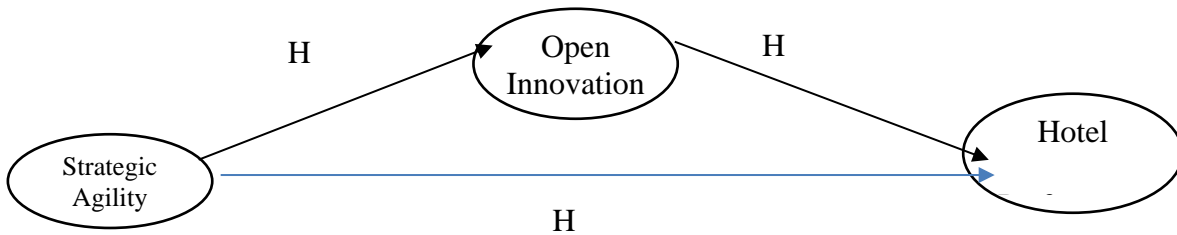
Based on the results of previous research, it shows that strategic agility and open innovation an important factor in improving business performance. In paper conducted by Siregar et al., (2021) explains that innovation is related to one's creativity in making new things. Organizations require the adoption of innovative marketing in the form of new ideas and non-traditional marketing practices related to the product, pricing, promotion, distribution, physical evidence, process, and service providers (Breesam et al., 2019).

Innovation is one of the keys to competitiveness. Innovation can be increased through agility in an organization (Gonçalves et al., 2021). The results of research conducted by (Puriwat & Tripopsakul, 2021) also show that the adoption of open innovation can increase through the application of organizational agility. Strategic agility is one of the factors that encourage companies to survive and be competitive (Lungu, 2020). The agility of business is a driving force for improving business performance (Ravichandran, 2018). The results of research conducted by (Lungu, 2020) also prove that strategic agility is a factor that can improve company performance. The results of research conducted by (Wangasa, 2018) show that strategic agility influences improving business performance. Research findings conducted by Kale et al., (2019) show the influence of strategic agility on performance.

Besides that, innovation is also a factor that is very crucial to the progress and success of the company (Nasution et al., 2021); (Siregar et al., 2019a); (Siregar et al., 2019b); (Siregar et al., 2021); (Siregar et al., 2022). Open innovation contributes to improving business performance (Valdez-Juárez & Castillo-Vergara, 2021); (Hartono & Kusumawardhani, 2018). Also added by (Jeong et al., 2020) that financial sustainability can be increased through open

innovation. The results of research conducted by (Puriwat & Tripopsakul, 2021) also show that open innovation mediates the effect of organizational agility on business innovation performance.

Based on the literature, we proposed the conceptual model below :



**Figure 1**  
**Conceptual Framework**

Based on the literature and previous studies, we stabilized the hypotheses below: 1) Strategic agility can positively and significantly increase open innovation; 2) Strategic agility has a positive and significant impact on the performance of the hospitality business; 3) Open innovation has a positive and significant impact on the performance of the hospitality business; 4) Strategic agility through open innovation has a positive and significant impact on the performance of the hospitality business.

## **RESEARCH METHOD**

### **Participants**

This study has 97 respondents as participants. Respondents in this study were employees who worked in the online-based hotel industry sector in Bogor, namely Reddoorz and Oyo Bogor, West Java, Indonesia. Data is collected through a questionnaire. The data analysis technique was carried out using structural equation modeling using the SMART PLS software.

### **Measures**

This study uses three variables, namely strategic agility, open innovation, and hotel performance.

**Table 1**  
**Construct and Measurements**

Variables	Indicators
Hotel Performance (Ivankovic et al., 2010);(Darroch, 2005);(Puriwat & Tripopsakul, 2021)	<ol style="list-style-type: none"> <li>Hotels have high profitability</li> <li>Compared with other industries, we grow higher</li> <li>Our firm is performing better than last five years</li> <li>Our new product generates a competitive advantage for the company.</li> </ol>
<b>Strategic Agility</b> (Cededa & Arias-Perez, 2019)	<ol style="list-style-type: none"> <li>Giving responds to general changes in the demands of the customer</li> <li>Personalize company products and services to respond to specific customer needs.</li> <li>Giving reactions when the competitors produce a new product or service</li> <li>Make product price adjustments in response to changes in competitive prices.</li> <li>Expanding strategy to domestic or international markets</li> <li>Expanding or reducing the product and service variety offers</li> </ol>
<b>Open Innovation</b> (Aleksić et al., 2021);(Hameed et al., 2019)	<ol style="list-style-type: none"> <li>Companies often acquire new knowledge/technology from outside to use</li> <li>Companies often seek outside ideas to add/create value</li> <li>Customers are involved in product/service development</li> <li>All partners realize the importance of sharing experiences in business</li> <li>Communication with partners goes well without any hiccups</li> </ol>

## RESULTS AND DISCUSSION

### Measurement Models

The research variable measurement model aims to determine the accuracy between the indicators used in measuring latent variables, in this case, strategic agility, open innovation, and hotel business performance. The measurement test is carried out by looking at the Composite Reliability value > 0.70 (Ghozali, 2005).

**Table 1**  
**Composite Reliability**

Variable	Cronbach Alpha	Composite Reliability	Information
Hotel Performance	0.807	0.874	Reliable
Open Innovation	0.842	0.888	Reliable

Strategic Agility	0839	0.880	Reliable
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Based on the table above, it can be seen that the composite reliability value for all research variables has a value of  $> 0.70$ . Thus, it can be explained that the variables used in the study are reliable.

**Discriminate Validity**

A discriminate validity test was carried out to test the correlation between constructs. The best measurement is to look at the Heretroit-Monotrait Ratio (HTM) value. If the HTMT value  $< 0.90$  then a construct has good discriminatory validity (Ghozali & Imam, 2018).

**Table 2**  
**Discriminant Validity**

Variable	Firm Performance	Open Innovation	Strategic Agility
Strategic Agility	0.649	0.696	0.742
Open Innovation	0.699	0.783	
Hotel performance	0.796		

**Hypothesis Test**

**Direct Hypothesis Testing**

This research examines the effect of strategic agility on open innovation, the effect of strategic agility on hotel business performance, and the effect of open innovation on hotel business performance. Besides that, the research will also examine the mediating role of open innovation in shaping the influence of strategic agility on the performance of the hotel business in Bogor City, West Java Province, Indonesia.

The results of hypothesis testing can be seen in the table below:

**Table 3**  
**Path Coefficient**

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics	P Values
Open Innovation -> Business Hotel Performance	0.480	0.085	5,627	0.000
Agility Strategy -> Business Hotel Performance	0.315	0.083	3,818	0.000
Agility Strategy -> Open Innovation	0.696	0.054	12,923	0.000

Based on the information on the path coefficient above, it shows the original sample value, p-value, or t-statistics. The original sample value, p-value, and t-statistic will be a guide in determining whether the proposed hypothesis is accepted or rejected. The provisions for testing the hypothesis are the value of t statistics > t table or p-value < 0.05.

Based on the path coefficient table, it was found that all forms of relationships between research variables had a P value of 0.000. This means that the value is < 0.05. Thus, it can be inferred that all hypotheses in this study are accepted. Strategic agility can positively and significantly increase open innovation. Strategic agility can positively and significantly contribute to improving the performance of online-based hospitality businesses in the city of Bogor, West Java, Indonesia. Strategic agility can positively and significantly increase open innovation. Then, it was also found that open innovation can positively and significantly contribute to improving the performance of the online-based hotel business in the city of Bogor, West Java, Indonesia

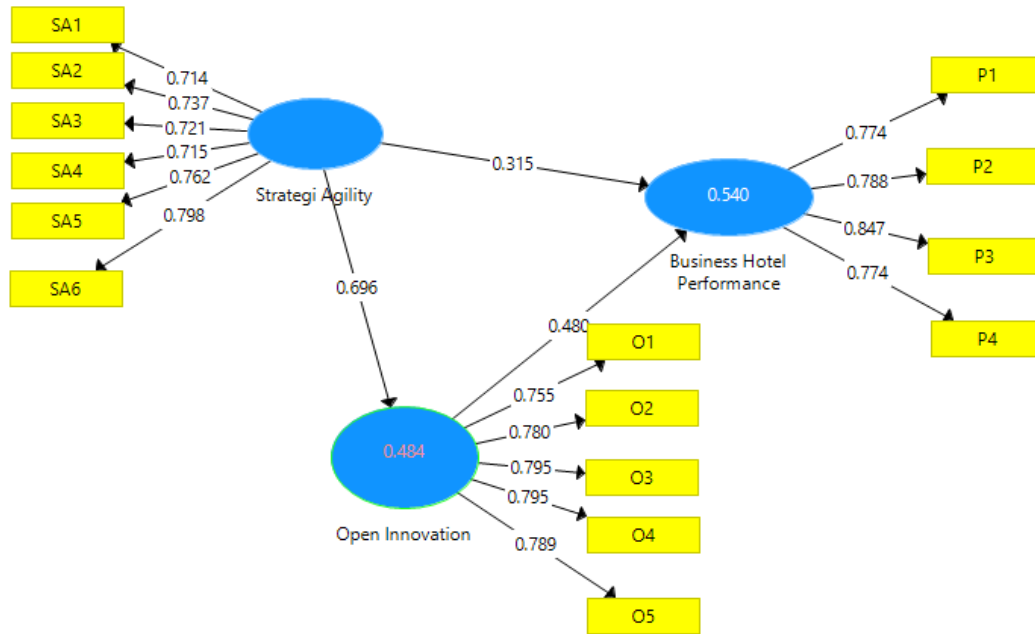
**Mediation Hypothesis Testing**

This study also looks at the effect of open innovation in mediating the effect of strategic agility on the performance of hotel business companies in the city of Bogor. The results of the indirect influence analysis can be seen in the following table:

**Table 4**  
**Indirect Effects**

	<b>Original Sample (O)</b>	<b>Sample Means (M)</b>	<b>Standard Deviation (STDEV)</b>	<b>T Statistics ( O/STDEV )</b>	<b>P Values</b>
Agility Strategy -> Open Innovation -> Business Hotel Performance	0.334	0.328	0.059	5,692	0.000

The results of testing the hypothesis of the indirect effect of open innovation on the performance of the hotel business in the city of Bogor can be seen from the t-statistics value of 5.529 > 1.96 and the p-value 0.000 < 0.05. The results of the hypothesis test show that there is a t statistic value of 5,692 and a P value of 0,000. Thus, it can be inferred that open innovation significantly mediates the effect of strategic agility on the business performance of hotel companies in the city of Bogor.



## Discussion

This present research is conducted in the online-based hospitality industry in Bogor, West Java, Indonesia. This research examines the effect of strategic agility and open innovation on the performance of the hotel business. Besides that, open innovation is tested whether it mediates the effect of strategic agility on the performance of the hotel business in Bogor, West Java, Indonesia. The success of an organization is largely determined by the company's ability to innovate (Siregar et al., 2021); (Pranowo et al., 2020); (Siregar et al., 2020); (Nasution et al., 2021); (Siregar et al., 2019b).

First, the first hypothesis in this study will be discussed, namely the effect of strategic agility on open innovation. In testing the hypothesis will be tested whether strategic agility can improve the ability of business firms online-based hospitality in the city of Bogor to innovate, in this case, the innovation in question is open innovation. The results of hypothesis testing show that there is a positive and significant influence between strategic agility on open innovation in the online-based hotel industry in the city of Bogor. This is consistent with the results of the study which showed that the path coefficients had an original sample value of 0.696. The coefficient value is positive with a t statistics value of 12,923 > t table 1.96. In addition to the obtained p-value of 0.000 < 0.05. Thus, it can be stated that there is a positive and significant influence between strategic agility on open innovation. This can be

interpreted that the better the implementation of strategic agility, the company's ability to implement open innovation will increase, and vice versa if the strategic agility is not good, it will lead to low implementation of open innovation by companies. The findings of this study are strengthened by research conducted by (Abdel-Aty & Deraz, 2022) that innovation can increase through agility.

The second hypothesis in this study is testing the influence of strategic agility on the performance of the online-based hotel industry in the city of Bogor. The results of hypothesis testing show that there is a positive and significant influence between strategic agility on the business performance of the online-based hotel industry in the city of Bogor. This is consistent with the results of the study which showed that the path coefficients had an original sample value of 0.315. The coefficient value is positive with a t statistics value of  $3.818 > t$  table 1.96. In addition to the obtained p-value of  $0.000 < 0.05$ . Thus, it can be stated that there is a positive and significant influence between strategic agility on the performance of the online-based hotel business in the city of Bogor. This can be interpreted that the better the implementation of strategic agility, the business performance will also increase. and conversely, if the strategic agility is not good it will lead to low implementation of open innovation by companies. The findings of this study are in line with the findings of research conducted by (Lungu, 2020) who found that there is an influence between strategic agility on company performance. The same research findings found by Clauss et al., (2021) superior company performance can be increased through strategic agility. Devie et al., (2023) organizational agility improves organizational performance in Indonesian hospitality. The organization focuses not just on quality, but also on how businesses may meet customer needs, generate competitiveness, take risks, innovate, and increase.

The third hypothesis is that open innovation has a positive and significant effect on the performance of the hospitality business. The results of hypothesis testing show that there is a positive and significant effect of open innovation on the performance of the online-based hotel industry business in the city of Bogor. This is consistent with the results of the study which showed that the path coefficients had an original sample value of 0.480. The coefficient value is positive with a t statistics value of  $5.627 > t$  table 1.96. In addition to the obtained p-value of  $0.000 < 0.05$ . Thus, it can be stated that there is a positive and significant

influence of open innovation on the performance of the online-based hotel business in the city of Bogor. This can be interpreted that the better the implementation of open innovation, the business performance will also increase, and conversely, if open innovation is not good, it will lead to low implementation of open innovation by companies. The results of this study are relevant to the opinion expressed by Dokukina & Petrovskaya, (2020) open innovation can accelerate business performance improvement. Also added by (YuSheng & Ibrahim, 2020) innovation capability is an effort that must be increased by companies to achieve better performance. The same finding was found by (Gunday et al., 2011).

The final hypothesis test is to examine the effect of open innovation in mediating the effect of strategic agility on business performance. The results also show that the indirect effect of strategic agility through open innovation on hotel business performance has an original sample value of 0.334 with a t statistics value of  $5.692 > t$  table 1.96 and a p-value of  $0.000 < 0.05$ . Thus, the research findings prove that open innovation has an intervening role that forms the relationship between strategic agility and the performance of the hospitality business in the city of Bogor. This can be interpreted that improving and increasing open innovation can shape the influence of strategic agility on the performance of online-based hotel businesses in the city of Bogor, West Java, Indonesia.

## **CONCLUSION**

Currently, innovation has a very important role in the progress of the company. Companies without innovation will have difficulty continuing to grow and develop. Strategic agility and open innovation can improve the performance of the online-based hotel industry in the city of Bogor. This means that business performance is largely determined by the implementation of strategic agility and the company's ability to implement open innovation. This study also found that open innovation can mediate the effect of strategic agility on the performance of the online-based hotel industry in Bogor City, West Java Province, Indonesia.

To improve the performance of the online-based hotel business in Indonesia, it is necessary to increase the company's ability to implement strategic agility. The hotel industry must further increase open innovation in running its business. This can be done in various ways such as increasing cooperation with various stakeholders such as collaboration with

digital companies to market or promote the hotel business. The era of open innovation prioritizes cooperation compared to competition. Besides that, strategic agility also needs to be improved, this can be done by increasing the company's ability to adapt, and improving employee skills so that they can easily adapt to changes that continue to occur.

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