

Print ISSN: 2288-4637 / Online ISSN 2288-4645
doi:10.13106/jafeb.2022.vol9.no1.0025

The Impact of Ambidextrous Innovation on the Performance and Competitiveness of Start-up Companies: An Empirical Study from Indonesia

Eduard Alfian Syamsya SIJABAT¹, Umar NIMRAN², Hamidah Nayati UTAMI³, Arik PRASETYA⁴

Received: September 15, 2021 Revised: November 20, 2021 Accepted: December 01, 2021

Abstract

Established and new companies face similar business challenges in achieving performance and competitiveness. Furthermore, several empirical studies using competitive advantage resource-based view theory show that established companies achieve performance and competitiveness with breakthrough innovations. Similarly, new business ventures with limited resources must incorporate breakthrough innovations to achieve performance and competitiveness. Therefore, this study aimed to examine the impact of ambidextrous innovation on new venture performance and competitiveness. It used an online survey to collect data from 178 newly established shipping agency companies in 22 provinces in Indonesia. Data was analyzed using multivariate analysis with WarpPLS 7.0, where the analysis unit was an organization represented by a director. The results showed that ambidextrous innovation positively and significantly affects firm performance and new venture competitiveness. This means that ambidextrous innovation that emphasizes adaptation and development improves the firm's internal business processes, even with limited resources. Moreover, it increases new ventures' competitiveness in responding to threats and taking advantage of market opportunities. These results contribute to the competitive advantage resource-based view theory, specifically for new venture empirical examination. Also, they contribute to practical implications in the transportation business, demonstrating that exploitative breakthrough innovation can improve new venture competitiveness and performance.

Keywords: Ambidextrous Innovation, New Venture, Firm Performance, Competitiveness

JEL Classification Code: M10, M13

1. Introduction

Faced with fierce competition and unforeseeable environmental changes, every organization strives for

innovative breakthroughs to stay competitive. Previous research has shown that established organizations make breakthroughs in innovation to increase performance and gain a competitive edge to survive (Gurleck & Tuna, 2017; Kusumadewi & Karyono, 2019; Teguh et al., 2021; Wang & Fang, 2021). New businesses, on the other hand, face fierce competition and difficulties in surviving due to a lack of internal resources as well as external resources. As a result, due to a lack of reputation and expertise, it is difficult for a new business to establish itself (Laraneta et al., 2012). According to an empirical survey, about half of newly established companies fail due to a lack of competitiveness (Anwar & Ali, 2018). However, by implementing a pioneering strategy and initiating business activities, a newly established company might become competitive or maintain its sustainability (Cai et al., 2017). In this situation, well-established and new companies make breakthrough innovations to retain clients. Customers now have a lot more options because of technological advancements.

¹First Author and Corresponding Author. Doctoral Program, Faculty of Administrative Sciences, Brawijaya University, Malang, Indonesia [Postal Address: Jl. Gelanggang Remaja Bukit Cantika Residence No. 6 Kel. Makassar Jakarta Timur 13570, Indonesia]
Email: eduard.a.s.sijabat@gmail.com; eduard.sijabat@student.ub.ac.id

²Professor, Faculty of Administrative Sciences, Brawijaya University, Malang, Indonesia. Email: umar_n_fia@ub.ac.id

³Associate Professor, Faculty of Administrative Sciences, Brawijaya University, Malang, Indonesia. Email: hamidahn@ub.ac.id

⁴Assistant Professor, Faculty of Administrative Sciences, Brawijaya University Malang, Indonesia. Email: arik_p_fia@ub.ac.id

© Copyright: The Author(s)

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<https://creativecommons.org/licenses/by-nc/4.0/>) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Furthermore, an empirical study revealed that a balance of exploitative and exploratory innovation is required to respond to an organization's ambidexterity condition (Harmancioglu et al., 2020). Therefore, companies with the ability to produce ambidextrous innovation breakthroughs could achieve a competitive advantage (Chang & Hughes, 2012). Another study found that newly established companies prefer exploitative innovation, whereas existing companies prefer exploratory innovation. (Cho et al., 2020).

This research looks at how ambidextrous innovation breakthroughs help newly established companies thrive. Even with limited resources, firms must make ambidextrous innovation breakthroughs to gain a competitive advantage. This is consistent with prior research on the influence of ambidextrous innovation breakthroughs on gaining competitive advantage in established businesses. As a result, this research adds to the empirical understanding of the relationship between innovation, competitive advantage, and corporate performance. Also, it confirms the theory of competitive advantage based on the resource-based view (Barney, 1995), where a superior company makes breakthrough innovations by creating unique added value.

This study was adapted from previous empirical models that analyzed the relationship between innovation, competitive advantage, and performance in a newly established company.

2. Literature Review

2.1. Ambidextrous Innovation and Competitive Advantage

A company makes innovation breakthroughs to create added value for the products or services offered to customers. This means a sustainable competitive advantage with an increased resource base is realized by creating added value through breakthrough innovations (Wolfe, 1994). Furthermore, companies continuously introduce new technological innovations to products or services to maintain competitiveness and satisfy changing customer needs (Benner & Tushman, 2002). Several empirical examinations showed that breakthrough innovation positively and significantly affects competitiveness (Wang & Fang, 2021; Teguh et al., 2021; Kusumadewi & Karyono, 2019; Gurlekk & Tuna, 2017). Therefore, established companies prefer exploratory innovation in achieving competitive advantage, while exploitative innovation is more important for newly established companies (Cho et al., 2020).

Exploratory innovation breakthroughs are more challenging for new ventures with limited resources to achieve than exploitative innovation breakthroughs.

As a result, the corporation can gain a competitive edge by balancing exploitation with exploration innovation (Chang & Hughes, 2012). In established manufacturing organizations, empirical studies indicated that innovation has a major impact on competitive advantage (Chatzoglou & Dimitrou, 2018). Similarly, in established businesses, exploratory and exploitative service innovation had a major impact on competitive advantage (Liu & Huang, 2018). To obtain a competitive advantage, established and new companies must balance between exploitative and exploratory innovation (Chang & Hughes, 2012). Ambidextrous innovation would also improve a company's competitive advantage. In this situation, new ventures with limited resources can gain a competitive advantage by implementing business operations strategies. Therefore, the hypothesis formulated is:

H1: Ambidextrous innovation is positively associated with a competitive advantage.

2.2. Ambidextrous Innovation and Firm's Performance

Breakthrough innovation boosts a company's performance and increases its customer base. It also improves the efficiency of internal business processes, as well as the organization's growth and learning. As a result, the balanced scorecard-based performance strategy is assessed from the perspectives of finance, customers, business processes, and learning growth. The creation of effective internal corporate processes is linked to breakthrough or process innovation. Product innovation breakthroughs, on the other hand, are associated with an increased number of customers and firm turnover. Previous empirical research has shown that process and product innovations have a major impact on a firm's performance (Hoang & Ngoc, 2019). Furthermore, market and technological innovations have a significant impact on the financial performance of a company (Zhou et al., 2019). The empirical test shows that ambidextrous innovation significantly affects the performance of established firms (Arif & Hasan, 2021; Harmancioglu et al., 2020; Cho et al., 2020; Soto-Acosta et al., 2018; Sutanto & Sarah, 2018; Tsai & Wang, 2017). As a result, even with minimal resources, a newly established company would enhance performance by providing additional value through breakthrough innovations. This is because breakthrough innovations help in overcoming the competition and ensuring the company's long-term survival. Therefore, the hypothesis formulated is:

H2: Ambidextrous innovation is positively associated with firm performance.

2.3. Firm's Performance and Competitive Advantage

There is a link between a company's performance and its competitive advantage (Powel, 2002). According to resource-based view theory, a company's ability to perform well through resource empowerment is essential for gaining a competitive edge. In addition, there are three links between a company's performance and its competitive advantage (Ma, 2000). For example, having a competitive advantage results in superior performance. Second, organizations without excellent performance hold competitive advantages. Third, higher performance can be attained without the use of competitive advantage. Empirical testing has shown that the link between a firm's performance and its competitive advantage is not always equivalent (Sigalas & Papadakis, 2018). In established organizations, however, numerous empirical studies have shown that company performance has a significant impact on competitive advantage (Kharub & Sharma 2020; Jamshi & Ganeshkumar, 2017). Similarly, a newly established company with little resources could improve its performance and gain competitiveness by neutralizing all threats and seizing all opportunities. As a result, the following hypothesis has been proposed:

H3: A firm's performance is positively associated with a competitive advantage.

2.4. The Mediation Role of Firm's Performance

Breakthrough innovations improve the firm's non-financial performance in internal business and learning processes, while product innovation increases customer quality (Hoang & Ngoc, 2019; Zhou et al., 2019). Moreover, breakthrough ambidextrous innovation could become a competitive advantage for an established company (Cho et al., 2020; Liu & Huang, 2018). In line with this, several empirical studies showed that breakthrough innovations increase company performance and could become a competitive advantage (Arif & Hasan, 2021; Harmancioglu et al., 2020; Cho et al., 2020; Soto-Acosta et al., 2018; Sutanto & Sarah, 2018; Tsai & Wang, 2017). Furthermore, ambidextrous innovation breakthroughs accompanied by a firm's performance increase competitive advantage (Wang & Fang, 2021; Teguh et al., 2021; Kusumadewi & Karyono, 2019; Gurleck & Tuna, 2017). A newly established company with limited internal and external resources would improve business processes and achieve competitive advantage through ambidextrous innovations. Therefore, the hypothesis formulated is:

H4: A firm's performance positively mediates the relationship between ambidextrous innovation and competitive advantage.

3. Research Methods

3.1. Population, Sample, and Data Collection

As of February 2021, this explanatory study employed a quantitative approach with a population of 270 Indonesian Shipping Agency Association companies from 22 provinces. Companies engaged in the agency of foreign and domestic ships in Indonesian shipping ports are known as shipping agency companies. From February to April 2021, a study was conducted using a company as the analysis unit, which was represented by a corporate executive.

Observations were made using the census approach on 270 newly established agency companies that were members of the ship agency organization. Questionnaires were given to the newly formed shipping agency corporation. The questionnaires were filled out and returned by 178 out of 270 shipping agency companies, with a response rate of 65% (Yang & Miller, 2008). The questionnaire was circulated to the target respondents using the online link survey method of the google document. The selected respondents comprised company directors or general managers with knowledge of business management.

3.2. Measurement

Three variables are used to operationalize research variables: one exogenous variable, Ambidextrous Innovation, and two endogenous variables, Firm Performance and Competitive Advantage. Each variable is reflected by indicators, and each indicator is reflected by items, in the second-order depth level of the research. The Ambidextrous Innovation variable is represented by two indicators: exploitative and explorative innovation, each of which has four items adapted from Atuahene-Gema (2005) and He and Wong (2004).

System modification, service development, network system adaptability, and area coverage expansion are all instances of exploitative innovation. Building a new system, developing a new marketing strategy, developing a new form of transportation, and developing a new model of collaboration with partners are all examples of explorative innovation. Firm Finance, customer, internal business process, growth, and learning are four indicators that describe performance characteristics. Each indicator consists of three components adapted from Sigalas (2015).

Revenue, profit, and operational costs are the items that are reflected in finance. Contract base, consistent financial success, and new branches are all items that are reflected by customers. New solutions, effective operations, and dependable service systems are all items that are mirrored

in internal company processes. Competency development, partnership service system, and superior human resources are among the items that indicate growth and learning.

Adapted from Sigalas et al. (2013) the competitive advantage variable is indicated by two indicators: take advantage of all opportunities and neutralize all external threats. Leverage external network, utilize association relationship, utilize partner relationship, and utilize client relationship are all items that are reflected in the take advantage of all opportunities indicator. Minimize consumer switching, minimize rival attacks, preserve Survival Company, and anticipate regulation change are some of the items that have been considered to neutralize all external threats.

By distributing questionnaires to 30 companies, a pre-test of the questionnaire instrument was conducted to verify its suitability and reliability. Based on the responses of the test respondents and subsequent analysis of the value of the moment product correlation using SPSS 18.0 software, all questioner items have a product-moment correlation value greater than 0.3, indicating that they have passed the validity test (Hair et al., 1990). The reliability test revealed that all items had a Cronbach alpha coefficient value greater than 0.6, indicating that they are all reliable (Hair et al., 1990). As a result, the instrument test results were found to be valid and reliable, and they were permitted to be used and distributed to the selected target respondents. The results of the distribution of questionnaires to all selected target respondents are then statistically analyzed using descriptive and inferential analysis.

3.3. Analysis Method

Frequency, tendency measurement (a measure of central tendency), and dispersion measurement are all terms used to explain descriptive analysis (a measure of spread). In addition, absolute and percentage frequency analyses were used to describe the respondent's profile as well as a description of each indicator or item of each variable. Inferential statistical analysis is intended to test the research model using sequential equation model (SEM) with the WarPLS series 7.0 software approach which covers convergent validity test, discriminant validity test, composite reliability test, the goodness of fit, and test hypotheses.

The validity and reliability of the pre-test questionnaire were examined in accordance with Hair et al. (2010) to reaffirm the validity and reliability of the test. If the loading factor is greater than 0.6 and the probability value is less than 5%, convergent validity is met (0.05). If the average variance extracted (AVE) value is greater than 0.5, discriminant validity is met. If Cronbach's alpha coefficient is greater than 0.70 and the composite reliability coefficient is greater than 0.60, reliability has been met.

4. Results

4.1. Respondent Profile

Respondents are newly established shipping agency companies as shown in Table 1. Based on company age 64.6% of companies were functioning for less than 3 years and the remaining 35.4% were above 3 years. Furthermore, based on the number of employees, 80.8% of companies have less than 25 employees and the remaining 19.2% have more than 25 employees. Meanwhile, based on the number of branch offices, 79.2% of companies have less than 3 branch units/offices and the remaining 20.8% have more than 3 branch offices/units. In general, based on the results of the descriptive analysis, the respondent's profile is classified as newly established companies with a small number of employees and a small area service coverage network.

4.2. Variable Description

Descriptive statistics is used to describe the basic features of the data in a study. They provide simple summaries about the sample and the measures (Table 2).

Table 1: Description of Respondent Profiles of Ship Agency Companies

Respondent Profile	Total (Company)	Percentage (%)
Firm's Age (Year)		
<3	115	64.6%
3–5	32	17.9%
>5	31	17.5%
Total	178	100%
Numbers of Employee (Person)		
<25	144	8.8%
25–50	28	15.7%
>50	6	3.5%
Total	178	100%
Number of Branches (Unit)		
<3	141	79.2%
3–6	19	10.6%
7–9	13	7.3%
>9	5	2.9%
Total	178	100%

Table 2: Mean, Loading Factor, and AVE's Indicators and Variables

Variables	Mean	AVE	Indicator	Mean	Loading Factor	
Ambidextrous Innovation (X_1)	4.99	0.936	Exploitative innovation ($X_{1,1}$)	5.07	0.936	
			1. System modification			4.78
			2. Service development			5.12
			3. Network adaptation			5.29
			4. Area coverage expansion	5.07		
			Explorative innovation ($X_{1,2}$)	4.91	0.936	
			1. Build new system			4.87
			2. Build a new marketing strategy			5.01
			3. Build new mode transport			4.83
			4. Build new model partner	4.94		
Firm Performance (Y_1)	4.80	0.906	Finance ($Y_{1,1}$)	4.62	0.843	
			1. Revenue increasing			4.68
			2. Profit increasing			4.60
			3. Low-cost operation	4.58		
			Customer ($Y_{1,2}$)	4.58	0.889	
			1. Contract base customer			4.55
			2. Reliable financial			4.75
			3. Expand area service	4.45		
			Internal business process ($Y_{1,3}$)	4.97	0.906	
			1. New solution			4.93
			2. Efficient operation			4.92
			3. Use reliable system	5.05		
			Learning and growth ($Y_{1,4}$)	5.02	0.892	
			1. Sustainable competence			4.99
2. Build partner system	4.90					
3. Human resource excellent	5.18					
Competitive Advantage (Y_2)	5.09	0.938	Take all opportunities ($Y_{2,1}$)	5.03	0.938	
			1. Leverage external network			5.13
			2. Utilize association relation			4.94
			3. Utilize partner relationship			5.01
			4. Utilize customer relation	5.03		
			Neutralize all threats ($Y_{2,2}$)	5.14	0.938	
			1. Minimize customer switch			5.15
			2. Minimize competition attack			5.13
			3. Maintain company survival			5.16
			4. Anticipate regulation	5.11		

The average value of the ambidextrous innovation variable is 4.99 which is categorized as high or good. The average value of the *exploitative indicator* which is 5.07 is higher than the average value of the *explorative innovation indicator* which is 4.91. While the most important indicator of the ambidextrous innovation variable is *exploitative innovation* with a loading factor value of 0.936 and an average score of 5.07. Based on the findings of this descriptive research, the respondents agree that to pursue breakthrough innovation, shipping agency companies should place a greater emphasis on exploitative innovation breakthroughs.

The average value of the firm performance variable is 4.80 which is categorized as high or good. The average value of the *growth and learning indicators* is 5.02, which is the highest, and the average value of the *customer indicator* is 4.58, which is the lowest. While the most important indicator of the firm advantage variable is *the effectiveness of internal business process management* with a loading factor value of 0.906 and an average score of 4.97. Based on the findings, respondents agree that to achieve firm performance, the shipping agency company should strengthen or place a greater emphasis on how it controls its internal business processes.

The average value of the competitive advantage variable is 5.09 which is categorized as high or good. The average value of the *take advantage of all opportunities* is 5.03, which is lower than the average value of the *neutralized external threat* which is 5.14. While the most important indicator of the competitive advantage variable *neutralizes all the threat indicators* with a loading factor value of 0.938 and an average score of 5.14. According to the findings of this descriptive analysis, respondents agree that shipping

agency companies should focus more on *neutralizing all firm threats* to gain a competitive edge.

4.3. Validity and Reliability

The purpose of inferential statistical analysis with WarPLS software is to test the research model, including the outer and inner models, and to obtain a comprehensive path diagram analysis of the research outcomes, as shown in Figure 1. The outer model is examined to determine the model’s validity and reliability, as well as its feasibility, whereas the inner model is examined to determine the link between variables or to verify the model’s research hypothesis.

The convergent validity examination yielded the following results: each indicator has a loading factor value greater than 0.6, indicating that it satisfies the convergent validity criteria. Hence, a collection of indicators depicts a variable, and the scores produced by different indicators indicate a strong link. The discriminant validity examination yielded the following results: each variable has an average variance extracted (AVE) value greater than 0.5, indicating that it meets discriminant validity. Thus, it can be concluded that each variable predicts its indicators better than the other variables.

Table 3 shows the reliability results, which show that all three variables had Cronbach’s alpha values greater than 0.70, and composite reliability is greater than 0.60, indicating that the three variables in the model satisfied the reliability requirements.

4.4. The Goodness of Fit

The *R*-squared and *Q*-squared measurements were used to determine the proportion of endogenous variables

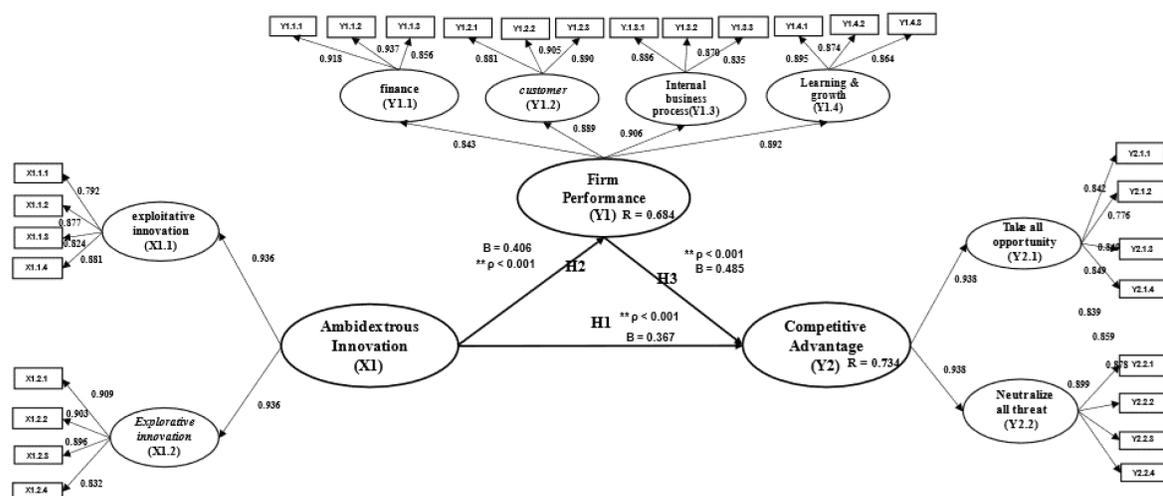


Figure 1: Path Diagram of the Result Model

Table 3: Reliability and Model Test

Variables	Cronbach Alpha	Composite Reliability	R-squared	Q-squared
Ambidextrous Innovation (X_1)	0.858	0.934	–	–
Firm's performance (Y_1)	0.905	0.934	0.684	0.685
Competitive Advantage (Y_2)	0.863	0.936	0.734	0.732

Table 4: Model Fit and Quality Indices

No	Model Fit and Quality indices	Criteria Fit	Result	Description
1	Average path coefficient (APC)	$p < 0.05$	APC = 0.349, $p < 0.01$	Good
2	Average R-squared (ARS)	$p < 0.5$	ARS = 0.685, $p < 0.001$	Good
3	Average Adjusted R-squared (AARS)	$p < 0.05$	AARS = 0.680, $p < 0.001$	Good
4	Average block VIF (AVIF)	Accepted if ≤ 5 ideally ≤ 3.3	AVIF = 3.284	Ideal
5	Average full collinearity VIF (AFVIF)	Accepted if ≤ 5 ideally ≤ 3.3	AFVIF = 3.985	Good
6	Tenenhaus GoF (GoF)	Small ≥ 0.1 , medium ≥ 0.25 large ≥ 0.36	GOF = 0.758	Ideal
7	Sympson's paradox ratio (SPR)	Accepted if ≥ 0.7 ideally = 1	SPR = 0.900	Good
8	R-squared contribution ratio (RSCR)	Accepted if ≥ 0.9 ideally = 1	RSCR = 0.997	Good
9	Statistical suppression ratio (SSR)	Accepted if ≥ 0.7	SSR = 1.000	Good
10	Nonlinear bivariate causality direction ratio (NLBCDR)	Accepted if ≥ 0.7	NLBCDR = 1.000	Ideal

that can be explained by exogenous variables, while the Q -squared measurement was used to determine the relevance of a set of exogenous latent variables to endogenous variables. The R -squared value of the Firm Performance variable is 0.684, which is classified as high, meaning that 68.4 percent of the variance in the Firm Performance variable can be explained by the research model, while the remaining 31.6 percent is explained by other factors outside the research (Kock, 2020).

Likewise, the R -squared value of the Competitive Advantage variable was 0.734, which was classified as high, indicating that the research model can explain 73.4 percent of the variance in the Competitive Advantage variable. The Q -squared value of the Firm Performance variable and the Competitive Advantage variable were higher than 0.35, where the higher the Q -squared value, the better the fit with the data.

The goodness of fit of a statistical model describes how well it fits a set of observations. Measures of goodness of fit typically summarize the discrepancy between observed values and the values expected under the model in question. Such measures can be used in statistical hypothesis testing. The goodness of fit test results revealed that all indicators

of the model satisfied the requirements with perfect results (Table 4). The research model was found to have a high degree of goodness of fit.

4.5. Hypothesis Test

The results of hypothesis testing as shown in Table 5 showed that the 4 hypotheses that were built showed a significant effect. The relationship between Ambidextrous Innovation and Competitive Advantage was positive and significant, so H1 is accepted. The relationship between Ambidextrous Innovation and Firm Performance was positive and significant, so H2 is accepted. Likewise, the relationship between Firm Performance and Competitive Advantage was significant, so H3 is accepted. As a result of the positive and significant effect of the Firm Performance variable in mediating the relationship between Ambidextrous Innovation and Competitive Advantage, H4 is accepted. Because the direct impact of Ambidextrous Innovation on Competitive Advantage was positive and significant, Firm Performance served as a partial mediating variable or partial mediation in mediating the effect of Ambidextrous Innovation on Competitive Advantage.

Table 5: The Results of Testing the Relationship Between Variables

Hypothesis	Variable Relationship	Path Coefficients	Effect Sizes	p-value	Description
H1	$X_1 \rightarrow Y_2$	0.367	0.296	<0.001**	H1 Accepted
H2	$X_1 \rightarrow Y_1$	0.406	0.328	<0.001**	H2 Accepted
H3	$Y_1 \rightarrow Y_2$	0.485	0.399	<0.001**	H3 Accepted
H4	$X_1 \rightarrow Y_1 \rightarrow Y_2$	0.197	0.159	<0001**	H4 Accepted

**Significant at level 0.01 (1%).

Source: Data Processed, 2021.

5. Discussion

Hypothesis 1's test results on the effect of ambidextrous innovation on competitive advantage showed a path coefficient of 0.367 and a p -value of 0.001, indicating that the effect is significant. This means that ambidextrous innovation increases competitive advantage by 36.7%. Therefore, exploitative ambidextrous innovation increases competitive advantage by 36.7% in the newly established shipping agency company. It means that ambidextrous adaptive and development innovation increases competitive advantage. This empirical result is in line with Liu and Huang (2018), who showed that exploitative and exploratory service innovations significantly affect competitive advantage.

Hypothesis 2's test results showed a p -value of 0.001 and a path coefficient of 0.406, demonstrating a significant effect of ambidextrous innovation on company performance. It means that a 40.6% increase in business performance can be achieved by ambidextrous innovation. This empirical result supports Tsai and Wang (2017), who found that ambidextrous innovation improved business performance. Furthermore, the results are in line with a previous study that balancing exploitative and exploratory innovation was significantly associated with startup company performance but insignificant with established company performance. Exploitative innovation was more important than exploratory innovation for a startup company.

Hypothesis 3's test results for the effect of firm performance on competitive advantage showed a p -value of 0.001 and a path coefficient of 0.485, indicating a significant effect. Hence, a firm's competitive advantage increases by 48.5% when it focuses on a successful internal business process. This suggests that achieving high performance in a new shipping agency with minimal resources increases competitive advantage by 48.5%. The results support Jamshid and Ganeshkumar (2017) and Kharub and Sharma (2020), who showed that a good firm performance increases competitive advantage.

The test results of Hypothesis 4 on the mediation role of firm performance in the effect of ambidextrous innovation

on competitive advantage showed a path coefficient of 0.197 and p -value < 0.001, implying a positive, significant, and indirect effect. Therefore, the role of the firm performance variable in mediating the effect of ambidextrous innovation on competitive advantage was categorized as partial mediation. This suggests that for newly established shipping agency companies, ambidextrous innovation and high firm performance have a 19.7% impact on competitive advantage. The magnitude of the influence is lower than the 36.7 percent without mediation. Hence, the newly formed shipping agency company improves its performance in response to tough competition and unpredictably rapid environmental changes by using breakthrough innovation. Based on this study model, 73.4% variance in the dependent variable, the firm's competitive advantage, is explained by ambidextrous innovation and firm performance.

This research contributes to Barney (1995)'s competitive advantage resource-based view theory by providing theoretical implications. The findings empirically support the competitive advantage resource-based view theory that is particularly relevant to newly established enterprises' competitive advantage and firm performance achievement.

This research also has practical implications for newly established businesses in terms of enabling breakthrough innovation to improve performance and gain a competitive edge. As a result, to improve firm performance and maintain competitiveness, newly established companies operating in tough competition and unpredictable rapid changes require ambidextrous innovation breakthroughs.

There are limitations in understanding and the scope of the study object. This provides an opportunity for further studies to examine the relationship between ambidextrous innovation and competitive advantage in a newly established company. Some aspects that require further confirmation are the population size and the type of business and company.

6. Conclusion

Exploitative ambidextrous innovation breakthroughs significantly and positively affect the performance

and competitiveness of newly established companies. Furthermore, ambidextrous innovation breakthroughs and firm performance significantly affect competitive advantage. However, because the indirect effect of ambidextrous innovation on competitive advantage is lower than the direct effect of ambidextrous innovation on competitive advantage, the role of a firm's performance as a mediator does not increase competitive advantage.

References

- Anwar, M., & Ali, S. Z. (2018). Managerial networking and business model innovation: Empirical study of new ventures in an emerging economy. *International Journal of Emerging Markets*, 13(5), 998–1025. <https://doi.org/10.1080/08276331.2018.1490509>
- Arif, M. R., & Hasan, D. (2021). Relationship between innovation activities and business performance: A case study in Indonesia. *Journal of Asian Finance, Economics, and Business*, 8(4), 0307–0315. <https://doi.org/10.13106/jafeb.2021.vol8.no4.0307>
- Atuahene-Gima, K. (2005). Resolving the capability rigidity paradox in new product innovation. *Journal of Marketing*, 69(4), 61–83. <https://doi.org/10.1509%2Fjmk.2005.69.4.61>
- Barney, J. B. (1995). Looking inside for competitive advantage. *Academy of Management Executive* 9(4), 49–61. <https://doi.org/10.5465/ame.1995.9512032192>
- Benner, M. J., & Tushman, M. L. (2002). Process management and technological innovation: A longitudinal study of the photography and paint industries. *Administration Science Quarterly*, 47, 676–706. <https://doi.org/10.2307%2F3094913>
- Cai, L., Guo, R., Fei, Y., & Liu, Z. (2017). Effectuation, exploratory learning and new venture performance: Evidence from China. *Journal of Small Business Management*, 55(3), 388–403. <https://doi.org/10.1111/jsbm.12247>
- Chang, Y., & Hughes, M. (2012). Drivers of innovation ambidexterity in small to medium-size firms. *European Management Journal*, 30, 1–17. <https://doi.org/10.1016/j.emj.2011.08.003>
- Chatzoglou, P., & Dimitrios C. (2018). The role of innovation in building competitive advantage: an empirical investigation. *European Journal of Innovation Management*, 21(1), 44–69. <https://doi.org/10.1108/EJIM-02-2017-0015>
- Cho, M., Bonn, M. A., & Han, S. J. (2020). Innovation ambidexterity: balancing exploitation and exploration for startup and established restaurants and impact upon performance. *Industry and Innovation Journal*, 26, 20–40. <https://doi.org/10.1080/13662716.2019.1633280>
- Gurleck, M., & Tuna, M. (2017). Reinforcing competitive advantage through green organizational culture and green innovation. *The Service Industries Journal*, 38(7–8), 467–491. <http://doi.org/10.1080/02642069.2017.1402889>
- Hair, J. R., Anderson, E., & Tatham, R. L. (2010). *Multivariate data analysis with reading*. New York: Macmillan Pub. Company.
- Harmancioglu, N., Sääksjärvi, M., & Hultink, E. J. (2020). Cannibalize and combine? The impact of ambidextrous innovation on organizational outcomes under market competition. *Industrial Marketing Management*, 85, 44–57. <https://doi.org/10.1016/j.indmarman.2019.07.005>
- He, Z., & Wong, P. (2004). Exploration vs exploitation: An empirical test of the ambidexterity hypothesis. *Organizational Science*, 15, 481–494. <https://doi.org/10.1287/orsc.1040.0078>
- Hoang, C. C., & Ngoc, B. H. (2019). The relationship between innovation capability and firm's performance in electronic companies, Vietnam. *Journal of Asian Finance, Economics, and Business*, 6(3), 295–304. <https://doi.org/10.13106/jafeb.2019.vol6.no3.295>
- Jamshid, J., & Ganeshkumar, C. (2017). Causal linkage among business analytics, supply chain performance, and competitive advantage. *KIIT Journal of Management*, 13(2), 29–36. <http://dx.doi.org/10.23862/kiit-parikalpana/2017/v13/i2/164518>
- Kharub, M., & Sharma, R. (2020). An integrated structural model of QMPs, QMS, and firm's performance for competitive positioning in MSMEs. *Total Quality Management & Business Excellence*, 31(3–4), 312–341. <https://doi.org/10.1080/14783363.2018.1427500>
- Kock, N. (2020). *WarpPLS user manual version 7.0*. Laredo, Texas: ScriptWarp Systems.
- Kusumadewi, R. N., & Karyono, O. (2019). Impact of service quality and service innovations on competitive advantage in retail. *Budapest International Research and Critics Institute Journal*, 2(2), 366–374. <https://doi.org/10.33258/birci.v2i2.306>
- Laraneta, B., Zahra, S. A., & González, J. L. G. (2012). Enriching strategic variety in new ventures through external knowledge. *Journal of Business Venturing*, 27(4), 401–413. <https://doi.org/10.1016/j.jbusvent.2011.11.004>
- Liu, F. H., & Huang, T. S. (2018). The influence of collaborative competence and service innovation on manufacturers' competitive advantage. *Journal of Business & Industrial Marketing*, 33(4), 466–477. <https://doi.org/10.1108/JBIM-12-2016-0294>
- Ma, H. (2000). Competitive advantage and firm performance. *Competitiveness Review*, 10(2), 15–32. <https://doi.org/10.1108/eb046396>
- Powell, T. C. (2002). The philosophy of strategy. *Strategic Management Journal*, 23(9), 873–880. <https://doi.org/10.1002/smj.254>
- Sigalas, C. (2015). An empirical investigation of balanced score's theoretical underpinnings. *Journal of Accounting and Organizational Change*, 11(4), 546–572. <https://doi.org/10.1108/JAOC-03-2014-0024>
- Sigalas, C., Pekka, E., & Georgopoulos, N. B. (2013). Developing a measure of competitive advantage. *Journal of Strategy and Management*, 6(4), 320–342. <https://doi.org/10.1108/JSMA-03-2013-0015>
- Sigalas, C., & Papadakis, V. M. (2018). An empirical investigation of relationship patterns between competitive advantage and

- superior performance. *Journal of Strategy and Management*, 11(1), 81–111. <https://doi.org/10.1108/JSMA-01-2017-0010>
- Soto-Acosto, P. S., Popa, S., & Isabel, M. C. (2018). Information technology, knowledge management, and environmental dynamism as drivers of innovation ambidexterity: a study in SMEs. *Journal of Knowledge Management*, 22(4), 824–849. <https://doi.org/10.1108/JKM-10-2017-0448>
- Sutanto, D., & Sarah, L. J. (2018). Slack resources, exploratory and exploitative innovation, and the performance of small technology-based firms at incubators. *The Journal of Technology Transfer*, 43(5), 1213–1231. <https://doi.org/10.1007/s10961-016-9533-0>
- Teguh, S., Hartiwi, P., Ridho, B. I., & Bachtiar, S. H. (2021). Innovation capability and sustainable competitive advantage: An entrepreneurial marketing perspective. *Journal of Asian Finance, Economics, and Business*, 8(5), 127–134. <https://doi.org/10.13106/jafeb.2021.vol8.no5.0127>
- Tsai, M. C., & Wang, C. (2017). Linking service innovation to firm performance: The roles of ambidextrous innovation and market orientation capability. *Chinese Management Studies*, 11(4), 730–750. <https://doi.org/10.1108/CMS-03-2017-0045>
- Wang, H., & Fang, C. (2021). The influence of corporate networks on competitive advantage: The mediating effect of ambidextrous innovation. *Technology Analysis & Strategic Management*, 15(9), 43–66. <https://doi.org/10.1080/09537325.2021.1934436>
- Wolfe, R. A. (1994). Organizational Innovation: review, critique, and suggested research directions. *Journal of Management Studies*, 31(3), 405–431. <https://doi.org/10.1111/j.1467-6486.1994.tb00624.x>
- Yang, K., & Miller, G. J. (2008). *Handbook of research methods in public administration*. London, UK: CRC Press, Taylor & Francis Group.
- Zhou, S. S., Zhou, A. J., Feng, J., & Jiang, S. (2019). Dynamic capabilities and organizational performance: The mediating role of innovation. *Journal of Management & Organization*, 4, 1–17. <https://doi.org/10.1017/jmo.2017.20>