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Knowledge Sharing, Organizational Learning Capability, Open Innovation, and Business Performance: Evidence from Food and Beverage SMEs in Indonesia

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ABSTRAK

Pandemi Covid 19 membuat kinerja bisnis industri makanan dan minuman menurun. Oleh karena itu, inovasi menjadi sangat penting untuk meningkatkan kinerja bisnis. Penelitian ini bertujuan untuk menganalisis pengaruh berbagi pengetahuan dan kemampuan pembelajaran organisasi pada inovasi terbuka dan dampaknya terhadap kinerja bisnis UKM dalam Konteks UKM Makanan dan Minuman di Bogor, Jawa Barat, Indonesia. Objek dalam penelitian ini adalah karyawan pada industri makanan dan minuman di Bogor. Jumlah kuesioner yang terkumpul sebanyak 237 kuesioner. Oleh karena itu, sampel dalam penelitian ini adalah 237 Karyawan. Teknik analisis data yang digunakan adalah Structural Equation Modeling dengan bantuan software Amos Versi 23. Hasil penelitian menunjukkan bahwa knowledge sharing berpengaruh positif dan signifikan terhadap kemampuan pembelajaran organisasi, dan knowledge sharing berpengaruh positif dan signifikan terhadap inovasi terbuka. Berbagi pengetahuan dan kemampuan belajar organisasi berpengaruh positif dan signifikan terhadap inovasi terbuka. Berbagi pengetahuan, kemampuan pembelajaran organisasi, dan inovasi terbuka berpengaruh positif dan signifikan terhadap kinerja bisnis. Temuan hasil ini memiliki implikasi penting dalam literatur tentang anteseden kinerja UKM yang belum pernah diuji sebelumnya. Kami menyarankan kepada para pemilik usaha di UKM Makanan dan Minuman di Bogor untuk meningkatkan praktik berbagi pengetahuan, kemampuan pembelajaran organisasi, dan inovasi terbuka untuk mencapai kinerja bisnis yang baik.

ABSTRACT

The Covid 19 pandemic has made the business performance of the food and beverage industry decline. Therefore, innovation becomes very important to improve business performance. This study aims to analyze the effect of knowledge sharing and organizational learning capability on open innovation and its impact on SMEs' business performance in the Context of the Food and Beverage SMEs. The objects in this study were employees in the food and beverage industry in Bogor. The number of questionnaires collected were 237 questionnaires. Therefore, the samples in the study were 237 Employees. The data analysis technique used is Structural Equation Modeling with the help of Amos software Version 23. The results show that knowledge sharing has a positive and significant effect on organizational learning capability, and knowledge sharing has a positive and significant effect on open innovation. Knowledge sharing and organizational learning capability have a positive and significant effect on open innovation. Knowledge sharing, organizational learning capability, and open innovation have a positive and significant impact on business performance. These findings of the results have important implications in the literature about the antecedent of SMEs' performance that has not been previously tested. We suggest to the business owner in the Food and Beverage SMEs in Bogor to enhance the knowledge sharing practice, organizational learning capability, and open innovation to achieve good business performance.

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1. INTRODUCTION

The food and beverage industry is one of the sub-sectors of the creative industry in Indonesia. In Indonesia, SMEs have developed rapidly, especially in the food industry. Small businesses significantly contribute to employment rates and economic growth (De Marco et al., 2020; Hutahayan, 2019). The performance of the food and beverage industry sector during the Covid-19 period in Indonesia tends to decrease. Before the COVID-19 pandemic, the average growth of the food and beverage industry was > 7%. However, after the COVID-19 pandemic, the growth of the food and beverage industry was below 7% (Databoks, 2022). The growth performance of the food and beverage industry after the COVID-19 pandemic has decreased significantly. In 2019 the growth of the food and beverage industry was 7.78%, but in 2020 and 2021 it tends to decrease, to 1.58% in 2020, and 2.54% in 2022. To improve the performance of the food and beverage industry in Indonesia, open innovation should be conducted. The owner of a business must be innovative in running its business. Innovation is one of the keys for the company to be able to continue to be competitive (Alvarez-Meaza et al., 2020; Castaneda & Cuellar, 2020) . Innovation has an important role in the progress of the firm, and employees who have innovation are needed by the firm as the basis for the realization of innovation (Lee & Hidayat, 2018; Peris-Ortiz et al., 2018; Pian et al., 2019).

Current innovation cannot rely on internal innovation alone, but must also prioritize collaboration with other businesses outside the firm in developing their business. This means that both internal innovation and external innovation are known as open innovation strategies must be carried out simultaneously (Bigliardi et al., 2020; Valdez-Juárez & Castillo-Vergara, 2021). Open innovation puts forward innovation that prioritizes internal and external ideas, companies are required to collaborate and not only innovate internally (Aleksić et al., 2021; Bayona-Saez et al., 2017). Open innovation has become a widely recognized and implemented concept among large corporations, facilitating a better understanding of new technologies and market developments, both within and outside of organizations. Discuss about open innovation is not only done by large companies but has also become one of the most important things for small companies to do (Ahn et al., 2015; De Marco et al., 2020). Although open innovation is one of the strategies often used by large companies, open innovation can also be a strategy that SMEs can use to improve business performance. Given this, to develop a broader understanding and study, we tried to conduct this research in the SMEs sector, in this case specifically in the food and beverage industry sector in Indonesia (Hunter et al., 2018). (Mirza et al., 2022). (Abdallah et al., 2012). Some of the problems faced by SMEs' are innovation activities. Namely, contemporary organizations operate in a rapidly evolving and challenging environment, characterized by unpredicted changes, technological novelties, ever-changing customer demands, and uncertainty (Chouayb et al., 2020; Ponta et al., 2021; Sidharta et al., 2019).

Many factors influence innovation in a company. According to the literature, the fact that the firm must have a strategy to obtain innovation through a mix both internal and external sources and the firm should determine how to organize innovation related capabilities within the organization (Dahlander & Gann, 2010; Salas-Vallina et al., 2017). In this present study, we will discuss the link between knowledge sharing and organizational learning capability as capabilities within the organization that influence open innovation, and its impact on business performance. This is in line with the opinion (Suseno, 2019) explained that many food and beverage industries are less than optimal in achieving profit, due to a lack of knowledge management implementation. Other studies state that knowledge is a factor that can affect the performance of the food and beverage industry (Ngah & Jusoff, 2009; Oyemomi et al., 2016; Ridha & Hidayat, 2020).

The results of research conducted by previous study show that the performance and success of the firm's innovation were driven by the implementation of knowledge sharing (Setini et al., 2020). The results of their research also found that there was an influence between knowledge sharing on innovation. Knowledge sharing is part of knowledge management that can contribute to increasing business competitiveness (Nham et al., 2020; Yi, 2009). Knowledge sharing studies can be at the individual level as well as at the organizational level. In this study, we focus more on individual-level studies. Knowledge sharing often occurs at the individual level. Besides knowledge sharing, the effect of organizational learning capability on the performance of the food and beverage industry in Indonesia will be tested. Organizational learning is one of the important factors for the success of the company (Anderson & Hardwick, 2017; Jui-Hsi et al., 2019). Previous research shows that organizational learning capability has a positive and significant effect on innovation and company performance (Patky, J. (2020). The same finding was obtained in paper which shows that open innovation, inbound or outbound has an effect on business performance (Leitão et al., 2020).

The originality of this study is that open innovation and organizational learning capability mediate variables involving the relationship between knowledge sharing and business performance in the food and beverage industry in Indonesia. Organizational learning capability and open innovation as

mediating variables according to the finding conducted in the previous study that argued organizational learning and innovation as a mediating variable (Lee, C. W., & Hidayat, N. 2018; Wu, I. L., & Chen, J. L. 2014) . Another finding also found that innovation capability has a mediating role in the relationship between organizational learning capability and firm performance (Hailekiros & Renyong, 2016). The research contribution is expected to provide a research model by testing organizational learning capability and open innovation as mediation to food and beverage performance. Based on the explanation of the previous background, this study aims to analyze the effect of knowledge sharing and organizational learning capability on open innovation and its impact on SMEs' business performance in the Context of the Food and Beverage SMEs in Bogor, West Java, Indonesia.

2. METHODS

This research was designed using a quantitative method approach, which aims to examine the effect of knowledge sharing, organizational learning capability, and open innovation on business performance. The research was conducted on Small and Medium Enterprises in the Food and Beverage Industry Sector in Bogor, West Java, Indonesia.

This study distributed as many as 250 questionnaires, and the questionnaires were returned as many as 237 questionnaires, so the samples in this study were 237 respondents. The data analysis technique used structural equation modeling with the help of Amos Software Version 23. In this study, there were four variables tested, namely business performance, open innovation, knowledge sharing, and organizational learning capability. Performance using six indicators adopted from knowledge sharing using 12 indicatorsn (Lin, 2007; Van Den Hooff & Ridder, 2004; Yi, 2009), organizational learning capability using 14 statement items adopted from, then open innovation uses 7 item statements adopted from the opinion (Chiva et al., 2007; Darroch, 2005). All variables in this research were measured using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree. For more details, the measurement of research variables can be seen in Table 1.

Table 1.Construct and Measurements

Variable	Dimensions/ Indicators
Business Performance (BP)	1. BP1 : In general, this businekss is showing better performance when compared to a few months ago 2. BP2 : In general, this business is showing better performance compared to a few years ago 3. BP3 : In recent years, business goals have been well achieved 4. BP4: Compared to other industries, our business is more profitable 5. BP5: Compared to other industries, our company has a larger market share 6. BP6: Compared to other businesses, ours is growing more rapidly
Knowledge Sharing (KS)	1. KS1 : I always give opinions and thoughts for business progress 2. KS2 : When I have learned a new skill or acquired new information, I tell my coworkers about it. 3. KS3 : When my coworkers have learned a new skill or acquired new information, they let me know about it. 4. KS4 : Sharing knowledge among co-workers is considered normal in my company 5. KS5 : I often share information, knowledge, skills and experiences with my coworkers 6. KS6 : I tend to gather information and skills from my coworkers. 7. KS7 : Colleagues in my company share their knowledge and skills with me when I ask for it. 8. KS8 : I ask my colleagues to teach me about their experience and skills 9. KS9 : People in my organization often share existing official reports and documents with members of my organization 10. KS10 : When I need new knowledge and information, I will ask others 11. KS11: Share experiences to coworkers 12. KS12 : Answer questions of others in team meeting
Organizational Learning Capability	1. OLC1: People here receive support and encouragement when presenting new ideas

(OLC)	2. OLC2: People here receive support and encouragement when presenting new ideas 3. OLC3: People are encouraged to take risks in this organization 4. OLC4: People here often venture into unknown territory 5. OLC5: Employees report information about what is happening outside the company related to company needs 6. OLC6: There are systems and procedures for receiving, collating and sharing information from outside the company 7. OLC7: People are encouraged to interact with the environment: competitors, customers, technological institutes, suppliers etc. 8. OLC8: Employees are encouraged to communicate well 9. OLC9: The creation of open communication at work 10. OLC10: Cross-functional teamwork is a common practice here 11. OLC11: Leaders facilitate good communication 12. OLC12: Employees are often involved in important decisions 13. OLC13: Employees feel involved in important company decisions 14. OLC14: The views of employees are considered by the company in making decisions
Open Innovation (OI)	1. OI1 : Companies often acquire new knowledge/technology from outside to use 2. OI2 : Companies often seek outside ideas to add/create value 3. OI3 : Customers are involved in product/service development 4. OI4 : We tend to open spaces for collaboration with outsiders 5. OI5 : We are open if there are other companies who want to learn with us 6. OI6 : Participate in business activities similar to other businesses 7. OI7 : Suppliers are involved in process and product development

Based on the literature review and the development of hypotheses that have been carried out, conceptual framework for the research can be drawn as show in Figure 1.

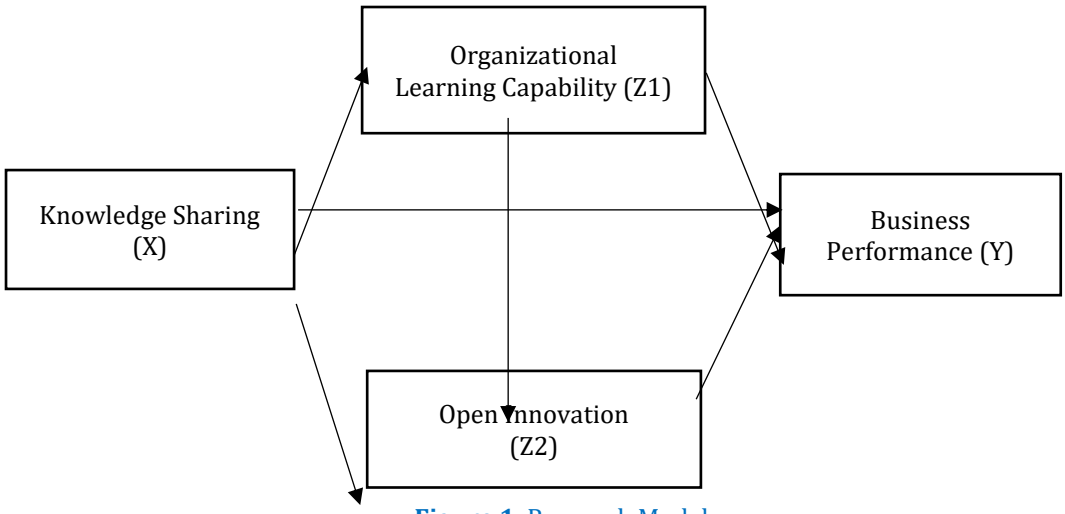

Figure 1. Research Model.

3. RESULTS AND DISCUSSIONS

Results

Measurement Model

Confirmatory Factor Analysis (CFA) is used to measure how well the indicators used are able to measure the research variables. We processed the Confirmatory Factor Analysis (CFA) by using AMOS software version 23. The loading factor value must be > 0.50. Based on the results of the study, there were 3 indicators that were discarded in the study because the loading factor value < 0.50, namely the KS2 indicator with a loading factor of 0.469 (0.469 < 0.50), the KS 11 indicator with a loading factor of 0.498 (0.498 < 0.50), and organizational learning capability indicator, namely the OLC2 with a loading factor of

0.443 (0.443 < 0.50). Until the three indicators were removed from the research model. Next, test the reliability test by looking at the value of Construct Reliability (CR) and Average Variance Extract (AVE). The value of Construct Reliability (CR) must exceed 0.70 and the value of Average Variance Extracted (AVE) should be > 0.50. The result of the measurement model can be seen in Table 2.

Table 2. The Measurement Model Result

Variables/Indicator	Factor Loading	Construct Reliability (CR)	Average Variance Extracted (AVE)	Decision
Business Performance (BP)				
BP1	0.735			
BP2	0.749			Valid and
BP3	0.734	0.899	0.599	Reliable
BP4	0.815			
BP5	0.774			
BP6	0.832			
Knowledge Sharing (KS)				
KS1	0.689			
KS3	0.680			
KS4	0.796			
KS5	0.835			Valid and
KS6	0.799	0.926	0.573	Reliable
KS7	0.752			
KS8	0.762			
KS9	0.757			
KS10	0.779			
KS 12	0.704			
Organizational Learning Capability (OLC)				
OLC1	0.740			
OLC3	0.771			
OLC4	0.709			Valid and
OLC5	0.718	0.934	0.552	Reliable
OLC6	0.763			
OLC7	0.807			
OLC8	0.845			
OLC9	0.853			
OLC10	0.828			
Open Innovation(OI)				
OI1	0.755			
OI2	0.789			
OI3	0.731			Valid and
OI4	0.707	0.895	0.551	Reliable
OI5	0.713			
OI6	0.74			
OI7	0.756			

Table 2 showed that all indicators in this research are valud and reliable. Therefore, it can be continued for further testing.

Normality Testing

The aim to conduct normality testing is to assess the distribution of data in a group of data or variables, whether the distribution of the data is normally distributed or not. The result is shown in Table 3.

Table 3. The Assessment of normality

Variable	min	max	skew	cr	kurtosis	cr
BP6	1,000	5,000	-.304	-1.909	-.465	-1.462
BP5	1,000	5,000	-177	-1.115	-.674	-2.117

Variable	min	max	skew	cr	kurtosis	cr
BP4	1,000	5,000	-.403	-2,535	-.472	-1.484
BP3	1,000	5,000	-.025	-155	-.875	-2.751
BP2	1,000	5,000	-.218	-1,369	-.622	-1.953
BP1	1,000	5,000	-.303	-1.901	-.474	-1.488
OI1	1,000	5,000	-.560	-3.522	-.098	-.307
OI2	1,000	5,000	-.586	-3.682	.023	.074
OI3	1,000	5,000	-.272	-1,708	-.561	-1,762
OI4	1,000	5,000	-.333	-2.095	-.451	-1.417
OI5	1,000	5,000	-.235	-1,479	-.427	-1,340
OI6	1,000	5,000	-.139	-.871	-.020	-.064
OI7	1,000	5,000	-.301	-1,890	-.568	-1.785
OLC10	1,000	5,000	-.519	-3,259	-.088	-.276
OLC9	1,000	5,000	-.528	-3.321	-.163	-.512
OLC8	1,000	5,000	-.661	-4.152	-.031	-.099
OLC7	1,000	5,000	-.508	-3.195	-189	-.593
OLC6	1,000	5,000	-.620	-3,898	156	.490
OLC5	1,000	5,000	-.402	-2,528	-.064	-.201
OLC4	1,000	5,000	-.245	-1.542	-.396	-1.244
OLC3	1,000	5,000	-.214	-1,347	-.587	-1.843
OLC1	1,000	5,000	-.305	-1.918	-.359	-1.130
KS1	1,000	5,000	-.134	-.843	-.619	-1,945
KS3	1,000	5,000	-.014	-.091	-.227	-.715
KS4	1,000	5,000	-.403	-2.532	-.317	-.995
KS5	1,000	5,000	-.469	-2,947	-.049	-155
KS6	1,000	5,000	-.490	-3.077	.179	.562
KS7	1,000	5,000	-.445	-2,794	.368	1.156
KS8	1,000	5,000	-.320	-2009	-.249	-.782
KS9	1,000	5,000	-.224	-1.406	-.414	-1.302
KS10	1,000	5,000	-.365	-2.297	-.235	-.739
KS12	1,000	5,000	-.237	-1.490	-.435	-1.368
Multivariate					**50,639**	**8.356**

Base on Table 3, the normality testing is useful for determining the data that has been collected is normally distributed or taken from a normal population. In structural equation modeling using Amos Software version 23, the normality testing can be seen from the value of the skewness and kurtosis. The skewness and kurtosis should be between 1.0 to 1.5 and the critical ratio 2.58. In table 3, the result of normality testing is shown.$< \pm 2.58$.

The result of normality testing as shown in Table 3 that the data are not normally distributed. It is shown from the value not in the skewness and kurtosis criteria 1.0 to 1.5 and the multivariate test results of cr = 8.356. The value multivariate cr 8.356 > 2.58. Therefore, the data does not pass the normality test. Furthermore, the outlier data was examined, and outliers were found in the observation numbers 230, 110, and 219. Normality test results is show in Table 4.

Table 4. Normality Test Results After The Outliers Are Excluded

Variable	min	max	skew	cr	kurtosis	cr
BP6	1,000	5,000	-.264	-1,647	-.523	-1.632
BP5	1,000	5,000	-.183	-1.143	-.640	-1,998
BP4	1,000	5,000	-.418	-2,608	-.430	-1.342
BP3	1,000	5,000	-.022	-.137	-.859	-2,683
BP2	1,000	5,000	-.229	-1.427	-.596	-1.861
BP1	1,000	5,000	-.298	-1.861	-.465	-1.453
OI1	1,000	5,000	-.571	-3.566	-.093	-.289

Variable	min	max	skew	cr	kurtosis	cr
OI2	1,000	5,000	-.620	-3,874	.071	.222
OI3	1,000	5,000	-.249	-1.554	-.568	-1,773
OI4	1,000	5,000	-.339	-2.118	-.442	-1.381
OI5	1,000	5,000	-.237	-1,479	-.445	-1,388
OI6	1,000	5,000	-.142	-.886	-.003	-.008
OI7	1,000	5,000	-.296	-1.849	-.559	-1.746
OLC10	1,000	5,000	-.538	-3.358	-.072	-.226
OLC9	1,000	5,000	-.550	-3.437	-121	-.376
OLC8	1,000	5,000	-.671	-4.192	.006	.018
OLC7	1,000	5,000	-.525	-3.276	-.173	-.542
OLC6	1,000	5,000	-.617	-3,855	.181	.567
OLC5	1,000	5,000	-.408	-2,550	-.077	-.240
OLC4	1,000	5,000	-.253	-1,577	-.407	-1,270
OLC3	1,000	5,000	-.215	-1.343	-.564	-1,761
OLC1	1,000	5,000	-.293	-1.828	-.348	-1.085
KS1	1,000	5,000	-.131	-.820	-.619	-1,933
KS3	1,000	5,000	-.019	-.117	-189	-.592
KS4	1,000	5,000	-.381	-2.381	-.327	-1.021
KS5	1,000	5,000	-.458	-2.862	-.041	-128
KS6	1,000	5,000	-.466	-2,908	.193	.602
KS7	1,000	5,000	-.414	-2.585	.359	1.122
KS8	1,000	5,000	-.313	-1.956	-.250	-.781
KS9	1,000	5,000	-.218	-1,358	-.404	-1,260
KS10	1,000	5,000	-.376	-2.349	-.203	-.634
KS12	1,000	5,000	-.203	-1,268	-.473	-1.476
Multivariate					**15,334**	**2,514**

Base on Table 4 above shows that the skewness and kurtosis value is already between 1.0 to 1.5 and the multivariate test results of cr = 2.514, this value< ±2.58.

The goodness of Fit Test

The goodness of fit model aims to do the evaluation in general the degree of compatibility of the research model.The criteria consist of Adjusted GFI (AGFI) > 0.90, Goodness of Fit Index (GFI) > 0.90,CFI> 0.90, RMSEA < 0.08 below, and RMR < 0.05 .The results of the goodness of fit test model can be seen in Table 5.

Table 5. The Goodness of Fit Test Results

Criteria	Result	Decision
RMSEA	0.065	good fit
CMIN/DF	0.997	good fit
GFI	0.795	Marginal fit
AGFI	0.763	Marginal fit
RMR	0.046	good fit
CFI	0.913	good fit
TLI	0.906	Good Fit

Based on Table 5, the results of the goodness of fit test model in this study, it is known that the goodness of fit test model has met the existing criteria.

Hypothesis Testing

Next, we tested the hypothesis that has been proposed based on the existing theoretical review and previous study. The analysis of Structural Equation Modeling (SEM) was done to test the hypothesis. The proposed structural equation modeling(SEM) is shown in figure 2. The hypothesis result was tested by using the critical ratio (CR) or t-value, and probability value (P-Value). The critical ratio must be ±1.96,

and the value of probability (P-value) does not exceed 0.05. The hypothesis test results can be seen in Table 6.

Table 6. The Hypotheses Testing Results

			Estimate	SE	CR	P-Value	Decision
OLC	<---	KS	0.714	0.090	8.690	0.000	Accepted
OI	<---	KS	0.358	0.090	4.425	0.000	Accepted
BP	<---	KS	0.261	0.084	3.381	0.000	Accepted
OI	<---	OLC	0.489	0.087	5.742	0.000	Accepted
BP	<---	OLC	0.208	0.081	2.555	0.011	Accepted
BP	<---	OI	0.463	0.086	5.241	0.000	Accepted

Base on Table 6, the results of hypothesis testing indicate that all hypotheses proposed in this study are accepted. This can be seen from the p-value < 0.05 and cr > 1.96. Thus, knowledge sharing has a positive and significant effect on organizational learning capability, open innovation, and business performance. Organizational learning capability has a positive and significant effect on open innovation and business performance. Open innovation has a positive and significant impact on business performance.

Direct and Indirect Effects

Table 7. Direct and Indirect Effect

The Form of Relations	Direct Effect	Indirect Effect			Total Effects
		Organizational Learning Capability	Open Innovation	Organizational Learning Capability and Open Innovation	
Knowledge Sharing--> Organizational Learning Capability	0.714	-	-	-	0.714
Knowledge Sharing --> Open Innovation	0.358	0.349		-	0.708
Organizational Learning Capability --> Open Innovation	0.489	-		-	0.489
Knowledge Sharing--> Business Performance	0.261	-		0.476	0.737
Organizational Learning Capability --> Business Performance	0.208		0.227		0.435
Open Innovation --> Business Performance	0.463	-	-	-	0.463

Base on Table 7 shows that there is an indirect effect from one variable to another. There is a direct influence between knowledge sharing on organizational learning capability of 0.714 (71.4%) Then, there is a direct effect of knowledge sharing on open innovation of 0.358 (35.8%), and an indirect effect of knowledge sharing through organizational learning capability on open innovation of 0.349 (34.9%). There is a direct effect of organizational learning capability on open innovation of 0.489 (48.9%). Moreover, there is a direct influence of knowledge sharing on business performance of 0.261 (26.1%), and there is an indirect effect of knowledge sharing through organizational learning capability and open innovation on business performance of 0.476 (47.6%). Direct effect of organizational learning capability on business performance of 0.208, and there is an indirect effect of organizational learning capability through open innovation on business performance of 0.227. And last one there is a direct effect of open innovation on business performance of 0.463 (46.3%). For the structural model is show in Figure 2.

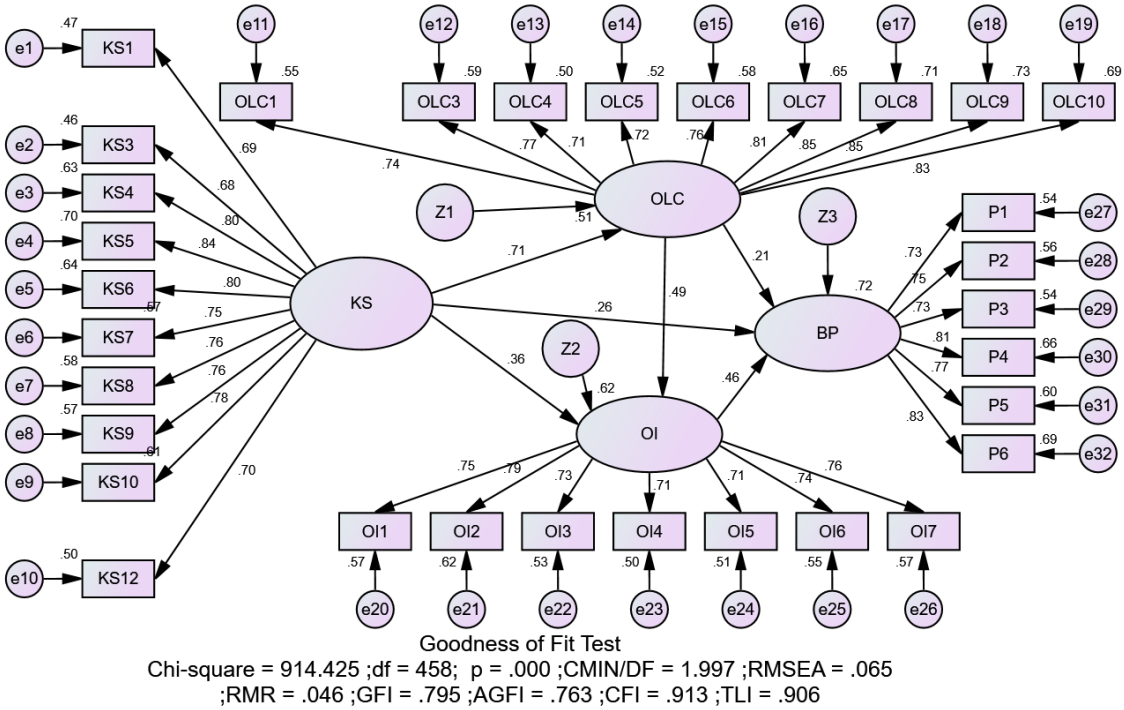

Figure 2. The Structural Model

Discussion

Business competition is getting tougher, making business people must be able to implement the right strategy in order to improve business performance. In this study, it is tested whether knowledge sharing, organizational learning capability, and open innovation can improve business performance of the food and beverage SMEs in Bogor in Indonesia. The hypothesis was developed, namely knowledge sharing has a positive and significant effect on organizational learning capability, knowledge sharing has a positive and significant effect on organizational learning capability open innovation, knowledge sharing has a positive and significant effect on business performance, organizational learning capability has a positive and significant effect on open innovation, organizational learning capability has a positive and significant effect on business performance, open innovation has a positive and significant effect on business performance (Hair Jr et al., 2013; Schumacker & Lomax, 2010).

The results of the study indicate that business performance is influenced by knowledge sharing, organizational learning capabilities, and open innovation. Testing the first hypothesis in this study shows that there is a positive and significant effect between knowledge sharing on organizational learning capability. This can be seen from the critical ratio (cr) value of 8.690 (8.690 > 1.96) and the p-value of 0.000 (0.000 < 0.05). Thus it can be explained that there is a positive and significant influence between knowledge sharing on organizational learning capability. In other words, if the implementation of knowledge sharing in the food and beverage industry increases, this will increase organizational learning capability. Conversely, if the implementation of knowledge sharing is low, then this will lead to low organizational learning capability. Knowledge sharing will give the advancement of organizational learning (Byrne, 2001; Yang, 2007). The knowing process is composed of sharing, thinking and learning components that have a reciprocity relationship. Knowledge sharing enables managers to keep the individual learning flowing throughout the company and to integrate it for practical applications. In addition, people within an organization, by way of sharing their thoughts, beliefs, knowledge and experience, mutually establish their common understandings.

Furthermore, the third hypothesis examines the effect of knowledge sharing on business performance in the food and beverage industry sector. The results show that knowledge sharing has a positive and significant effect on business performance. This can be seen from the critical ratio (cr) of 3.381 (3.381 > 1.96) and significant at 0.000 (0.000 < 0.05). This means that there is an influence between knowledge sharing on the performance of the food and beverage industry in Indonesia. Business performance will increase by increasing the implementation of knowledge sharing. On the other hand, the application of a low knowledge sharing culture will reduce business performance. The results of this study are in line with the findings of previous research who found the effect of knowledge sharing on

business performance (Lee & Hidayat, 2018). It was also added by other study that knowledge is one of the factors to improve company performance (Darroch, 2005). Knowledge sharing becomes an important part in enhancing performance (Lin, 2007; Rao et al., 2018).

The next hypothesis, fourth hypothesis examines the effect of organizational learning capability on open innovation. The results showed that the cr value was 5.742 (5.742 > 1.96) and the p-value was 0.011 (0.011 < 0.05). This shows that the cr (critical ratio) value is greater than 1.96 and the p-value is less than 0.05. Thus, it can be informed that there is an influence between organizational learning on open innovation. This means that if organizational learning capability is increased, it will further increase the ability of businesses to carry out open innovation. The research findings are in line with the findings of research conducted in paper there was a strong relationship between organizational learning capability and innovation (Yaşar Uğurlu, Ö., & Kurt, M. (2016).

Next, testing the effect of organizational learning capability on the performance of the food and beverage industry. The results showed that the cr value of2,555 (2.555 > 1.96) and a p-value of 0.000 (0.000 < 0.05). This shows that the cr value is greater than 1.96 and the p-value is less than 0.05. Thus, it can be informed that there is an influence between organizational learning on business performance. This means that if organizational learning capability is improving, it will further increase the ability of the business to improve its performance. Conversely, if organizational learning capability is low, then business performance will also decrease. The findings of research conducted by previous study that state organizational learning capability (OLC) has a positive and significant effect on performance (Hussain et al, 2018).

The sixth hypothesis in this study examines the effect of open innovation on the performance of the food and beverage industry in Indonesia. Based on the results of the study, the cr value was 5.241 (5.241 > 1.96) and the p-value was 0.000 (0.000 < 0.05). This shows that the cr value is greater than 1.96 and the p-value is less than 0.05. Thus, it can be informed that there is an influence between open innovation on business performance. This means that if the company has a better level of open innovation, then the company will improve its performance. Conversely, if open innovation is low, then the company's performance will increase. Open innovation as a booster to accelerate business performance (Dokukina & Petrovskaya, 2020; Hussain et al., 2018). The other researcher argued the company's financial sustainability is determined by the implementation of open innovation (Jeong et al., 2020). This shows that open innovation has a strategic role in improving business performance, including in this case in the food and beverage industry sector.

Based on direct and indirect effects, it can be explained the variables that have the greatest influence on business performance, in the context of the food and beverage industry in Indonesia. In this case, it will also be explained whether the direct influence has the greatest influence on business performance, compared to the indirect effect. The results show that there is a direct effect of knowledge sharing on business performance of 0.261 (26.1%), and there is an indirect effect of knowledge sharing through organizational learning capability and open innovation on business performance of 0.476 (47.6%). Thus, it can be informed that indirect effects have a greater effect on improving business performance. The results of testing the mediation effect hypothesis also show that there is a positive and significant effect between knowledge sharing through organizational learning capability and open innovation on business performance. In other words, organizational learning capability and open innovation have a role as mediating or intervening that can improve business performance. The result relates to mediating effect of open innovation in forming a relationship on business performance, it can be seen that the direct effect of organizational learning capability on business performance is 0.208, and indirect organizational learning capability through open innovation is 0.227. Thus, open innovation can mediate the effect of organizational learning capability on business performance.

Based on direct and indirect effects, it is known that the mediating role of organizational learning and open innovation has a positive and significant influence in mediating the effect of knowledge sharing on the performance of the food and beverage industry in Indonesia. This means that the direct effect of knowledge sharing is smaller than the indirect effect through organizational learning capability and open innovation in improving the performance of the food and beverage industry in Indonesia. In other words, organizational learning capability and open innovation have a significant role in mediating the effect of knowledge sharing on performance. To improve business performance in the food and beverage industry in Bogor, West Java, Indonesia, we recommend that the food and beverage SMEs in Boro to continue in improving their ability to innovate, especially open innovation. To increase open innovation, companies must implement knowledge sharing and organizational learning capability well. The indirect effect on performance has a greater influence, therefore it is recommended to improve the performance of the food and beverage industry in Indonesia, the most important thing is to first improve the implementation of open innovation and increase organizational learning capability.

This research does not of course still have research limitations. Our research only examines the effect of knowledge sharing, organizational learning capability, and open innovation, on the business performance of the food and beverage industry. Data analysis using Structural Equation Modeling was only tested on unidimensional (first-order construct). Future research will be expected to be tested with a multidimensional approach (second-order construct), which is to test all dimensions that exist in each variable. For future research, it is also recommended that this research be carried out more broadly, including the addition of research objects and research variables. In the future, it is necessary to examine other variables as mediations that form the relationship between knowledge sharing and business performance in the food and beverage industry sector in Indonesia.

4. CONCLUSION

This present study has important theoretical and empirical implications related to business performance in the case of the food and beverage SMES in Bogor, West Java, Indonesia. This paper contributes to developing and analyzing the theory, which includes performance, knowledge sharing, organizational learning capability, and open innovation. The results show that knowledge sharing strongly influences organizational learning capability, open innovation, and business performance. Organizational learning capability strongly influences open innovation and food and beverage performance. Open innovation strongly influences business performance. These results of the study indicate that business performance in the food and beverage sector can be influenced by knowledge sharing, organizational learning capability, and open innovation. The better the implementation of knowledge sharing, organizational learning capability, and the implementation of open innovation, it will improve business performance. On the other hand, if knowledge sharing, organizational learning capability, and open innovation are low, this will have an impact on decreasing business performance.

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