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THE EFFECT OF TECHNOLOGICAL CAPABILITY, SOCIAL CAPITAL, AND ENTREPRENEURIAL ORIENTATION ON FIRM PERFORMANCE THROUGH ABSORPTIVE CAPACITYIN THE FOOD AND BEVERAGE PACKAGING INDUSTRY

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ABSTRACT

The purpose of this study is to present a model that describes the general influence of technological capability, social capital, entrepreneurial orientation on firm performance through absorptive capacity in the food and beverage packaging industry in Indonesia which is tested with a structural equation model by processing data from 168 respondents. This study found that technological capability, social capital and absorptive capacity have a positive and significant effect on firm performance. Meanwhile entrepreneurial orientation has a positive but not significant effect on firm performance. Absorptive capacity partially mediates the relationship between technological capability and social capital on firm performance and absorptive capacity fully mediates the relationship between entrepreneurial orientation on firm performance

KEYWORDS *technological capability, social capital, entrepreneurial orientation, firm performance, absorptive capacity*

INTRODUCTION

The food and beverage industry is one of the most important industries in the economy in Indonesia and is still one of the mainstay sectors supporting Indonesia's manufacturing and economic growth in 2021. According to (Lukman, 2021), as General Chair of GAPPMI, the food and beverage industry contributed 38.42% to Indonesia's non-oil and gas manufacturing industry in the second quarter of 2021,

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with a positive growth of 2.95% and contributed 6.66% to the Gross Domestic Product (GDP) in the first quarter II 2021 of Rp. 278.1 trillion. In terms of the food and beverage export sector, it recorded an increase to US$. 19.58 billion in the second quarter of 2021, compared to exports in the same period in 2020 of US$. 13.73 billion.

Mobility restrictions at the time of COVID-19 changed the buying patterns of consumers who were used to going to the market physically, since the pandemic changed to using online sales services through e-commerce and online stores. Changes in people's consumption patterns are indirectly related to changes in marketing, logistics and production systems in the food and beverage industry. This phenomenon of increasing demand for ready-to-eat food is one of the reasons why sales of food and beverage packaging continued to increase during the COVID-19 pandemic. Based on information from the Indonesian Packaging Federation, the level of sales of food and beverage packaging in 2021 has increased by 3% - 4%, and packaging sales in 2022 are projected to reach 110.2 trillion or grow by 5% from 2021.

There are 244 packaging supply companies in the food and beverage industry that are registered in the B2B directory in 2020. With the number of companies, variations in packaging and the use of technology that are still limited, this causes a high level of competition between companies, where competition occurs because each company always tries to provide competitive selling prices, innovating new products to meet customer desires and providing a commitment to quality, quantity and timely delivery to customers. For companies buying food and beverage packaging, if packaging prices can be competitive, packaging innovations that are unique and attractive and of good quality will of course be able to increase sales of their products.

Company resources can be in the form of visible physical assets or invisible assets in the form of knowledge, social relations and capabilities (Penrose, 2009; Wernerfelt, 1984), if companies are able to utilize and combine the resources they have to build a competitive advantage then these resources will be difficult to imitate, valuable, rare, inimitable, and irreplaceable. The resource-based viewpoint also suggests that although resources are important, they must be managed appropriately and effectively meaning that resources alone do not guarantee competitive advantage (J. Barney, 1991; J.B. Barney & Arikan, 2008).

The theory of resource-based view is still unable to explain more specifically how and why certain companies achieve competitive advantage in markets with dynamic environments with unpredictable changes (Engelen et al., 2014). This is the basis of the theory of dynamic capabilities where the theory is an extension of the perspective from the resource-based view which is defined as the ability of a company to integrate, build, and reconfigure internal and external competencies to cope with a rapidly changing environment (Teece et al., 1997), absorptive capacity is one of the company's dynamic capabilities because it is embedded in the company's routine by combining existing knowledge and capabilities within the company which aims to build organizational capabilities (Engelen et al., 2014).

In facing market dynamics and facing ever-changing competitive environment, it is necessary to emphasize knowledge-based capabilities (Grants,

1996) as the basis for the absorptive capacity process to create and disseminate the necessary knowledge (Engelen, 2014). Referring to the theory of knowledge-based view, accumulation, application and combination of knowledge is very important for companies (Lee et al., 2020), because it can provide insight into corporate strategy, which is created through the conversion between tacit knowledge in the form of skills and contextual knowledge in the form of knowledge that can be easily communicated between individuals and companies (Grant, 1996; Nonaka et al., 2016). It is very important for companies to acquire and use external knowledge with the aim of increasing product innovation and improving performance by carrying out collaborations between suppliers and buyers (Tzokas et al., 2015), and take advantage of newly developed knowledge if they are to be able to recognize changing environments and take advantage of new opportunities (Helfat & Peteraf, 2015).

In this study, there are three variables studied as antecedent absorptive capacity, namely technological capability variable as technological alignment which is an individual and organizational process, social capital variable as relational alignment which is a process in individuals in groups as well as inter-organizational and entrepreneurial orientation variable as strategic alignment which is a managerial and organizational process

RESEARCH METHOD

The population in this study are food and beverage packaging companies registered in the B2B directory in 2020. The sample collection technique was carried out using a purposive sampling technique, namely sampling using several criteria in collecting samples (Sekaran & Bougie, 2020). The criteria for the unit of analysis in this study are companies in the food and beverage industry with the criteria for companies that have been registered in the Indonesian B2B directory and have been operating for more than 5 years until 2020 so that research can get an overview of company performance in the food and beverage packaging industry. To get a complete picture of the condition of the company, in one company there is not only one respondent, but several employees with senior and middle manager levels within the company. Furthermore, respondents gave responses to the questionnaire given. The questionnaire used is a closed questionnaire in which respondents have been provided with choices in the form of a check list of answers selected with a Likert scale from number 1 (strongly disagree) to number 5 (strongly agree).

RESULT AND DISCUSSION

Validity test results

1. The results of the validity test of the Technological Capabilities variable (X1)

The results of the validity test of the technological capabilities (X1) variable can be seen based on the following table:

Table 1 Variable Validity Test Results *Technological Capabilities* (X1)

Variable	Dimensions	Question Indicator	Estimates	R Table	Information
Technological Capabilities	*Product Related Technology*	PT1	0.589	0.5	Valid
		PT3	0.547	0.5	Valid
		PT4	0.546	0.5	Valid
	Process Related Technology	PS1	0.595	0.5	Valid
		PS2	0.53	0.5	Valid
		PS3	0.813	0.5	Valid
	Human Resources	HR2	0.754	0.5	Valid
		HR3	0.689	0.5	Valid
	Research and Development	RD2	0.813	0.5	Valid
		RD3	0.834	0.5	Valid

Source: Amos Output v.26.0, Primary Data 2022

2. The results of the validity test of the Social Capital variable (X2)

The results of the validity test of the social capital variable (X2) can be known based on the following table:

Table 2 Variable Validity Test Results *Social Capital* (X2)

Variable	Dimensions	Question Indicator	Estimates	R Table	Information
Social Capital	*Structural Capital*	SC1	0.649	0.5	Valid
		SC2	0.624	0.5	Valid
		SC3	0.612	0.5	Valid
	Cognitive Capital	CC1	0.611	0.5	Valid
		CC2	0.584	0.5	Valid
		CC3	0.818	0.5	Valid
	Relational Capital	RC1	0.604	0.5	Valid
		RC2	0.744	0.5	Valid
		RC3	0.544	0.5	Valid

3. Entrepreneurial Orientation variable validity test results (X3)

The results of the validity test of the entrepreneurial orientation variable (X3) are known based on the following table:

Table 3
Variable Validity Test Results *Entrepreneurial Orientation* (X3)

Variable	Dimensions	Question Indicator	Estimates	R Table	Information
Entrepreneurial Orientation	*Innovativeness*	IN1	0.691	0.5	Valid
		IN2	0.673	0.5	Valid
		IN3	0.735	0.5	Valid
	Risk Taking	RT1	0.647	0.5	Valid
		RT2	0.95	0.5	Valid
		RT3	0.715	0.5	Valid

Variable	Dimensions	Question Indicator	Estimates	R Table	Information
	proactiveness	PR1	0.724	0.5	Valid
		PR2	0.814	0.5	Valid

Source: Amos Output v.26.0, Primary Data 2022

4. Absorptive Capability variable validity test results (Y1)

The results of the validity test of the absorptive capability variable (Y1) are known based on the following table:

Table 4
Variable Validity Test Results *Absorptive Capability*(Y1)

Variable	Dimensions	Question Indicator	Estimates	R Table	Information
Absorptive Capacity	*Exploratory Learning*	ER1	0.622	0.5	Valid
		ER2	0.688	0.5	Valid
		ER3	0.588	0.5	Valid
		ER4	0.689	0.5	Valid
	Transformative Learning	TR1	0.728	0.5	Valid
		TR2	0.700	0.5	Valid
		TR3	0.749	0.5	Valid
	Exploitative Learning	ET1	0.505	0.5	Valid
		ET2	0.635	0.5	Valid
		ET3	0.557	0.5	Valid
		ET4	0.781	0.5	Valid

Source: Amos Output v.26.0, Primary Data 2022

5. Firm Performance variable validity test results (Y2)

The results of the validity test of the firm performance variable (Y2) are known based on the following table:

Table 5
Variable Validity Test Results *Firm Performance*(Y2)

Variable	Question Indicator	Estimates	R Table	Information
Firm Performance	FP1	0.672	0.5	Valid
	FP2	0.73	0.5	Valid
	FP3	0.642	0.5	Valid
	FP4	0.673	0.5	Valid
	FP5	0.545	0.5	Valid
	FP6	0.752	0.5	Valid

Source: Amos Output v.26.0, Primary Data 2022

Reliability Test Results

Table 6. Reliability Test Results

No.	Variable	Cronbach Alpha value	Information
1	Entrepreneurial Orientation	0.769	Reliable
2	Social Capital	0.830	Reliable
3	Technological Capabilities	0.869	Reliable
4	Absorptive Capacity	0.881	Reliable
5	Firm Performance	0.824	Reliable

Source: Amos Output v.26.0, Primary Data 2022

The results of the model feasibility test (goodness of fit model)

The goodness of fit criteria from the structural equation model above are presented in the following table:

Table 7
***Goodness of Fit* Research Model Testing**

GOF	Acceptable Match Level	Index models	Explanation
Chi Square	*Chi Square*≤ 2df (good fit), 2df < chi square ≤ 3df (marginal fit)	1.151	*Good Fit*
P-values	P ≥ 0.005 (good fit)	0.000	*Good Less*
CMIN/DF	Cmin/df ≤ 2 (good fit)	1,547	*Good Fit*
RMSEA	0.05 < RMSEA < 0.08 (good fit), 0.08 RMSEA < 1 (Marginal)	0.059	*Good Fit*
CFI	CFI > 0.9 (Good fit), 0.8 ≤ CFI < 0.9 (marginal)	0.927	*Good Fit*
TFI	TFI > 0.9 (Good fit), 0.8 ≤ TFI < 0.9 (marginal)	0.914	*Good Fit*
IFI	IFI > 0.9 (Good fit), 0.8 ≤ IFI < 0.9 (marginal)	0.929	*Good Fit*
NFIs	NFI > 0.9 (Good fit), 0.8 ≤ NFI < 0.9 (marginal)	0.822	*marginal*
RFI	RFI > 0.9 (Good fit), 0.8 ≤ RFI < 0.9 (marginal)	0.791	*marginal*

Source: Amos Output v.26.0, Primary Data 2022

The goodness of fit model recapitulation table shows that in general the goodness of fit model is good fit.

HYPOTHESIS TEST

Based on the results of the suitability of the model, the next step is to test the hypothesis using Structural Equation Modeling (SEM). The results of the analysis can be displayed in 2 (two) diagrams, namely unstandardized or standardized estimate(Arbuckle, 2016; Wijaya, 2009). Structural Equation Modeling (SEM) standardized estimates for this research can be seen in Figure 4.13 below:

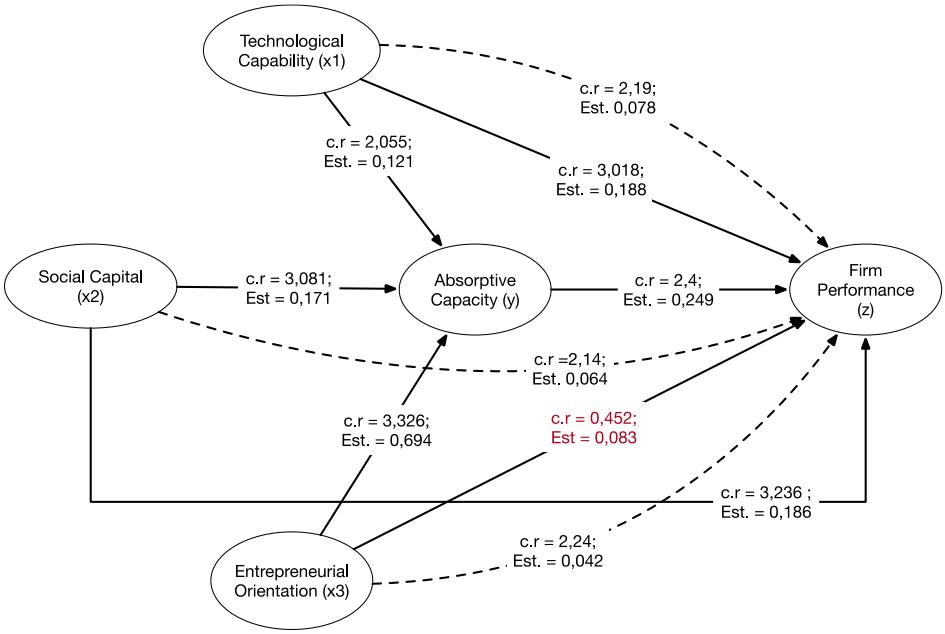

Figure 1
Structural Equation Modeling (SEM) Standardized Estimates

Based on the structural model image, two structural equations are obtained as follows:

1. AC = 0.121*TC + 0.171*SC + 0.694*EO, Errorvar.= 0.154, R^2 = 0.209
2. FP = 0.188*TC + 0.249*AC + 0.186*SC + 0.083*EO, Errorvar.= 0.151, R^2 = 0.271

Table 8
SEM recapitulation*test*

hypothesis	Description	Est.	CR	P	Ket
H1	*tc →air conditioning*	0.121	2.055	0.04	Significant
H2	*tc →FP*	0.188	3,018	0.003	Significant
H3	*SC →air conditioning*	0.171	3,081	0.002	Significant
H4	*SC →FP*	0.186	3,236	0.001	Significant
H5	*EO →air conditioning*	0.694	3,326	***	Significant
H6	*EO →FP*	0.083	0.452	0.651	Not significant
H7	*air conditioning →FP*	0.249	2,4	0.016	Significant
H8	*tc →air conditioning →FP*	0.078	2,19	0.028	Significant
H9	*SC →air conditioning →FP*	0.064	2,14	0.031	Significant
H10	*EO →air conditioning →FP*	0.042	2,24	0.025	Significant

Source: Amos Output v.26.0, Primary Data 2022

Table 9 Direct and Indirect Effects of Form Performance

Variable	Influence			Results
	Direct	Indirect	Total	
EO →FP	0.038	0.078	0.115	mediated
SC →FP	0.28	0.064	0.344	mediated
tc →FP	0.263	0.042	0.304	mediated

Source : Output Amos v.26.0, Primary Data 2022

Discussion of Research Outcome

The Effect of Technological Capability on Absorptive Capacity

The results of this study support the results of previous research conducted by(Tzokas et al., 2015)who found a positive influence between technological capability and absorptive capacity, where the accumulation of technological knowledge not only increases product innovation skills, but also the company's ability to be involved in the transformation process through evaluating, using, and implementing new technologies. Companies with strong technological capability tend to have a strong ability to use new knowledge(Srivastava et al., 2015)obtained from external parties.

In the food and beverage packaging industry, the application of technological capability emphasizes two objectives. First, increasing production efficiency, this is achieved by consulting external parties and applying the results of internal meetings which are held periodically to become a culture that can increase technical knowledge.(Nazeer et al., 2021). In the consulting process, the age of the company and the experience of the company's managers play an important role in determining the absorption of knowledge(Guerra & Camargo, 2016),

Second, implementing standard operating procedures that prioritize customer satisfaction and consistently following the latest standards through the application of the exploitation process of the knowledge gained. In research conducted bySrivastava et al., (2015), states that companies that have strong technological capability have a high ability to utilize knowledge obtained from external parties. This proves that technological capability is also a facilitator for transferring knowledge within organizations to find, utilize, understand new technological trends(Zang & Li, 2016).

The Effect of Technological Capability on Firm Performance

This is in line with the RBV theory and dynamic capability which explains the benefits of technological capability in increasing competitive advantage and performance, by enabling companies to identify acquiring and applying external knowledge to develop operational competencies aimed at achieving competitive advantage (Salisu, 2019). Results of research by Hsu et al., (2014); Tzokas et al., (2015) also shows that technological capability affects performance and is very important because responding to dynamic market needs requires the development of new products that are based on technology development, so that they can accurately predict and adapt to technological changes (Salisu & Abu Bakar , 2019) by turning information into product innovation(Aydin, 2020).

So it can be concluded that technological capability in food and beverage packaging companies is an important resource for companies that must be managed effectively to develop products that are in line with market trends and to introduce new products from time to time.(Guerra & Camargo, 2016).

The Effect of Social Capital on Absorptive Capacity

In line with previous research byAlghababsheh & Gallear, (2020)states that social capital can support and contribute to effective partner-to-partner relationships by enhancing knowledge exchange, learning, resilience, responsiveness and innovation. Social capital also plays a key role in transferring knowledge from one

stage to another in the uptake process(Aribi et al., 2015), while increasing the speed and breadth of previous knowledge accumulation through the willingness between partners to share knowledge by ensuring the common goals, mission and vision so that each individual is easier to present, exchange, adopt, and even combine various ideas, thereby increasing their absorptive capacity to sustain continuous innovation(Xin et al., 2020).

So it can be concluded that in the food and beverage packaging industry companies need to strengthen network relationships between partners, where social capital acts as a liaison process between partners through the interaction of knowledge exchange and as one of the factors to increase the success of implementing the absorptive capacity process.

Influence *Social Capital* on Firm Performance

One of the important elements to achieve competitive advantage is to collaborate with internal and external partners that aim to build trust and exchange information(Whipple et al., 2015)as well as to facilitate collective action(Pillai et al., 2017)to improve performance. This relationship is a valuable resource that other companies may not have(Kittikunchotiwut, 2018)because it is rare, cannot be imitated and cannot be substituted. This differs from opinion(Zhang et al., 2016), which states that in a simple distribution chain, companies do not need social capital processes, because the benefits of social capital are not in accordance with the investments made by companies to increase competitive advantage.

However, the management of relationships between partners in the food and beverage packaging industry is not simple but very complex, one of the reasons is the large number of employees, the supply chain which requires timeliness, quality and quantity according to standards, thus causing the relationship between internal partners to be managed in an integrated manner. effective to achieve maximum results. In this study it was concluded that the social capital variable has a positive effect on firm performance in the food and beverage packaging industry and is able to facilitate the achievement of company goals, so that internal and external partners can understand the actions taken by companies to achieve successful collaboration and improve performance (Zhang et al. , 2016).

Influence *Entrepreneurial Orientation* on Absorptive Capacity

*Entrepreneurial orientation*is a strategic orientation of the company that focuses on finding and exploiting new opportunities through a process of innovation, risk taking and level of proactiveness towards market changes, but the end result of this strategic orientation has the possibility of success or failure and the absorptive capacity process is able to determine the level of probability of success of the company's strategic orientation(Rodríguez-Serrano & Martín-Armario, 2019). So that the experience and knowledge possessed by employees can be the basic capital to gain new knowledge which aims to carry out risk analysis and take action to reduce risks that arise, to innovate new product development and to take initiatives and opportunities to anticipate dynamic market changes.

The results of this study indicate that food and beverage packaging companies have a tendency not to take risks, this is considered reasonable for company management due to the uncertainty factor due to the COVID-19 pandemic, but companies are still actively looking for new opportunities to maintain business

continuity and conduct experiments. to innovate new products to meet consumer needs. To ensure which opportunities can be acted upon and which consumer needs can be met, the absorptive capacity process plays a very important role in interpreting information obtained from market intelligence, competitor activities and combining it with existing knowledge to help evaluate opportunities and detect errors during the product innovation process.(Ibarra-Cisneros et al., 2021), and ensure continuous innovation to deal with market uncertainties(Makhloufi et al., 2021), so that companies can make the right decisions regarding entrepreneurial orientation actions to maximize company performance.

Influence *Entrepreneurial Orientation* on Firm Performance

This contradicts previous research which concluded that entrepreneurial orientation has become a widely accepted way to increase innovation and firm performance(Aljanabi, 2017; Hernández-Perlines et al., 2017; Zhai et al., 2018). However, this research is in accordance with the research conductedOnwe et al., (2020)who found the results of entrepreneurial orientation had a positive but not significant effect, which means that entrepreneurial orientation is useful for company activities but is not too important because companies without entrepreneurial orientation can still perform well. The main cause is because the products produced are imitations of other products and there are problems in the socio-cultural area and the lack of individual motivation that underlies the desire to maintain or improve performance. So it can be concluded that environmental factors and corporate culture can influence the relationship between entrepreneurial orientation and company performance.

In the food and beverage packaging industry, there are three reasons that cause entrepreneurial orientation and company performance to have no significant effect. First, during the COVID-19 pandemic the company still showed an increase in sales, which was triggered by the trend of changes in people's consumption patterns, so that the company was still able to survive and tended to increase its production capacity. Second, from the results of interviews with respondents in each packaging category, the technology used is not much different, so the difference in the products produced is also not too significant. This similarity causes more business risk on the financial side than on the production side, and to minimize this risk, Companies have a tendency to prefer existing customers to new customers and avoid high-risk projects. Third, descriptive statistics show that the age of the respondent's company is above 15 years, with this experience the company is able to manage risks and is able to map the level of competition in the industry and is more careful in investing.

Influence *Absorptive Capacity* on Firm Performance

Referring to the theory of knowledge-based view, where knowledge is an object to be studied and is the most strategic resource for companies to gain competitive advantage (Grant, 1996) and the re-conceptualization of absorptive capacity proposed by Lane et al., (2006), that absorptive capacity is three successive process mechanisms.

In interviews with respondents it is known that the absorptive capacity process has been applied to food and beverage packaging companies, namely first,

identifying and understanding valuable external knowledge for companies with exploratory learning by periodically collecting and evaluating information about competitors' activities, comparing selling prices, updating production process, applying the latest technology and increasing machine efficiency. Second, assimilate that knowledge through transformative learning by applying research results into the production process, providing solutions to consumers and looking for new opportunities with the technology they have.

The effect of Technological Capability on Firm Performance is mediated *Absorptive Capacity*

In line with research conducted by Nazeer et al., (2021), which states that absorptive capacity can act as a mediating factor between technological capability and firm performance, as well as being the main driver of technological capability and the performance of manufacturing companies through exploratory, transformative and exploitative processes. new knowledge related to technology so as to improve company performance(Tzokas et al., 2015), thus enabling the company to reduce production costs, product improvements, effective inventory management, and increase efficiency in production systems(Poudel et al., 2020).

The previous experience possessed by manager level employees in the food and beverage packaging industry is the basis for obtaining new knowledge obtained through collaboration between departments, consumer feedback, consulting with external parties and having standard operating procedures that are implemented and evaluated regularly regarding the technology used. relating to products, processes, human resource skills towards mastery of technology and development research that is processed through exploration, transformation and exploitation processes can improve company performance. This can happen because the absorption of knowledge about technology through absorptive capacity has a significant influence on the results of product innovation and production processes.

The influence of Social Capital on Firm Performance is mediated*Absorptive Capacity*

In line with research conducted byChuang et al., (2016), which concludes that the absorptive capacity element mediates the effect of social capital on performance and companies must invest resources to build social capital capabilities to maximize the company's absorptive capacity.Gölgeci & Kuivalainen, (2020), states that social capital enables the process of obtaining knowledge through relevant external information higher than customers, competitors, suppliers and other institutions because it can identify and assimilate new knowledge and the ability to transform and exploit the new knowledge obtained and update their knowledge and understanding for better selection and retention(Xin et al., 2020).

In the food and beverage packaging industry, the level of connection between members in social networks, trust and emphasis on the common goals of cooperation have the most influence on firm performance, but this influence can be increased by investing resources to build social capital capabilities to maximize new knowledge(Chuang et al., 2016)obtained through interaction with external parties, then coordinated internally based on a common vision and mission and then processed through a process of exploration, transformation and exploitation to save

time and money for future innovation experiments(Kittikunchotiwut, 2018)while improving company performance.

The effect of Entrepreneurial Orientation on Firm Performance is mediated *Absorptive Capacity*

Consistent with research conducted by(Hernández-Perlines et al., 2017), which states that absorptive capacity can act as a mediating factor between entrepreneurial orientation and effective firm performance to obtain superior performance. Absorptive capacity is also able to improve information processing in the process of entrepreneurial orientation in facing opportunities, both observable and unobserved(Makhloufi et al., 2021). According to Engelen, (2014) there is one condition where absorptive capacity greatly determines the relationship between entrepreneurial orientation and firm performance, namely when environmental uncertainty is high, in these conditions the effectiveness of entrepreneurial orientation in the form of innovation, risk taking and proactive action depends on the company's ability to absorbing and disseminating knowledge resources to make superior strategic decisions as part of implementing an entrepreneurial orientation(Hughes et al., 2017).

This research took place during the Covid-19 pandemic, when conditions of uncertainty were very high. The food and beverage packaging industry has not only survived but has experienced growth, although not too high, in conditions of uncertainty, companies must be very careful in making every decision. With knowledge combined with previous experience, the absorptive capacity process can help determine the direction of entrepreneurial orientation activities, especially in determining risk taking in times of uncertainty.

CONCLUSION

Theoretical implications

There are three findings in this study which provide empirical support that the absorptive capability variable acts as an intervening or mediating variable in increasing the effect of technological capability, social capital and entrepreneurial orientation on firm performance in the food and beverage packaging industry in Indonesia as follows:

1. The indirect effect of entrepreneurial orientation on firm performance through absorptive capacity is greater than the direct effect. With market conditions where the level of competition is not too tight and continues to increase during the COVID-19 pandemic, companies tend not to take high-risk investments, but continue to innovate and actively seek new opportunities. These conditions cause company performance to be achieved with a low level of entrepreneurial orientation(Shirokova et al., 2016). This is in accordance with previous research conducted by Hughes et al., (2017);Hernández-Perlines et al., (2017)who concluded that the implementation of entrepreneurial orientation benefits from absorptive capacity.
2. The direct effect of social capital on firm performance is the highest compared to the technological capability variable. Social capital facilitates effective relationships between internal and external partners based on a common

vision and goals of cooperation, trust and success of cooperation, so that it directly influences firm performance which results in increased quality, speed and flexibility of delivery(Alghababsheh & Gallear, 2020). This is in line with the results of research by Whipple, Wiedmer, & K. Boyer, (2015), Akintimehin et al., (2019), Gelderman et al., (2016), Leem & Rogers, 2017, Ha & Nguyen, (2020), where social capital has a positive impact on performance results.

3. The direct effect of technological capability on firm performance is greater than the indirect effect. This is because in the same packaging category, the technology and types of materials used are not much different, so what differentiates between companies is the ability of each company to master and apply better technology. This is in accordance with the results of research by Hsu et al., (2014); Tzokas et al., (2015) which shows that technological capability affects performance.

Managerial implications

Managers of companies in the food and beverage packaging industry must pay attention to three things if they want to get the benefits of entrepreneurial orientation and absorptive capacity to improve company performance. First, always anticipate market changes by taking opportunities and taking risks(Rodríguez-Serrano & Martín-Armario, 2019)to gain market share and potential customers. This needs to be done because in order to serve changing consumer preferences, companies need to develop initiatives compared to competitors to exploit market opportunities(Baker & Sinkula, 2009)and take quick action on this opportunity so as to improve company performance(Zhai et al., 2018). Second, conducting promotions and experimenting with new product innovations to build the company's reputation, bearing in mind that reputation is one of the determining factors in supplier selection and to ensure suppliers have a clear understanding of company goals so as to increase success and competitiveness.(Taherdoost & Brand, 2019). Third, consistent investment and management of employees who have experience in the food and beverage packaging industry so that they can become capital to gain new knowledge obtained from the absorptive capacity process through external partners. The new knowledge gained is very helpful for companies to determine strategy, level of innovation, proactiveness and high-risk decisions, especially when there is uncertainty in the industrial environment.(Engelen et al., 2014).

The use of technology in the food and beverage packaging industry is not too high considering the limited use of raw materials and machine technology used. However, company managers must always look for new opportunities by investing time, money and resources(Ahmad Mehmet, 2018; Nazeer et al., 2021; Rezaei-Zadeh & Darwish, 2016; Zhai et al., 2018)to increase technological capability through its social capital, in order to obtain and utilize information and knowledge from external partners and ensure competitive advantage among food and beverage packaging companies, by developing closeness and long-term relationships between buyers and suppliers (Taherdoost & Brand, 2019).

Although the empirical findings of this study provide theoretical and managerial contributions, this study has limitations, including, the population

studied is companies in the food and beverage packaging industry in Indonesia, so adjustments are required due to possible differences in behavior (Cisneros, 2021, Makhloufi, 2021) and corporate culture (Xin, 2020), if you want to generalize it in the context of a different industrial environment. The dependent variable in this study is firm performance with the mediator variable being absorptive capacity while the independent variables are technological capability, social capital and entrepreneurial orientation.

Research on the relationship between technological capability, social capital and entrepreneurial orientation on firm performance through absorptive capacity is still very limited. Some suggestions for future further research include using samples of different product industries, research locations and times.(Chuang et al., 2016; Hsu et al., 2014; Nazeer et al., 2021; Taghizadeh et al., 2020; Tzokas et al., 2015), the type of service provider company(Kittikunchotiwut, 2018), or by comparing company attributes such as company age, company age and product variety(Aljanabi, 2017). Further research is needed regarding the impact caused by the uncertainty of environmental conditions during the pandemic, because the uncertainty of environmental conditions can affect performance(Gölgeci & Kuivalainen, 2020; Sáenz et al., 2014; Salisu & Abu Bakar, 2019), so that future research can add variable uncertainty or uncertainty about environmental conditions as a moderating variable for each variable tested to further clarify the relationship between variables and firm performance, especially if the company is in environmental conditions with intense competition or declining market conditions or both (Shirokova et al., 2016). In this study, it shows that the direct effect of the variables tested on firm performance is greater than the indirect effect, so that the re-conceptualization of absorptive capacity put forward by Lane et al., (2006) where absorptive capacity is three sequential process mechanisms, needs to be examined more closely. more about the interprocess mechanism. So that it can be concluded which process or dimension in absorptive capacity has the most influence on firm performance. Research conducted by(Zou et al., 2018)states that the longer the age of the company causes a declineabsorptive capacitycompany, but in this study the role of company age onabsorptive capacityhas not been discussed in detail, so it is interesting to examine further the relationship between age and experience possessed by the company and abilityabsorptive capacityhis.Food and beverage packaging companies have similar raw materials and technology, so the effect of technology intensity on performance is not yet clear. Because accordingAydin, (2020); Nazeer et al., (2021); Rodríguez-Serrano & Martín-Armario, (2019); Tzokas et al., (2015), differences in the intensity of technology used can affect company performance. So that the next research can take samples from the population of companies that have different levels of technology use, so that the influence of variables can be clearly seentechnological capabilitytofirm performance.

REFERENCES

Ahmad Mehmet, BE (2018). absorptive capacity and institutional theory. Journal of Economic & Management Perspectives, 12(2), 5–17.

Alghababsheh, M., & Gallear, D. (2020). Social capital in buyer-supplier relationships: A review of antecedents, benefits, risks, and boundary conditions. Industrial Marketing Management, 91, 338–361. https://doi.org/10.1016/j.indmarman.2020.10.003

Aljanabi, ARA (2017). The mediating role of absorptive capacity on the relationship between entrepreneurial orientation and technological innovation capabilities. International Journal of Entrepreneurial Behavior & Research, 24(4), 818–841. https://doi.org/10.1108/ijebr-07-2017-0233

Arbuckle, JL (2016). IBM - SPSS - AMOS 24 User's Guide. IBM Corp.

Aribi, A., Claude Paraponaris, DMSP, & Dupouët, O. (2015). The role of organizational and social capital in the firm's absorptive capacity. Journal of Knowledge Management, 19(5), 987–1006. https://doi.org/10.1108/jkm-05-2015-0169

Aydin, H. (2020). Market orientation and product innovation: the mediating role of technological capability. European Journal of Innovation Management, 24(4), 1233–1267. https://doi.org/10.1108/ejim-10-2019-0274

Baker, WE, & Sinkula, JM (2009). The Complementary Effects of Market Orientation and Entrepreneurial Orientation on Profitability in Small Businesses. Journal of Small Business Management, 47(4), 443–464. https://doi.org/10.1111/j.1540-627X.2009.00278.x

Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. Journal of Management, 17(1), 99–120. https://doi.org/10.1177/014920639101700108

Barney, JB, & Arikan, A. (2008). The Resource-based View: Origins and Implications. The Blackwell Handbook of Strategic Management. https://doi.org/10.1111/b.9780631218616.2006.00006.x

Chuang, M.-Y., Chen, C.-J., & Lin, MJ (2016). The impact of social capital on competitive advantage. Management Decision, 54(6), 1443–1463. https://doi.org/10.1108/md-11-2015-0485

Covin, JG, & Lumpkin, GT (2011). Entrepreneurial Orientation Theory and Research: Reflections on a Needed Construct. Entrepreneurship Theory and Practice, 35(5), 855–872. https://doi.org/10.1111/j.1540-6520.2011.00482.x

Engelen, A., Kube, H., Schmidt, S., & Flatten, TC (2014). Entrepreneurial orientation in turbulent environments: The moderating role of absorptive capacity. Research Policy, 43(8), 1353–1369. https://doi.org/10.1016/j.respol.2014.03.002

Ferreras-Méndez, JL, Fernández-Mesa, A., & Alegre, J. (2016). The relationship between knowledge search strategies and absorptive capacity: A deeper look. Technovation, 54, 48–61. https://doi.org/10.1016/j.technovation.2016.03.001

García-Villaverde, PM, Rodrigo-Alarcón, J., Ruiz-Ortega, MJ, & Parra-Requena, G. (2018). The role of knowledge absorptive capacity on the relationship between cognitive social capital and entrepreneurial orientation. Journal of Knowledge Management, 22(5), 1015–1036. https://doi.org/10.1108/jkm-07-2017-0304

Gölgeci, I., & Kuivalainen, O. (2020). Does social capital matter for supply chain resilience? The role of absorptive capacity and marketing-supply chain

management alignment. Industrial Marketing Management, 84, 63–74. https://doi.org/10.1016/j.indmarman.2019.05.006

Grant, RM (1996). Toward a knowledge-based theory of the firm. Strategic Management Journal, 17(S2), 109–122. https://doi.org/10.1002/smj.4250171110

Guerra, RM de A., & Camargo, ME (2016). The role of technological capability in the internationalization of the company and new product success: a systematic literature review. Internext, 11(1). https://doi.org/10.18568/1980-4865.11149-62

Helfat, CE, & Peteraf, MA (2015). Managerial cognitive capabilities and the microfoundations of dynamic capabilities. Strategic Management Journal, 36(6), 831–850. https://doi.org/10.1002/smj.2247

Hernández-Perlines, F., Moreno-García, J., & Yáñez-Araque, B. (2017). Family firm performance: The influence of entrepreneurial orientation and absorptive capacity. Psychology & Marketing, 34(11), 1057–1068. https://doi.org/10.1002/mar.21045

Hsu, TT, Tsai, K.-H., Hsieh, M.-H., & Wang, W.-Y. (2014). Strategic orientation and new product performance: The roles of technological capability. Canadian Journal of Administrative Sciences / Revue Canadienne Des Sciences De L'administration, 31(1), 44–58. https://doi.org/10.1002/cjas.1274

Hughes, P., Hodgkinson, IR, Hughes, M., & Arshad, D. (2017). Explaining the entrepreneurial orientation–performance relationship in emerging economies: The intermediate roles of absorptive capacity and improvisation. Asia Pacific Journal of Management, 35(4), 1025–1053. https://doi.org/10.1007/s10490-017-9539-7

Ibarra-Cisneros, M.-A., Demuner-Flores, M. del R., & Hernández-Perlines, F. (2021). Strategic orientations, firm performance and the moderating effect of absorptive capacity. Journal of Strategy and Management, 14(4), 582–611. https://doi.org/10.1108/jsma-05-2020-0121

Kittikunchotiwut, P. (2018). Social Capital as Knowledge Absorptive Capacity and Firm Innovation. Business & IT, VIII(1), 13–25. https://doi.org/10.14311/bit.2018.01.02

Lee, Y., Cortes, AF, Zhuang, Y., & Herrmann, P. (2020). Social capital and organizational ambidexterity: the moderating effect of absorptive capacity. International Journal of Emerging Markets, 16(8), 1793–1812. https://doi.org/10.1108/ijoem-07-2019-0542

Lukman, A. (2021). Constraints and Strategy for the Food and Beverage Industry Sector. Chairman of Indonesia's Food and Beverage Industry Association (GAPMMI).

Lumpkin, GT, & Dess, GG (1996). Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance. The Academy of Management Review, 21(1). https://doi.org/10.2307/258632

Makhloufi, L., Laghouag, AA, Ali Sahli, A., & Belaid, F. (2021). Impact of Entrepreneurial Orientation on Innovation Capability: The Mediating Role of Absorptive Capability and Organizational Learning Capabilities. Sustainability, 13(10). https://doi.org/10.3390/su13105399

Marek, S., Schuh, IG, & Stich, IV (2020). Identification of multidimensional key performance indicators for manufacturing companies. In 2020 IEEE Technology & Engineering Management Conference (TEMSCON).

Munawar, F. (2019). The Role of Entrepreneurial Orientation and Adaptive Capability to Performance of SME Food & Beverages. Global Business and Management Research:, 11.

Nahapiet, J., & Ghoshal, S. (1998). Social Capital, Intellectual Capital, and the Organizational Advantage. The Academy of Management Review, 23(2). https://doi.org/10.2307/259373

Nazeer, N., Rasiah, R., & Furuoka, F. (2021). Technology Transfer, Technological Capability, Absorptive Capacity and Firm Performance: An Investigation of the Textile and Clothing Firms in Pakistan. Malaysian Journal of Economic Studies, 58(1), 99–124. https://doi.org/10.22452/MJES.vol58no1.6

Nonaka, I., Hirose, A., & Takeda, Y. (2016). 'Meso'-Foundations of Dynamic Capabilities: Team-Level Synthesis and Distributed Leadership as the Source of Dynamic Creativity. Global Strategy Journal, 6(3), 168–182. https://doi.org/10.1002/gsj.1125

Onwe, CC, Ogbo, A., & Ameh, AA (2020). Entrepreneurial orientation and small firm performance: the moderating role of environmental hospitality. Entrepreneurial Business and Economics Review, 8(4), 67–84. https://doi.org/10.15678/EBER.2020.080404

Penrose, E. (2009). The Theory of the Growth of the Firm (Fourth Edition). Oxford University Press Inc., New York.

Pillai, KG, Hodgkinson, GP, Kalyanaram, G., & Nair, SR (2017). The Negative Effects of Social Capital in Organizations: A Review and Extension. International Journal of Management Reviews, 19(1), 97–124. https://doi.org/10.1111/ijmr.12085

Poudel, KP, Carter, R., & Lonial, S. (2020). The Impact of Entrepreneurial Orientation, Technological Capability, and Consumer Attitude on Firm Performance: A Multi-Theory Perspective. Journal of Small Business Management, 57(sup2), 268–295. https://doi.org/10.1111/jsbm.12471

Reichert, FM, & Zawislak, PA (2014). Technological Capability and Firm Performance. Journal of Technology Management & Innovation, 9. https://doi.org/10.4067/S0718-27242014000400002

Rezaei-Zadeh, M., & Darwish, TK (2016). Antecedents of absorptive capacity: a new model for developing learning processes. The Learning Organization, 23(1), 77–91. https://doi.org/10.1108/tlo-04-2015-0026

Rodríguez-Serrano, M. Á., & Martín-Armario, E. (2019). Born‐Global SMEs, Performance, and Dynamic Absorptive Capacity: Evidence from Spanish Firms. Journal of Small Business Management, 57(2), 298‐326. https://doi.org/10.1111/jsbm.12319

Sáenz, MJ, Revilla, E., & Knoppen, D. (2014). Absorptive Capacity in Buyer-supplier Relationships: Empirical Evidence of Its Mediating Role. Journal of Supply Chain Management, 50(2), 18–40. https://doi.org/10.1111/jscm.12020

Salisu, Y., & Abu Bakar, LJ (2019). Technological capability, relational capability and firms' performance. Revista de Gestão, 27(1), 79–99.

https://doi.org/10.1108/rege-03-2019-0040
Sekaran, U., & Bougie, R. (2020). Research Methods For Business : A Skill Building Approach (8th ed.). Wiley.
Shirokova, G., Bogatyreva, K., Beliaeva, T., & Puffer, S. (2016). Entrepreneurial orientation and firm performance in different environmental settings: Contingency and configurational approaches. Journal of Small Business and Enterprise Development, 23(3), 703–727. https://doi.org/10.1108/JSBED-09-2015-0132
Srivastava, MK, Gnyawali, DR, & Hatfield, DE (2015). Behavioral implications of absorptive capacity: The role of technological effort and technological capability in leveraging alliance network technological resources. Technological Forecasting and Social Change, 92, 346–358. https://doi.org/10.1016/j.techfore.2015.01.010
Taghizadeh, SK, Nikbin, D., Alam, MMD, Rahman, SA, & Nadarajah, G. (2020). Technological capabilities, open innovation and perceived operational performance in SMEs: the moderating role of environmental dynamism. Journal of Knowledge Management, 25(6), 1486–1507. https://doi.org/10.1108/jkm-05-2020-0352
Taherdoost, H., & Brard, A. (2019). Analyzing the Process of Supplier Selection Criteria and Methods. Procedia Manufacturing, 32, 1024–1034. https://doi.org/10.1016/j.promfg.2019.02.317
Teece, DJ, Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. Strategic Management Journal, 18(7), 509–533. https://doi.org/10.1002/(sici)1097-0266(199708)18:7<509::Aid-smj882>3.0.Co;2-z
Tsai, W., & Ghoshal, S. (1998). Social Capital and Value Creation: The Role of Intrafirm Networks. Academy of Management Journal, 41(4), 464–476. https://doi.org/10.5465/257085
Tzokas, N., Kim, YES, Akbar, H., & Al-Dajani, H. (2015). Absorptive capacity and performance: The role of customer relationship and technological capabilities in high-tech SMEs. Industrial Marketing Management, 47, 134–142. https://doi.org/10.1016/j.indmarman.2015.02.033
Wernerfelt, B. (1984). A resource-based view of the firm. Strategic Management Journal, 5(2), 171–180. https://doi.org/10.1002/smj.4250050207
Whipple, JM, Wiedmer, R., & K. Boyer, K. (2015). A Dyadic Investigation of Collaborative Competence, Social Capital, and Performance in Buyer-Supplier Relationships. Journal of Supply Chain Management, 51(2), 3–21. https://doi.org/10.1111/jscm.12071
Wijaya, T. (2009). Structural Equation Modeling analysis using AMOS. Atma Jaya University.
Xin, L., Tang, F., Zhang, S., & Pan, Z. (2020). Social Capital and Sustainable Innovation in Small Businesses: Investigating the Role of Absorptive Capacity, Marketing Capability and Organizational Learning. Sustainability, 12(9). https://doi.org/10.3390/su12093759
Zang, J., & Li, Y. (2016). Technology capabilities, marketing capabilities and innovation ambidexterity. Technology Analysis & Strategic Management,

29(1), 23–37. https://doi.org/10.1080/09537325.2016.1194972

Zhai, Y.-M., Sun, W.-Q., Tsai, S.-B., Wang, Z., Zhao, Y., & Chen, Q. (2018). An Empirical Study on Entrepreneurial Orientation, Absorptive Capacity, and SMEs' Innovation Performance: A Sustainable Perspective. Sustainability, 10(2). https://doi.org/10.3390/su10020314

Zhang, M., Guo, H., & Zhao, X. (2016). Effects of social capital on operational performance: impacts of servicing. International Journal of Production Research, 55(15), 4304–4318. https://doi.org/10.1080/00207543.2016.1246764

Zou, T., Ertug, G., & George, G. (2018). The capacity to innovate: a meta-analysis of absorptive capacity. Innovations, 20(2), 87–121. https://doi.org/10.1080/14479338.2018.1428105