Jurnal Ekonomi dan Studi Pembangunan, 17 (1), 2025
ISSN 2086-1575 E-ISSN

Determinants of Partnership in Micro and Small-scale Manufacturing Firm

Janaska Nurrachmat

UKM Center Faculty of Economic and Business, Universitas Indonesia

Email: janaska.nur@yahoo.com

Received: June 27, 2024; Accepted: April 14, 2025; Published: April 22, 2025
Permalink/DOI: http://dx.doi.org/10.17977/um002v17i12025p070

Abstract

This study aims to analyze the determinants of micro and small firms to conduct a partnership with other institutions. Using logit and probit this research estimates which factors that increase or decrease the probability of forming a partnership among micro and small firms. This study uses the data from the Indonesian Statistics Bureau to obtain detailed aspects from each micro and small business, this study also attempts to link the characteristics of larger firms within the same industry group that might influence forming a partnership among smaller firms. The result of this study shows that factors which have a strong connection with business formality increase the probability of forming a partnership with other institutions.

Keyword: Partnership, Collaboration, Cooperation, MSME
JEL Classification: M21, O17, 035

INTRODUCTION

Micro, small and medium enterprises or MSME is the backbone of the Indonesian Economy. According to the data of the Ministry of Cooperatives and SME (2019) the MSME comprised around 99% of all business in Indonesia, MSME also contributed around 60% of our GDP and provide employment for around 97% of our labor force. The MSME also has a strong role in women's empowerment. BPS estimated that around 70% of micro and small enterprises in the manufacturing sector are led by female entrepreneurs (Badan Pusat Statistik, 2023b). However Indonesian MSMEs still face many challenges especially in productivity, digitalization, technology application, and financing (Indonesian Chamber of Commerce and Industry, 2023). The presence of Indonesian MSME in global trade is also small. It is also reported that Indonesian MSMEs only contributed around 15,6% of our exports, and only 4,1% of them participated in the global value chain (Ministry of Cooperatives and SME, 2019). Compared to other countries, Korean SMEs have contributed around 39% of all their export (Ministry of SMEs and Startups, 2024). Chinese SMEs even have a higher share of their export, which is around 68% (OECD, 2022). According to the report from ADB, most Indonesian MSMEs are active in the wholesale and retail trade sector, while the manufacturing sector only comprises around 16% of all MSMEs in Indonesia (Asian Development Bank, 2023). Furthermore, the MSME manufacturing sector in Indonesia mostly

consists of Food and Beverage, Textile, and Clothing. The percentage of high-value-added sectors such as Electronics, Machinery, and Automotive is still extremely low (Badan Pusat Statistik, 2023b).

The Indonesian government has provided a wide range of empowerment regulations for MSME and its landscape, which is written in detail in Government Regulation Number 7 (2021). One aspect that draws significant interest is the partnership between MSMEs and larger companies. Partnership as a focus to induce growth in the MSME landscape can be defined as innovative because the most common empowerment type for MSME in Indonesia is providing training or lucrative financing. Etemad et al. (2001) stated that cooperative relationships with larger firms can increase the competitiveness of smaller companies in the global market and raise their participation in the global value chain. Other scholars also argued that collaboration is the best way to promote innovation for MSMEs and in the end promote economic development (Brink, 2017; Rajalo & Vadi, 2021; Sawers et al., 2008;). To conduct innovation activities properly, appropriate skills and adequate resources are needed. However, these two aspects are rarely found in MSMEs. Thus, a partnership agreement might be needed between MSME and innovation-enabling institutes (Nwokocha et al., 2019). Badillo et al. (2017) and Kim & Hemmert (2016) also stated that large firms collaborating with MSMEs with a form of subcontracting can reduce their production burden. Thus, the available resources can be allocated to other divisions. As a result, large firms can be more efficient in their activity.

However, the partnership between smaller and larger firms can have negative effects. Yang et al. (2014) pointed out that small firms which have formed an alliance with larger firms are prone to be exploited or outlearned. Liu & Lui (2020) have identified that exploitation among MSMEs may occur because of their weak bargaining power. To minimize the risk, certain strategies are required to be undertaken by the MSMEs (Audretsch et al., 2023; Müller et al., 2017). Although the partnership is formed between small and large firms, any kind of agreement between firms in similar industries might pose a threat to the competition. Therefore, the partnership activity between smaller and larger firms must be monitored by the government (Goduscheit & Knudsen, 2015; Marchellia, 2022; Ulil Albab et al., 2023).

According to the Ministry of Cooperatives and SMEs (2019), only 7% of our small and micro businesses conduct some partnership with other institutions. The MSMEs in Indonesia seem to face several barriers to forming an alliance with them. Goduscheit & Knudsen (2015) stated that an information deficit may hinder the collaboration process. They also found that some MSMEs might be confused with legal or administration procedures that need to be done to start a collaboration.

This study aims to find out what are the driving factors of MSMEs to conduct any type of partnership that is promoted by the government. Through a quantitative called probit and logit regression, we can estimate which aspects can increase or decrease the probability of conducting a partnership. Research that focuses on MSME partnerships in Indonesia is rather scarce and most of them are conducted qualitatively or use relatively small-scale data. Therefore, this study will fill the gap in the literature. The results of this study can also help the government formulate a strategy that can boost the collaboration rate among smaller firms.

LITERATURE REVIEW

MSME in Indonesia

The definition of MSME is regulated in Government Regulation Number 7 (2021). The regulation stated that there are three groups of business namely micro, small, and medium, which are classified by their capital and yearly revenue. A micro business is an enterprise that has a maximum capital of Rp 1 billion and a revenue of a maximum of Rp 2 billion in a year. Small business has a capital in a range between Rp 2- 5 billion and yearly revenue between Rp 2-15 billion. The medium business is an enterprise with a capital of Rp 5-10 billion and yearly revenue of Rp 15-50 billion, larger than that will be classified as a large firm. The Indonesian statistics agency also has its definition for MSME (Badan Pusat Statistik, 2013). The classification of micro, small, and medium businesses is measured by the number of employees. They define a micro business as an enterprise that only has one to four employees, while a small business has 5-19 employees, and a medium business employs 20-99 persons.

MSMEs Partnership

The context partnership in this study is defined as cooperation between micro and small business and other institutions such as private companies, Government, Universities, etc. Badillo et al. (2017) mentioned in their study that there are three types of cooperation with external agents. The first one is vertical cooperation, which is carried out by customers and suppliers in the same industry group. Second, Institutional cooperation, which is carried out between MSME and University or technology center. The last type is horizontal cooperation which is conducted between competitors. According to the newest regulation of the government (2021). The partnership is defined as a skill or capacity transfer process in production and manufacturing, marketing, financing, human resources management, and technology. The government also explains the partnership between MSME and other institutions encompasses several practices. They are "Inti-plasma", Subcontracting, Franchising, General Trade, Distribution, Supply chain and other types of partnership such as; joint venture, profit sharing, outsourcing, and operational cooperation.

Previous Studies

Studies about MSME cooperation have been discussed by many scholars. Badillo et al. (2017) investigated the cooperation in research and development in the automotive industry in Spain. The study did not focus on the MSME, but the smaller firms are included in the estimation. They found that smaller firms tend to collaborate in R&D and smaller firms also tend to collaborate with university than other companies. This indicates that smaller firms might have fear of being exploited by some large companies as their partner. The study by Nwokocha et al. (2019) examined the influence of collaboration on the performance of small and medium enterprises in Nigeria. They discovered that collaboration with larger firms can expand SME innovation. However, they also found that most collaborations are limited to the production process. As a consequence, this can limit the spillover effect to smaller firms. Rezaei et al. (2015) argued that partnerships have a significant positive effect on overall firm performance but there is a limitation from their study. The research which is conducted in the Netherlands only observes high-

tech SMEs that have already a clear orientation in research and development. Rajalo & Vadi (2021) found that successful collaborative project between Universities and SMEs is highly influenced by SMEs' motivation. They also believed that partnerships between smaller firms and larger firms follow the same pattern, and that owner or staff characteristics can affect the process of collaboration. A newer study from Audretsch et al. (2023) also found that collaboration between universities or competitors can increase the innovation intensity of SMEs, the results vary considerably if the collaboration is carried out internationally.

METHOD AND DATA

This study used two datasets from the Indonesian Statistical Bureau. The first dataset is called Statistik Industri Mikro Kecil, this rich dataset contains information from Indonesian micro and small businesses in the manufacturing sector. The second dataset is Statistik Industri Besar dan Sedang. This dataset provides us with information about larger firms which is useful for our estimation later. Both datasets were collected in 2019, The data from this year gives us a small advantage because the pandemic had not occurred yet. Thus, we can get results from an economic condition without any disruption or any other special circumstances. This means we can observe the usual behavior from all actors. One major drawback of this study is that due to the nature of the dataset, we can only observe the partnership behavior of micro and small business.

The dependent variable in this study takes the form of a binary variable. 0 means that the micro and small enterprises do not conduct any form of partnership.1 means that the business conducts at least one form of partnership. The available dataset provides us with six types of partnerships. They are “Inti-plasma”, Subcontracting, General trade, Profit Sharing, Operational cooperation, and Joint venture. Table 1 shows the distribution of partnerships that were conducted by micro and small businesses in Indonesia in 2019. According to the data, only 33% of micro and small businesses formed a partnership with private companies. 9% formed a partnership with a Government or state-owned enterprise. The rest, around 58%, partnered with Non-profit organizations, Universities, and other Institutions. The data also shows that 93% of micro and small businesses stated that the partnership had brought benefits for them. Although we are not able to know what kind of benefit did they get, was it profit increase, more access to the market, technology transfer, etc.

Table 1. Distribution of partnership type

Type of Partnership	Percentage
Inti-plasma	4%
Subcontracting	6%
Profit Sharing	7%
General trade	45%
Joint-Venture	1%
Operational cooperation	19%
Others (Franchising, Supply chain, etc)	18%

Source: Badan Pusat Statistik (2019), Processed

A binary variable is normally estimated through a linear probability model (LPM). However, Horrace & Oaxaca (2006) showed a limitation of LPM. The

estimation through LPM may result in a coefficient greater than 1 or less than 0, which is not interpretable in the sense of probability and also estimation with ordinary linear square implies that heteroscedasticity exists. As a standard remedy, Horrace & Oaxaca (2006) recommended using the Logit or probit model instead. The probit and logit models are estimated through the maximum likelihood approach rather than ordinary least squares, many researchers also stated that estimation with both logit and probit can provide similar results (Chen & Tsurumi, 2010).

Equation 1 shows the estimation model where $partnership_i$ explain whether micro or small businesses form a partnership or not. β_o is a constant term while $\beta_i X_i$ is the regression coefficient from a matrix of independent variables X_i. The matrix X_i consists of micro and small business characteristics. Z_J is a matrix which consists of characteristics of medium and large firms within the same group of industry with micro and small firms. The classification of the industry sector in this study is carried out based on the International Standard Industrial Classification of All Economics Activities (ISIC), which is also adopted by the Indonesian Statistics Bureau and provided in the dataset (Badan Pusat Statistik, 2023a). u_i in the equation represents the error term and equation 2 is the description of linear probability model.

$$partnership_i = \beta_o + \beta_i X_{ij} + \beta_i Z_J + u_i \quad (1)$$

$$P(y_i = 1|X_i) = G(\beta_o + \beta_i X_i) \quad (2)$$

The logit model is explained mathematically in equation 3, where we assume that $z = (\beta_o + \beta_i X_i + \beta_i Z_J)$ and L follows a logistic distribution. On the other hand, the Probit model follows normal distribution which is described in equation 5.

$$L(z) = \frac{e^z}{1+e^z} \quad (3)$$

$$\frac{\partial L(z)}{\partial X_i} = \beta_1 L(z)[1 - L(z)] \quad (4)$$

$$F(z) = \Phi(z) = \int_{-\infty}^{z} \frac{1}{\sqrt{2\pi}} e^{-\frac{t^2}{2}} \quad (5)$$

$$\frac{\partial \Phi}{\partial x_i} = \Phi'(z)\beta_1 \quad (6)$$

According to Cornelißen & Sonderhof (2008), the coefficient from the probit and logit model cannot be interpreted directly. Instead, the estimation result is interpreted in the marginal effect, which is given by the partial derivative of the expected value of the outcome variable with respect to the regressor. The marginal effect from Logit and Probit models are described in equations 4 and 6 respectively.

The selection of determinants in this study is heavily influenced by previous research. (Fitriana et al., 2018; Kachlami & Yazdanfar, 2016; Rafiki, 2020; Rahman et al., 2017). The description of all variables is displayed in Table 2.

Table 2. Description of variables

Dependent variable	**Description**
Partnership	1=if business forms any type of partnership, 0 =else
Independent variable	
age	Age of entrepreneur
educ	Education of entrepreneur (in years)
firm_age	Age of firm
labor	Total labor hired
association	1=if business had joined the association, 0 =else
bank	1=if business had credit access to the bank, 0 = else
legal	1=if business had credit access to the bank, 0 =else
export	1=if business had conducted export activity, 0 =else
ssi	sales share to the industry
digital	1=if business used the internet for any business activity, 0 =else
certification	1=if business had certification in the business process (SNI, ISO,etc.), 0 =else
revenue	Total revenue
foreign	Share of foreign owner
output	average output in large firm
asset	average total asset in large firm
intermediate	average usage of imported intermediate goods by large firm
labor2	average number of labor hired within large firm
material	average cost for material by large firm
rnd	average cost for research and development by large firm

Source: (Badan Pusat Statistik, 2019a, 2019b), Processed

It is predicted that firm size in terms of revenue, labor force, or credit size will have a higher probability of forming a partnership (Rahman et al., 2017). Small or micro firms which have higher performance can draw more attention from large firms and attract them to collaborate. It is also estimated that an experienced firm (higher firm age, a firm with clear legal status and certification, business digitalization, and firm export ability will have a higher likelihood of conducting a partnership. Those aspects are also bounded by firm size (Rafiki, 2020), This means that when a firm is growing, those aspects, including partnership, will be achieved over time. Higher education of entrepreneurs is also expected to increase the probability of collaboration. (Fitriana et al., 2018). Higher education means that an individual has a more oriented business mindset and an entrepreneur with higher education views partnership as a way to business growth. A higher share of foreign capital in a micro and small business can also positively contribute to forming a partnership. It can be assumed that subcontracting or other types of collaboration are also included in the investment contract. A higher share of sales to similar or other industries will also increase the probability of conducting a partnership. A reliable supplier must be drawing more attention of larger firms,

As stated in the model, this study also features some independent variables which are obtained from medium and large industries. The characteristics of large firms within the same industry are expected to have an impact on the smaller firms, especially on partnerships. For example, if a large firm wants to expand to a new market and does not have enough resources to establish a whole line of manufacturing. The large firm might ask smaller firms within the area to fill the gap.

Unfortunately, due to the nature of the dataset, we cannot include variables about regional characteristics.

RESULTS

Descriptive analysis

Table 3 is the descriptive analysis of the combined dataset. The micro and small entrepreneurs have an average age of 45 years old and, the average year of schooling is 8,1 years. On average the micro and small businesses have been operated for 12 years and hired around two persons. The average amount of monthly revenue is around 15 million rupiah. Most micro and small businesses can be defined as informal because only around 5% of them have clear legal entities or have certification in their business process. As a result, only a small percentage of them have access to the bank (10%) and very small of them have exported their product (0,5%).

Table 3. Descriptive Statistics

Variable	Mean	Standard Deviation
age	45,12	10
education	8,130	4,260
association*	0,250	0,154
bank*	0,105	0,307
firm_age	12,47	10,23
labor	2,27	2,07
legal*	0,053	0,222
ssi	10,10	27,17
export*	0,005	0,070
digital*	0,245	0,430
certification*	0,056	0,230
revenue	15.500.000	106.000.000
foreign	7,36	21,58
output**	170	105
asset**	98	55
intermediate	0,13	0,12
labor2	203	96
Material**	79	55
rnd	78.726.000	130.330.000

Source: (Badan Pusat Statistik, 2019a, 2019b), Processed
Note: *Dummy variable, ** in Billion Rupiah

The variables from large firms were obtained from the average of all firms within a certain industry. From the data provided both datasets were divided into 24 categories based on industry types. Such as Food and beverage, Textile, clothing, Chemical, Electronic, Automotive, and many more. (Badan Pusat Statistik, 2019a, 2019b). The average production value from 24 Industries is 170 billion Rupiah, on average the large firms have assets with a value of around 98 billion Rupiah. The large firms spend an average of around 79 billion for materials and around 78 million Rupiah for research and development activity. It is also found that on average large firms only use around 13% of imported intermediate goods for production, this could indicate that our dependency on foreign material is not so extremely high.

Estimation results

The estimation results are displayed in Table 4. The first column shows the estimation with the logit model, while the second column displays the estimation result from probit regression. In sum, both models show a similar relationship with a slight difference in magnitude and significance. Nevertheless, the variable can be interpreted in the same way in both models.

Table 4. Estimation results

	1	2
	Logit	Probit
age	-0,000244**	-0,000271**
education	-0,0000161	-0,0000942
association	-0,000281**	-0,000232*
bank	0,00503***	0,00562***
firm_age	0,0526***	0,0560***
labor	-0,00828**	-0,00796**
legal	0,0198***	0,0211***
ssi	0,000834***	0,000877***
export	0,00765	0,013
digital	0,0295***	0,0294***
certification	0,0364***	0,0379***
revenue	0000000000157**	0000000000191***
foreign	0,000843***	0,000891***
output	-0,0304***	-0,0308***
asset	-0,0267***	-0,0276***
intermediate	0,0541***	0,0564***
labor2	0,000169***	0,000168***
material	0,0713***	0,0737***
rnd	0000000713***	0000000693***
N	85188	85188

Notes: the results are displayed in the marginal effect of each variable.
* p<0.05, ** p<0.01, *** p<0.001

The only variables that exhibit no significant relationship are educational background from entrepreneurs and export activity from micro and small businesses. From the firm size perspective, higher revenue means a higher probability of forming a partnership. However, more employees do not mean a higher probability of collaboration. The aspects which have relevance to formality such as legality, certification, and access to banks increase the probability of smaller enterprises to partner with other institutions. If a business has joined an association, it is less likely for them to form a partnership. Micro and small businesses might have opinions that joining an association or being a cooperative member can be profitable enough for them rather than forming a partnership that might be bound by some legal contract and can be complicated for some entrepreneurs on a smaller scale. On the other side, joining associations or cooperatives would take less effort. If a firm has applied the internet for its business activity, it can increase the probability of collaboration. A higher presence in the digital world can catch more attention of other institutions. The same argument can also be applied to sales share

in other or similar industries. If a micro or small firm conducts transactions regularly with other firms, this can be viewed as a potential partner to collaborate with larger firms. These results are partially aligned with previous research.(Fitriana et al., 2018; Rahman et al., 2017)

The variables from large industries also show interesting insight. Higher revenue and assets from larger firms in the same industry group decrease the probability for smaller businesses to form a partnership. This can be roughly analyzed that if a large firm already has higher revenue or assets, they believe they can grow without collaboration with any type of firm. Interestingly, more employees and higher material costs increase the probability of micro and small firms collaborating. This could mean that large firms might want to decrease their burden and cost. Thus, they might search for a reliable partner to alleviate the problem. The same idea can also be applied to interpreting the share of imported intermediate goods. Purchasing from other countries might be troublesome and costly at some point. Therefore, it might be wise to search the alternatives locally and then this could lead to a collaboration with a smaller firm. An increase in research and development costs among larger firms can also increase the probability for smaller firms to form a partnership. It can be argued, that firms with high technology capacity or specialized in technology might exist. This type of smaller firm could be a highly potential partner for other institutions to grow the business and the economy. Research and development costs in large firms might also include the search cost for a potential research partner.

CONCLUSION AND LIMITATION

This study has investigated the determinants of forming partnerships among micro and small businesses. The estimation results show that most factors which have a strong connection with business formality positively contribute to forming a partnership. Foreign ownership of a firm and more sales in the form of business-to-business also increase the probability for micro or small firms to partner with other institutions. Therefore, it is recommended for policymakers to convert much more informal business to formal business. The government also should signal the presence of micro and small businesses to large firms or other institutions, a database with complete information for micro and small business would facilitate the partnership search. This study also includes some characteristics of large firms within the same industry as smaller firms. However, the effect of larger firm's characteristics is still unsettled.

The limitation of this study is that regional characteristics cannot be observed. It is also possible that we need different kinds of strategies to promote partnerships in different areas. The quality of the partnership agreement cannot be observed thoroughly. Each partnership agreement among micro and small businesses can be different. It is also possible that one firm might have different types of partnerships with different partners. The next study should measure the intensity of the partnership agreement and its impact on the business itself. This kind of study will also help the stakeholders to identify the existence of exploitation. It is also interesting to analyze the determinants of forming an agreement from the perspective of large firms. What factors encourage them to collaborate with smaller firms which can promote growth in smaller firms? It is also advised to investigate

the impact of this partnership on larger firms because a fair partnership should be profitable on both sides.

REFERENCES

Asian Development Bank. (2023). *2023 Asia Small and Medium-Sized Enterprise Monitor*. https://data.adb.org/dataset/2023-asia-small-and-medium-sized-enterprise-monitor

Audretsch, D. B., Belitski, M., Caiazza, R., & Phan, P. (2023). Collaboration strategies and SME innovation performance. *Journal of Business Research*, *164*, 114018. https://doi.org/10.1016/j.jbusres.2023.114018

Badan Pusat Statistik. (2013). *Statistik UMKM Tahun 2012-2013*.

Badan Pusat Statistik. (2019a). *Survei Industri Mikro dan Kecil Tahunan 2019* [dataset].

Badan Pusat Statistik. (2019b). *Survei Tahunan Perusahaan Industri Manufaktur 2019* [dataset].

Badan Pusat Statistik. (2023a). *Jumlah Perusahaan IBS (KBLI 2020) Unit, 2020-2021*. https://www.bps.go.id/id/statistics-table/2/MjAwIzI=/jumlah-perusahaan-ibs--kbli-2020-.html

Badan Pusat Statistik. (2023b). *Profil Industri Mikro dan Kecil 2022*.

Badillo, E. R., Galera, F. L., & Moreno Serrano, R. (2017). Cooperation in R&D, firm size and type of partnership: Evidence for the Spanish automotive industry. *European Journal of Management and Business Economics*, *26*(1), 123–143. https://doi.org/10.1108/EJMBE-07-2017-008

Brink, T. (2017). SME routes for innovation collaboration with larger enterprises. *Industrial Marketing Management*, *64*, 122–134. https://doi.org/10.1016/j.indmarman.2017.01.010

Chen, G., & Tsurumi, H. (2010). Probit and Logit Model Selection. *Communications in Statistics - Theory and Methods*, *40*(1), 159–175. https://doi.org/10.1080/03610920903377799

Cornelißen, T., & Sonderhof, K. (2008). Marginal effects in the probit model with a triple dummy variable interaction term. *Diskussionsbeitrag*, *386*.

Etemad, H., Wright, R. W., & Dana, L. P. (2001). Symbiotic International Business Networks: Collaboration between Small and Large Firms. *Thunderbird International Business Review*, *43*(4), 481–499. https://doi.org/10.1002/tie.1009

Fitriana, W., Rustiadi, E., Fauzi, A., & Anggraeni, L. (2018). Penguatan Inklusi Keuangan pada Industri Kreatif Berskala Mikro Kecil di Sumatra Barat. *Jurnal Ekonomi dan Pembangunan Indonesia*, *18*(3), 140–153. https://doi.org/10.21002/jepi.2018.20

Goduscheit, R. C., & Knudsen, M. P. (2015). How Barriers to Collaboration Prevent Progress in Demand for Knowledge: A Dyadic Study of Small and Medium-Sized Firms, Research and Technology Organizations and Universities. *Creativity and Innovation Management*, *24*(1), 29–54. https://doi.org/10.1111/caim.12101

Horrace, W. C., & Oaxaca, R. L. (2006). Results on the bias and inconsistency of ordinary least squares for the linear probability model. *Economics Letters*, *90*(3), 321–327. https://doi.org/10.1016/j.econlet.2005.08.024

Indonesian Chamber of Commerce and Industry. (2023). *UMKM Indonesia*. https://kadin.id/data-dan-statistik/umkm-indonesia/

Kachlami, H., & Yazdanfar, D. (2016). Determinants of SME growth: The influence of financing pattern. An empirical study based on Swedish data. *Management Research Review*, *39*(9), 966–986. https://doi.org/10.1108/MRR-04-2015-0093

Kim, J., & Hemmert, M. (2016). What drives the export performance of small and medium-sized subcontracting firms? A study of Korean manufacturers. *International Business Review*, *25*(2), 511–521. https://doi.org/10.1016/j.ibusrev.2015.09.002

Liu, C.-L. (Eunice), & Lui, S. (2020). Comparing the impact of alliance-learning activities on alliance performance across small and large firms. *Knowledge Management Research & Practice*, *18*(2), 188–198. https://doi.org/10.1080/14778238.2019.1673674

Marchellia, S. N. (2022). *Pengawasan Kemitraan UMKM di Masa Pandemi COVID-19 oleh KPPU (Studi Kasus Putusan Perkara No. 16/ KPPU-K/2019)*. *2*(1).

Ministry of Cooperatives and SME. (2019). *Gambaran UMKM Indonesia*. Kementerian Koperasi dan UKM Republik Indonesia. https://www.kemenkopukm.go.id/kumkm-dalam-angka/?type=indikator-umkm&sub=0

Ministry of SMEs and Startups. (2024). *Status of Korean SMEs*. https://www.mss.go.kr/site/eng/02/20202000000002019110610.jsp

Müller, J., Maier, L., Veile, J., & Voigt, K.-I. (2017). Cooperation strategies among SMEs for implementing industry 4.0. *Proceedings of the Hamburg International Conference of Logistics (HICL)*. https://doi.org/10.15480/882.1462

Nwokocha, V. C., Nwankwo, C., & Madu, I. A. (2019). The role of subcontracting on innovation: An assessment of small and medium enterprises in Nigeria. *Production & Manufacturing Research*, *7*(1), 88–108. https://doi.org/10.1080/21693277.2019.1583142

OECD. (2022). *Financing SME and Entrepreneurs 2022: An OECD Scoreboard*. https://www.oecd-ilibrary.org/sites/a3891ad8-en/index.html?itemId=/content/component/a3891ad8-en

Peraturan Pemerintah Nomor 7 Tahun 2021 Tentang Kemudahan, Pelindungan, Dan Pemberdayaan Koperasi Dan Usaha Mikro, Kecil, Dan Menengah, 7, Presiden Republik Indonesia (2021).

Rafiki, A. (2020). Determinants of SME growth: An empirical study in Saudi Arabia. *International Journal of Organizational Analysis*, *28*(1), 205–225. https://doi.org/10.1108/IJOA-02-2019-1665

Rahman, A., Rahman, M. T., & Belas, J. (2017). Determinants of SME Finance: Evidence from Three Central European Countries. *Review of Economic Perspectives*, *17*(3), 263–285. https://doi.org/10.1515/revecp-2017-0014

Rajalo, S., & Vadi, M. (2021). Collaboration potential between low-capacity SMEs and academic researchers determined by symmetry of motivation. *Technovation*, *107*, 102304. https://doi.org/10.1016/j.technovation.2021.102304

Rezaei, J., Ortt, R., & Trott, P. (2015). How SMEs can benefit from supply chain partnerships. *International Journal of Production Research*, *53*(5), 1527–1543. https://doi.org/10.1080/00207543.2014.952793

Sawers, J. L., Pretorius, M. W., & Oerlemans, L. A. G. (2008). Safeguarding SMEs dynamic capabilities in technology innovative SME-large company partnerships in South Africa. *Technovation*, *28*(4), 171–182. https://doi.org/10.1016/j.technovation.2007.09.002

Ulil Albab, S. H. S., Widayanto, E., & Sibarani, K. B. (2023). Pengawasan Pelaksanaan Kemitraan UMKM dan Usaha Besar: Perbandingan Pengaturan di Indonesia dan Malaysia. *Jurnal Persaingan Usaha*, *3*(1), 74–86. https://doi.org/10.55869/kppu.v3i1.98

Yang, H., Zheng, Y., & Zhao, X. (2014). Exploration or exploitation? Small firms' alliance strategies with large firms. *Strategic Management Journal*, *35*(1), 146–157. https://doi.org/10.1002/smj.2082