Supplier performance evaluation factors for agroindustrial supply chain: A systematic review

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KEYWORDS	ABSTRACT
	Supplier performance is critical in maintaining the stability of the supply chain activities in the agroindustry. Their performance needs to be assessed using relevant factors to choose reliable and dependable suppliers. A significant amount of research has been done to examine essential factors in selecting reliable suppliers in supply chains from various perspectives. The divergence of research findings has led to many assessment factors that must be considered when choosing the supplier. Therefore, this study aimed to analyze factors affecting agroindustry supplier performance using a systematic review. The research from reliable databases such as Elsevier, Emerald, Proquest, and Taylor & Francis from 2010 to 2020 has been analyzed. Similarity and relevance analysis has been applied to form the factors and eliminate the redundant and irrelevant factors. As a result, fourteen suppliers' performance factors to support an effective supply chain system are identified. These factors include customer care, economics, quality improvement, stakeholder coordination, production performance, organizational improvement, human resources, food safety, risk factors, company image, market, geography, corporate social responsibility (CSR), and environmental management system (EMS).

Introduction

Agroindustry is one of the competitive industries that encourage the stakeholders to pay attention, evaluate, and improve the business system so that they can compete and survive to gain the maximum market share. Agroindustry is defined as the enterprise that processes the agroindustrial raw material into value-added products, including food and non-food products. In the agroindustry, supply chain operation is also enforced since it is one of the critical aspects that supports the success of business processes, especially when dealing with perishable materials. The supply chain is a structured and planned activity to obtain raw materials into semi-finished goods and then send them to the market through a systematic distribution process (Chong et al., 2009). The purpose of the supply chain is to create more valuable products to be sold in compliance with the customers' demands (Heizer et al., 2016). Supply chain activities in the agroindustry are relatively different from manufacturing industries since the agroindustry has certain limitations, such as perishable materials, seasonality, and the variety of yield quality (Risqiyah and Santoso, 2017). These issues correlate significantly with the supplier's ability to deal with these constraints and find a solution.

The supplier is one of the supply chain stakeholders who play an essential role in ensuring the continuity of raw materials. Upstream disruptions in the supply chain, such as shortages of raw materials, delivery delays, and low quality, lead to more significant problems on the downstream side (Kähkönen et al., 2021; Alavi et al., 2021). As a result, supplier performance evaluation must be carefully considered to avoid future problems in meeting customer demands because it significantly impacts quality maintenance, cost reduction, supply chain efficiency, and customer satisfaction (Wu et al., 2021; Alavi et al., 2021).

Supplier performance evaluation is a complex task requiring comprehensive criteria to be

considered to find competent and reliable suppliers. To date, there has been a significant amount of research on supplier performance evaluation topics from various perspectives and industries. However, the different terms for the same concept cause practitioners to need clarification when applying the idea in their respective industries. Lack of consistency in the definition of the supplier criteria and the inclusion of too many factors lead to an ineffective and inefficient supplier selection process. The comprehensive selection process is also challenging because it produces biased and inaccurate results (Dania et al., 2018). Therefore, a systematic review of the supplier selection factors is proposed in this study to address the limitations of the current research. This study aimed to examine the relevant research findings and shed some light on the following key research question: "What are the supplier selection factors that must be considered in evaluating supplier performance in the agroindustry supply chain?".

Research Methods

This study utilized the systematic literature review as the main methodology to gather, evaluate, and analyze the recent literature. A systematic review is a structured and thorough approach to obtaining and selecting appropriate research findings from theoretical perspectives (Touboulic and Walker, 2015). The main focus of this review is a broader landscape of research in the supplier evaluation process or supplier selection in the agroindustry. Firstly, the exploratory search was conducted in several databases such as Elsevier, Emerald, Proquest, and Taylor&Francis from 2010 to 2021 to find high-quality and peer-reviewed research articles. Several keywords have been applied to capture the relevant articles broadly. The term "supplier" becomes the main keyword, and it is combined with the performance evaluation terms, such as "performance", "evaluat*", "selecti*", and "measurement". As the supporting keyword, terms that represent agroindustry, such as "agroindustr*", "agri-food", "food", and "food industr*", have been applied to the limit of the type of industry. These key terms are combined to create a series of strings, e.g. ("supplier") AND ("performance" OR "evaluat*" OR "selecti*" OR "measurement") AND ("agroindustr*" OR "agri-food" OR "food" OR "food industr*"). The searching process is applied to the research articles' titles, abstracts, and keywords.

Any duplication was removed after the search, and irrelevant research articles were excluded from the following process. Then, the frequency analysis was performed to determine the frequency of each factor applied in the articles. Moreover, it was followed by content analysis to assess the correlation between the factors and similarities of the definition to shape and reduce the number of factors. The content analysis consists of two steps. The first step is similarity analysis to examine the resemblances in the definition and concept. Then, the next step is relevance analysis to eliminate the redundant factors and cluster factors that have the relevant value, concept, and activities into one group to make the factors more brief, compelling, and applicable (Dania et al., 2018).

Results and Discussion

Using a combination of keywords, 194 research articles were selected from four databases as potential articles related to the review focus. However, after the screening process by eliminating the duplication, reading abstracts, and the content thoroughly, only 25 articles are relevant and comprise the supplier performance factors for the agroindustry supply chain. There are 25 articles admitted for further process of frequency and content analysis. The selection process of the systematic review can be seen in Figure 1.

Of the 25 articles, most of the articles were obtained from the *Journal of Cleaner Production, Mathematical Problems in Engineering, and International Journal of Production Research*, which contains two articles for each journal. The rest of the articles were taken from *Computers & Industrial Engineering, The International Journal Of Management Science, Procedia Manufacturing, Transportation Research Procedia, Computers & Operation Research, Supply Chain Management: An International Journal, Logistics Information Management, Business Process Management Journal, Grey Systems: Theory and Application, The International Journal of Logistics Management, Symmetry, Journal of Advanced Computational Intelligence and Intelligent Informatics, Sustainability, African Journal of Agricultural Research, North American Journal of Fisheries Management, Journal of Business-to-Business Marketing, Production & Manufacturing Research: An Open Access Journal, The Service Industries Journal, and International Journal of Sustainable Engineering.*
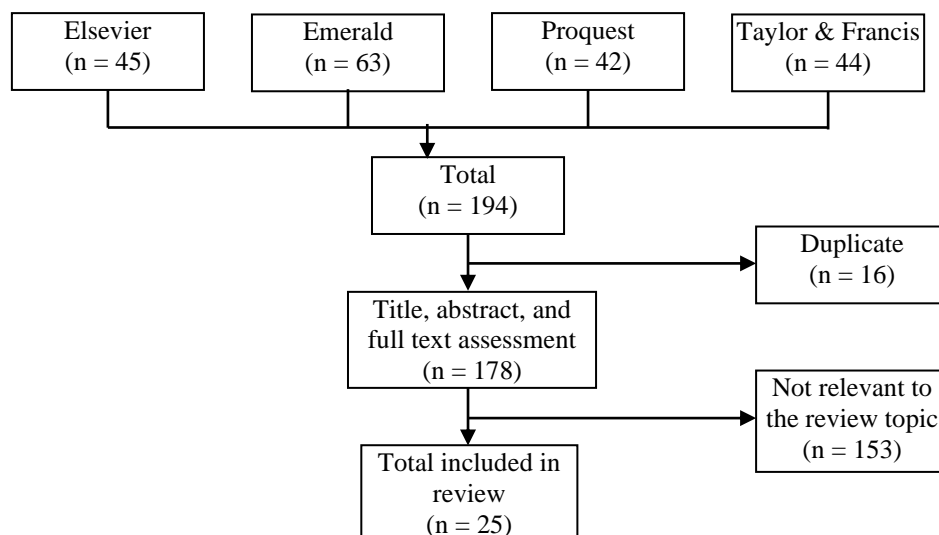
Figure 1. Systematic review of processes in supplier performance criteria in agroindustry supply chain

Frequency analysis

The systematic review began with frequency analysis. This step evaluates how often the factor has been used in several articles. From 25 articles, 49 supplier performance evaluation criteria were found, as shown in Table 1. According to the frequency analysis, the factor with the highest frequency count is product quality (in 21 articles). It is followed by service and delivery (13 articles), then cost (12 articles). However, many factors only appear in one article, such as mutual trust, information, resource consumption, fuel quality, employee performance, supportive activity, reliability, business, security, accuracy, willingness to corporate, stakeholder influence, implementation, and operation. Regardless of the frequency of appearance of the factors in the articles, each factor has its importance level depending on the researcher's consideration. In other words, frequency analysis cannot be used as the primary analysis method to determine the critical factor to consider in selecting the supplier in the supply chain. Therefore, this study applied additional content analysis to shape and cluster the findings to improve them.

Content analysis

In the content analysis, two stages were carried out to analyze the factors that affect supplier performance in the agroindustry. The first analysis is similarity analysis, and the second is relevance analysis. Analysis content is a method that can be used in qualitative and quantitative research. Analysis content can help clarify if there is confusion due to data selection or a lack of knowledge about specific phenomena (Elo and Kyngäs, 2008). Similarity analysis is used to simplify factors that have similarities based on concepts, activities, or objectives, thereby eliminating repetitive factors and ambiguities of factors with similar meanings and definitions. Relevance analysis serves to combine factors with diverse definitions but is still relevant from one factor to another in the same topic.

Similarity analysis

In the systematic literature review, it is necessary to examine each factor's definition to make it more concise and easier to understand. Using similarity analysis, factors with the same concept are equated with more commonly used terms and are easier to understand. Before conducting the analysis, it is critical to define each factor so that the concept can be easily understood. The definition of 49 factors that affect *supplier* performance can be seen in Table 2.

In this stage, 49 factors were initially grouped into 27 factors based on the similarity definitions to other factors. This analysis revealed that the frequency of the factors used across 25 literature journals had changed. Figure 2 shows the frequency of factors following the analysis.

Product quality is the most commonly used factor. Product quality is a priority factor for agroindustry to assess supplier performance by looking at the excellent quality of products, allowing suppliers and other agroindustries to form relationships. Product quality directly impacts all activities and production activities that affect the company's reputation (Kuo and Lin, 2012).

Table 1. Supplier performance criteria reported in the research articles

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
Banaeian et al. (2018)	v		v	v				v																																									
Govindan et al. (2017)			v			v	v	v	v																																								
Lau et al. (2020)	v		v	v	v	v	v						v	v		v	v		v																														
Liu et al. (2019)	v	v	v			v	v	v	v	v	v								v	v	v	v	v		v	v		v	v	v				v														v	v
Lu et al. (2019)						v	v																									v			v														
Taherdoost and Brard (2019)	v	v	v	v	v	v	v	v	v			v	v		v	v	v	v	v	v			v	v			v							v			v	v	v										
Żak (2015)			v			v	v																	v															v										
Bai and Sarkis (2014)			v			v																																v	v	v									
Çebi and Otay (2016)								v								v																										v	v						
Diba and Xie (2019)			v			v		v	v													v																				v							
Lau et al. (2018)	v		v	v	v		v							v		v		v																															
Voss (2013)			v	v		v													v																									v					
Frej et al. (2017)			v	v																																		v	v		v				v				
Chin-Nung et al. (2012)	v		v																		v														v											v			
Phochanikorn and Tan (2019)		v	v			v	v	v			v	v				v												v	v	v																			v
Shen et al. (2012)			v			v	v		v																									v															

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
Wang et al. (2020)	v		v			v	v				v					v																				v			v										
Zhang et al. (2020)	v		v	v	v	v		v														v			v			v							v														v
Azadnia (2016)			v				v																												v														
Banaeian et al. (2015)	v	v	v	v		v		v	v	v						v		v																	v														
Büyüközkan (2012)	v		v			v		v																																									
Ng (2010)							v	v	v		v		v			v		v		v	v														v	v			v		v					v			
Lin et al. (2015)	v		v	v					v							v		v		v																									v				
Lin (2013)	v		v							v	v		v					v	v	v																									v				
Shaik and Abdul-Kader (2011)	v		v			v		v	v	v										v	v																												
TOTAL	13	4	21	8	5	12	13	11	10	3	4	6	3	2	2	8	1	3	7	2	6	6	3	1	2	1	1	3	2	2	1	2	1	2	4	4	1	3	3	2	4	1	1	1	2	1	1	2	1

1. Service	8. EMS	15. Commercial position	22. Management & organizational	29. Employee right	36. Company image	43. Security
2. Service product	9. Technology	16. Relationship	23. Communication system	30. Health and safety	37. Reliability	44. Accuracy
3. Product quality	10. Production facilities	17. Mutual trust	24. Information	31. Employee performance	38. Time	45. R & D capability
4. Price	11. Production capacity	18. Risk factors	25. Attitude	32. Professionalism	39. Flexibility	46. Willingness to corporate
5. CSR	12. Quality system & process	19. Geography	26. Resource consumption	33. Supportive activities	40. Innovation	47. Stakeholders' influence
6. Cost	13. Food safety	20. Market	27. Fuel quality	34. Economy	41. Logistics	48. Pollution control
7. Delivery	14. Warranties & claim policies	21. Financial position	28. Eco-design	35. Performance history	42. Business	49. Implementation and operation

Table 2. Similarity analysis based on the definition of the factors

Criteria	Reported in the references	Definition	Similarities	Terms Used
Service	13	*Supplier*'s ability to provide products and serve customer demand, such as information, delivery, warranty, and repair, among other things (Lau et al., 2020; Liu et al., 2019; Banaeian et al., 2015; Taherdoost and Brard, 2019).	Focusing on all services that *suppliers* can provide and that buyers or partners require to run a business	*Service*
Service product	4	The *supplier*'s ability to repair defective or damaged products and return them to excellent condition(Taherdoost and Brard, 2019; Liu et al., 2019; Banaeian et al., 2015; Phochanikorn and Tan, 2019).		
Communication system	3	A sound communication system that is precise and fast in data information, including order progress(Liu et al., 2019; Taherdoost and Brard, 2019; Żak, 2015).	Concentrating on information dissemination through effective communication	*Communication system*
Information	1	Organizational transparency in providing precise and accurate information (Zhang et al., 2020).		
Employee performance	1	Worker performance by considering their health and safety through conducting training to improve performance (Zhang et al., 2020).	Focusing on performance and skills as a workforce	*Employee performance*
Professionalism	2	Skills and competencies expected in performing a particular job (Taherdoost and Brard, 2019).		
Attitude	2	Attitude towards compliance and procedures, agreements, and norms when dealing with work partners (Taherdoost and Brard, 2019; Liu et al., 2019)		
Relationship	8	Relationships created between *suppliers*, partners, and customers by committing to long-term connections through information and expertise (Lau et al., 2020; Çebi and Otay, 2016; Lin, 2013).	Emphasizing relationships made with colleagues in building trust and improving performance	*Relationship*
Mutual trust	1	The level of trust that exists between suppliers and buyers in fulfilling mutually agreed-upon obligations. (Taherdoost and Brard, 2019).		
Stakeholder influence	1	Partner assistance in project execution, standards, and fellow partner development (Liu et al., 2019).		
Willingness to corporate	1	Capability and availability to work with other organizations to improve their quality (Ng, 2010).		
Company image	4	The reputation and status that the company or organization establishes based on the opinions of others (Ribeiro et al., 2020; Taherdoost and Brard, 2019; Shen et al., 2012).	Focusing on both the organization's existing and growing reputation based on data and future performance	*Company image*

Performance history	4	Past supplier performance that is evaluated in terms of its impact on the economy, society, organizations, and environment (Taherdoost and Brard, 2019; Banaeian et al., 2015).		
Business	1	Reputation, financial strength, and management skills in running a business (Çebi and Otay, 2016).		
Commercial position	2	Organizational planning for carrying out business objectives, reasons, and actions, including finances, assets, and stock, to maintain market reputation (Lau et al., 2020; Taherdoost and Brard, 2019).		
Reliability	1	Reliable supplier quality in light of organizational profile and financial stability (Taherdoost and Brard, 2019)		
Food safety	3	Certificates that the organization owns attesting to the safety of its products, manufacturing processes, and other aspects of regulatory compliance (Lin, 2013; Lau et al., 2018).	Highlighting product safety through warranties and certifications	*Food safety*
Warranties and claim policies	2	Written guarantees provided in the replacement or repair of the product following the conditions that have been imposed by providing compensation or liability (Taherdoost and Brard, 2019).		
Employee right	2	The rights that all employees have, such as employment contracts, insurance, compensation, as well as working hours standards, must be provided by the organization (Liu et al., 2019; Phochanikorn and Tan, 2019).	Focusing on the safety and health of workers who have become the rights of every worker	*Employee right*
Health and safety	2	The policy that the organization provides to maintain the safety and health of workers by providing training, education, appropriate rewards, and equipment for insurance (Phochanikorn and Tan, 2019; Liu et al., 2019).		
Delivery	13	The *supplier*'s ability to deliver to the buyer safely, on time, vehicles that meet the agreed requirements and to improve service to consumers (Żak, 2015; Liu et al., 2019; Taherdoost and Brard, 2019; Govindan et al., 2017; Shen et al., 2012; Lau et al., 2020).	Focusing on the delivery process in order to provide the customer with excellent service	*Delivery*
Logistics	4	Accuracy, suitability, and safety of the selected mode of transportation (Diba and Xie, 2019; Frej et al., 2017).		
Environmental management system	11	The system that the organization establishes and runs in maintaining the environment. The organization also takes several actions to protect the environment, including energy, water, waste, raw materials, and etc. (Govindan et al., 2017; Lu et al., 2019; Diba and Xie, 2019;	Focusing on caring about the surrounding environment in each activity and the materials used	*Environmental management system*

		Phochanikorn and Tan, 2019; Wang et al., 2020; Azadnia, 2016; Büyüközkan, 2012).		
Eco-design	3	Planning and implementation made by the organization in paying attention to the environment from all aspects of the environment (Liu et al., 2019; Phochanikorn and Tan, 2019; Zhang et al., 2020).		
Pollution control	2	Assessment of the impact of the pollution emitted and the ability to reduce pollution to prevent environmental damage (Liu et al., 2019; Zhang et al., 2020).		
Resource consumption	1	The use of resources in a period includes energy, raw materials, and water (Liu et al., 2019).		
Fuel quality	1	Stable fuel quality and safety for use (Lu et al., 2019).		
Financial position	6	A sound and stable financial position of *suppliers* increases the standard of *supplier* performance, including assets, shares, and others (Ng, 2010; Liu et al., 2019).	Focusing on the financial state of the organization.	*Financial position*
Economy	2	Criteria that consider the profit in terms of all qualitative elements to get the most considerable profit (Lu et al., 2019; Azadnia, 2016)		
R&D capability	2	Ability to find and develop products to improve organizational performance (Liao and Kuo, 2014; Lin, 2013).	Focusing on organizational development as well as improving performance by innovating or doing new things	*R&D capability*
Innovation	2	Suppliers who have innovations, both in developing products and the process of implementing organizational activities, to reduce costs (Ng, 2010; Bai and Sarkis, 2014).		
Management & organizational	6	Management and organizational capacity in running the company must be consistent and effective in running and resolving problems in all company activities (Ng, 2010; Diba and Xie, 2019; Taherdoost and Brard, 2019).	Concentrating on effectively and steadily developing and implementing an organization in every aspect	*Management & organizational*
Implementation & operation	1	The implementation and execution of plans that suppliers and consumers have made in carrying out environmental management practices for the shake of sustainable shared management (Phochanikorn and Tan, 2019).		
Production capacity	4	The *supplier*'s ability to fulfill orders in quantity or volume or the ability to produce goods (Liu et al., 2019; Taherdoost and Brard, 2019; Phochanikorn and Tan, 2019).	concentrating on *suppliers'* capacity to satisfy a range of demand types	*Production capacity*
Flexibility	3	The supplier's ability to handle changes in the number and date of orders, as well as product changes (Bai and Sarkis, 2014; Frej et al., 2017).		

Product quality	21	The supplier's ability to provide quality products offered or purchased, the better and more consistent the product, the higher the selling price and enthusiasm (Liu et al., 2019; Banaeian et al., 2018; Taherdoost and Brard, 2019).	N/A
CSR	5	*Supplier*'s responsibility in maintaining the surrounding environment, work environment, labor, and social conditions (Taherdoost and Brard, 2019; Lau et al., 2020).	N/A
Geography	7	The *supplier*'s advantageous geographical location includes distribution proximity, transportation problems, punctuality, and costs (Lin, 2013; Liu et al., 2019; Taherdoost and Brard, 2019).	N/A
Security	1	The level of security of the entire supply chain from the production process, delivery, and information (Voss, 2013).	N/A
Accuracy	1	Accuracy in the quantity of deliveries made within a predetermined time (Frej et al., 2017).	N/A
Risk factors	3	Measurable characteristics such as assets, prices, and economic position can affect the organization's profits or harm the organization (Lau et al., 2020; Taherdoost and Brard, 2019).	N/A
Market	2	Knowledge of market conditions with previous organizational experience (Liu et al., 2019; Lin, 2013).	N/A
Supportive activities	1	Activities encourage employees to develop further to improve internal organization (Liu et al., 2019).	N/A
Time	3	The timeliness and speed of time required to complete tasks such as delivery, reaction, lead time, etc. (Żak, 2015; Bai and Sarkis, 2014; Frej et al., 2017).	N/A
Quality system & process	6	The quality and ability of suppliers to identify and analyze the existing systems and processes in the company for optimization (Taherdoost and Brard, 2019; Ng, 2010).	N/A
Price	8	The price that needs to be paid by the buyer to the *supplier* related to the purchase of products that are inclusive of taxes, etc. (Lau et al., 2020; Frej et al., 2017; Banaeian et al., 2018; Taherdoost and Brard, 2019).	N/A
Cost	12	Costs associated with a product, delivery, storage, the manufacturing process, labor, a guarantee, and other overhead expenses (Govindan et al., 2017; Lau et al.,	N/A

		2020; Liu et al., 2019; Diba and Xie, 2019; Shaik and Abdul-Kader, 2011; Żak, 2015; Bai and Sarkis, 2014).	
Production facilities	3	Facilities owned by the organization in supporting or implementing the production process (Liu et al., 2019; Banaeian et al., 2015; Ng, 2010).	N/A
Technology	10	The ability of *suppliers*, in terms of technology, to support processes and performance. Knowledgeable technicians also help this facility (Diba and Xie, 2019; Çebi and Otay, 2016; Liu et al., 2019; Taherdoost and Brard, 2019).	N/A
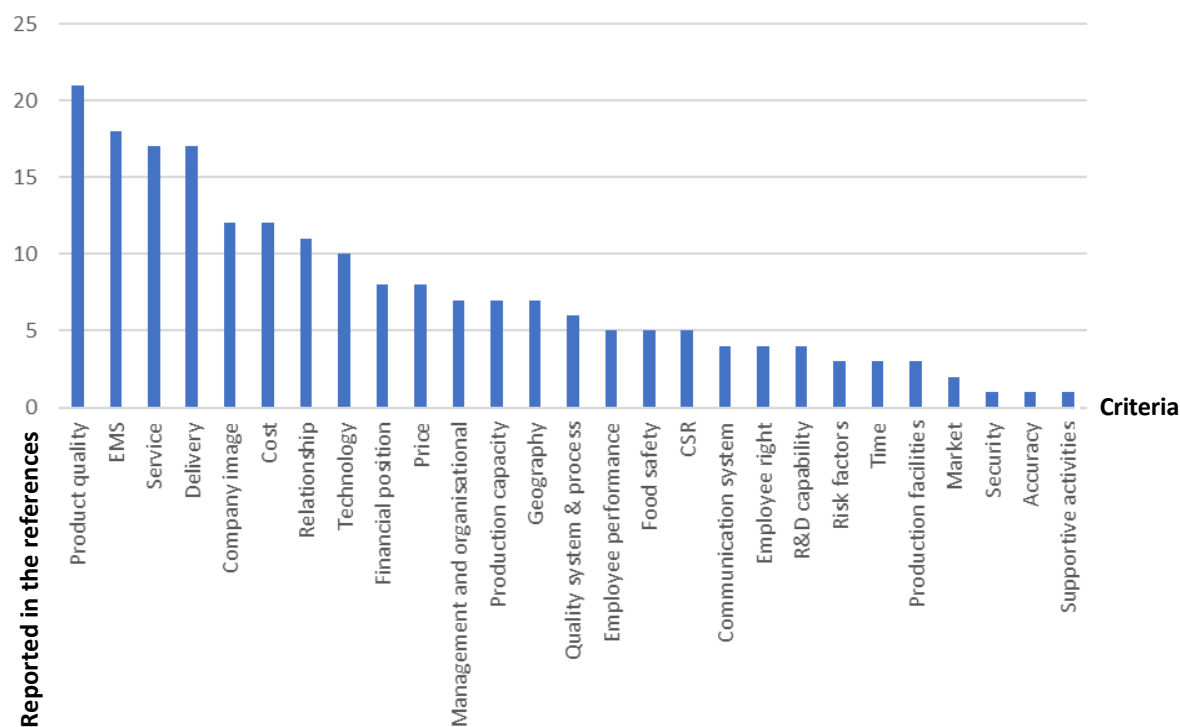
Figure 2. Frequency similarity analysis of the supplier performance factors

Relevance analysis

Following the similarity analysis, 27 factors emerged that could be further analyzed in relevance analysis. Factors with a relationship and commonalities in terms of concepts, values, or activities are generalized into one category, while the rest remain independent. Thus, based on the process in the relevance analysis, the number of supplier evaluation factors was reduced from 27 to 14, which can be seen in Figure 3.

a. Customer care

The first factor is customer care. This component characterizes the activities or services that must be adhered in the supplier. The services must be top-notch and comprehensive. This activity is critical in considering supplier performance. The better the services provided, the better the supplier's performance. Thus, the better the supplier's performance, the more satisfied the consumer. Customer care factors must be considered service, delivery, time, accuracy, and security. Excellent customer service helps the supply chain to increase the customer's understanding and accuracy of the customer demand (Wang et al., 2021).

b. Production performance

The second factor is production performance. This component represents the suppliers' ability to provide or produce raw materials for the agro-industrial sector. In addition to services, production is one of the crucial things in considering supplier performance. Three things that affect production performance are capacity, facilities, and technology. Poor production performance on the supplier side will lead to a bottleneck in the supply chain system (Garnett et al., 2020).

c. Quality improvement

The third factor that affects supplier performance is quality improvement, including the quality of products, systems, and processes. There are three factors: product quality, quality system & process, and R& D. Performance is the result of how suppliers carry out activities to fulfill the industrial's demand. The supplier's performance is excellent and accurate if the product quality is as promised to the customer. The supplier's quality, including how to treat the uncertainty, will impact the overall quality of the product and system (Quigley et al., 2018). Additionally, research and development can be done to improve quality to determine which aspects need improvement. The existence of many competitors forces the supplier to offer the best quality product, process, and

system. Every aspect must be updated to be more effective, efficient, and inexpensive to maintain or increase product quality.

d. Human resources

The fourth factor is human resources which includes employee performance and rights. Employees are vital in the organization since they perform all tasks using their skills and abilities. Improving employee capabilities will impact the performance of the entire supplier (Arijanto et al., 2020). The human resource is responsible for all service activities, production, decision-makers, and other factors. In looking at supplier performance, what needs to be considered from the employee is the performance and rights that each employee must have. Employee rights include salary, leave, insurance, and security equipment in carrying out activities. Failure to fulfill the employee's rights causes work accidents, unproductive, unenthusiastic, and unsatisfied employees. As a result, the overall supplier's performance will be declined.

e. Organizational improvement

The fifth factor is organizational improvement or development. Organizational improvement is carried out to help the company continue to thrive in the face of numerous competitors. Consequently, it requires strong performance from every internal department of the organization. Having concrete business goals outlined in the organization's activities and operation process is essential to support the development of the business. This factor includes management & organization and supportive activities. In addition, organizational culture is also one factor that supports the enhancement of innovation in suppliers (Sikombe and Phiri, 2019).

f. Economic

The sixth factor is economic, which encompasses the cost, price, and financial position. As a company that needs a significant profit or result, a supplier must also calculate the economic value. A supplier must have a reliable financial status by carrying out the correct planning and calculations to maintain the supplier's performance. Considering the economic value of a supplier can be seen by calculating the price, cost, and financial position. Controlling the company's financial or economic position may allow for determining the direction of business development and managing its development according to predetermined plans or targets (Andekina and Rakhmetova, 2013).
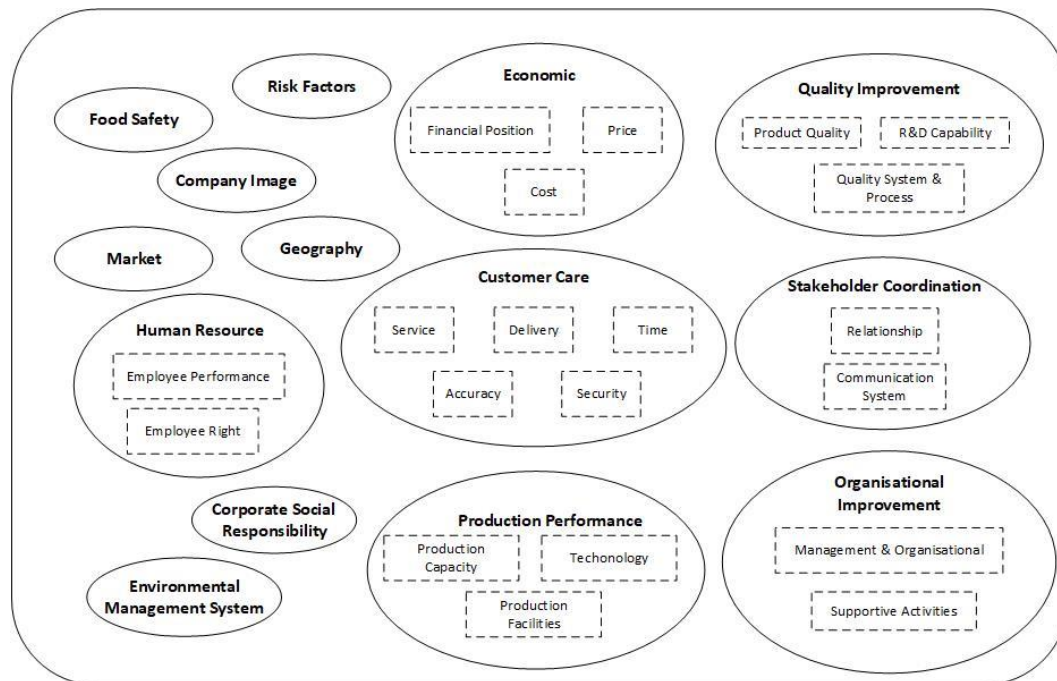
Figure 3. Cluster based on relevance analysis

g. Stakeholder coordination

The next factor is stakeholder coordination, including relationship and communication systems. The stakeholder is other organizations related to or interested in suppliers carrying out business activities. The importance of coordination between fellow stakeholders in supplier performance is that each organization can help each other in improvement or seek benefits together. This partner coordination is carried out based on agreements made by suppliers with partners so that together they improve the overall performance. Coordination can be built through good relationships and communication so that it helps in channeling information and can reduce misunderstandings (Dania et al., 2018). Moreover, sharing information is essential to simplify the order process, product and schedule changeover, and other transactional activities. Good communication will support the collaboration process with other partners. Moreover, facilitating coordination with positive relationships and communication can enhance suppliers' performance.

h. Food safety

Food safety is also a factor that can impact supplier performance. Food safety is a guarantee of the product, which can be proven by certificates from suppliers as evidence. Certificates might refer to the product's safety, the production or processing method, or other applicable compliances. The growing number of guarantees made or promised to the agroindustry gives suppliers a competitive edge over other suppliers. The existence of food safety will reduce food risks, and it can also enhance performance in this area (Lau et al., 2020). Additionally, minimizing defective products result in reducing the repetitious effort in reprocessing. Therefore, it increases supplier efficiency in fulfilling customer demand.

i. Environmental management system

The following factors are those that relate to environmental concerns. Concerns about energy use, waste management, water use, air pollution, and other issues are taken into account by the supplier. The factors that need to be considered are the use of natural fuels and the Environmental Management System (EMS). Yu et al. (2014) stated that EMS significantly enhances the company's overall performance. Waste and pollution can be reduced or eliminated by the company through EMS, which will then affect the company's financial line. Analysis of the environmental performance's effects will impact the price of raw materials, production, quality enhancement, creativity, and innovation.

j. Market

The next factor that needs to be considered is the market. Market relates to the level of expertise in analyzing the circumstances of the market. Research or field surveys can be used to determine market conditions. The survey's objective is to learn more about the state of the agroindustrial

situation, as well as agroindustrial needs, characteristics, and other factors. Suppliers must be aware of this to understand what the agroindustrial sector needs, including the characteristics of raw materials and information about competitors in the agro-industrial market. One of the keys to achieving company performance is market orientation. Companies with excellent market knowledge will connect better and guarantee the company to see opportunities and threats (Endres et al., 2020).

k. Risk factor
The next factor that needs to be aware of is the risk factor. Running a business always involves risk in some way or another. Every action, choice, and decision carries significant risk, but these risks can always be diminished. When looking at the risk aspect, especially from the resistance of raw materials, agroindustrial materials have a higher risk than materials like iron, steel, and other materials. The degree of risk in each choice limits or makes it more difficult for the supplier to take specific actions. By considering the risk factors, the company can reduce costs and losses through an enterprise risk management system (Hanggraeni et al., 2019).

l. Corporate social responsibility
Another factor that is also important is corporate social responsibility. It is related to factors regarding the responsibility of a company or supplier to social conditions. Social refers to the supplier's immediate surroundings, the workplace, the employee, and the social environment. Suppliers must maintain all factors, including social conditions both inside and outside the company, to remain stable in the business environment. The employer has to manage the employee so that the social environment is safe and healthy. A positive social environment will also boost the supplier's performance. Moreover, suppliers' CSR practices will help strengthen the global supply chain since they can mitigate global risk (Zhu and Lai, 2019).

m. Company image
The next factor that needs to be respected is the company image representing the supplier's past performance. Supplier track record in the past based on data from performance results is used as a reference. The supplier's track record is based on economic, social, management, and environmental concerns. This track record may serve as a supplier's reputation. As a result, the supplier must

consistently deliver good performance to maintain a good reputation. Customer loyalty correlates with a company's image of providing high-quality services (Sheikh et al., 2014).

n. Geography
The last important factor is the supplier's geographical location. It is essential to make a wise and profitable decision when choosing a supplier's geographic location. The agroindustry is an industry with a high risk because agro materials do not have a long shelf life and are easily damaged. A strategic geographic location can minimize the possibility of such damage. Each business has reasons for deciding on or selecting its location because it is a long-term strategic choice. Many variables can be considered, including price, industry type, transportation, and etc. Nevertheless, every rationale ultimately serves the same purpose: maximizing business profits (Emirhüseyinoğlu and Ekici, 2019).

Conclusion
Based on the results of the analysis of 178 journals from four databases, it is known that 49 factors can affect supplier performance. After conducting content analysis, there are 14 factors obtained that can be considered in the supplier performance evaluation process. These factors are customer care, production performance, quality improvement, human resources, organizational improvement, economic, stakeholder coordination, food safety, environmental management system (EMS), market, risk factors, corporate social responsibility (CSR), company image, and geography. Considering each of the aforementioned factors is crucial because they are all vital to supplier performance. However, according to the analysis's findings, some factors are used more frequently than others. These include product quality, EMS, delivery, and service factors. It may be relevant for future research to examine factors in evaluating supplier performance using organizational theory.

Declarations

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