Supply Chain Mapping to Prepare Golden Generation 2045 for Future Technology Infrastructure

Johanes Fernandes Andry[1, a)], *Filscha* Nurprihatin[2, b)] and *Lydia* Liliana[3, c)]

[1,3]*Universitas Bunda Mulia, Jl. Lodan Raya No. 2, Jakarta, Indonesia*
[2]*Sampoerna University, Jl. Raya Pasar Minggu Kav. 16, Jakarta, Indonesia*

[a)]jandry@bundamulia.ac.id
[b)]Corresponding author filscha.nurprihatin@sampoernauniversity.ac.id
[c)]lydialiliana6@gmail.com

Abstract. The continued growth of the manufacturing industry as a result of shifting consumer demands has created turmoil in the supply chain process. The Indonesian government is currently focusing on human development and mastery of science and technology in the supply chain to prepare for Golden Generation 2045. Various problems arise in the current supply chain process, namely lack of transparency, complex production processes, and poor partner relations. The manufacturing industry must begin to prepare for the development of technology infrastructure, especially in supply chain integration, supply chain performance, and information sharing. Based on the problems experienced, a supply chain strategy mapping was carried out to identify challenges and improvements that needed to be made. The supply chain strategy is mapped with market trends and defines divisions affected by constructing new technology infrastructure. This strategy is taken into consideration in defining challenges and improving supply chain processes. This study aims to map supply chain strategies in the form of a mindmap to maximize processes and prepare technology infrastructure. Supply chain strategy mapping allows the manufacturing industry to implement strategies to react quickly if there are problems with suppliers, missing orders, spikes in demand, or other unexpected things.

1 Introduction

In the development process, the manufacturing industry plays an important role in the Indonesian economy [1]. Current technological developments are a trigger to immediately explore the potential and improve company performance and generate revenue for the organization [2]. Technological innovations and changes in the business environment affect the industry's short-term performance and long-term sustainability as a result of economic growth [3]. The increase in economic growth reflects the occurrence of activities in producing output in the form of goods and services, absorption of labor, increased investment, and opening up new jobs. Therefore, the manufacturing industry plays an important role in economic globalization [4]. The government is trying to encourage an increase and accelerate

the pace of economic growth [5]. The manufacturing industry needs to find new ways to reduce costs, increase productivity, improve product quality, and meet various customer demands [6]. Over time, the challenges of the industry are increasing with the development of technology infrastructure that demands the digitization of supply chain processes. The development of technological infrastructure is closely related to the digitalization revolution in the industrial sector [7]. The industrial revolution era is an opportunity and a challenge for Indonesia's Golden Generation in realizing projections about Indonesia in 2045.

To realize the Golden Generation of 2045, the manufacturing industry must begin to prepare, especially in the development of technology infrastructure. The increasingly massive disruption of digital technology makes the manufacturing industry need changes, especially in supply chain processes. One of the pillars to prepare the Golden Generation 2045 is "Human Development and Mastery of Science and Technology" (Kemendikbud). There are 5 targets to be achieved, one of which is to increase the contribution of science and technology to development. To accelerate development, technology is used to strengthen infrastructure, industrialization, and innovation [8]. Infrastructure provides basic physical facilities that are important in industry, industrialization encourages the transformation from a farm-based economy to mass manufacturing through the application of technology, and innovations that expand technological capabilities for the development of new skills [9]. Technological changes in the future will be dominated by information technology and become a new trend in the manufacturing sector, to realize more efficient processes in manufacturing and supply chain management. Mobility and availability of technology in meeting production needs from upstream to downstream (consumers) rests on the principles of supply chain management.

In Indonesia, the existence of supply chains has a very large contribution to the sustainability of various industrial sectors. The emergence of supply chain management in the manufacturing industry is not a new concept [10], [11]. The supply chain concept emphasizes 3 aspects, namely increasing partnerships by maintaining supplier relationships (supply chain integration), increasing partner information externally and individually (supply chain performance), and information in supporting decisions (information sharing) [12]. Realization of 3 aspects of the supply chain using technology support needs to be done in order to be able to handle the acceleration of changes in the business environment that is growing faster [13]. However, due to the COVID-19 pandemic in Indonesia, the productivity of the manufacturing industry has weakened. Various problems arise in the face of supply chain complexity, such as lack of transparency, complex production processes, and poor partner relations. Technological acceleration also raises new problems, such as increasingly critical consumer demands, short product life cycles due to changes in the market environment, and maturity of the material/product flow process. Improvements need to be made in the aspects of supply chain integration, supply chain performance, and information sharing by taking into account market trends and the impact that will be felt by the manufacturing industry.

Based on the problems that have been described, the manufacturing industry should pay attention to the supply chain management aspects needed in realizing the development of technology infrastructure. This study aims to map supply chain strategies to maximize supply chain processes and prepare technology infrastructure that will be applied in handling supply chain problems. To assist the realization of technology infrastructure, it is necessary to map out aspects of supply chain management that focus on strategic matters, namely "Market Trends" and "Impact Divisions". Market trends analysis is carried out to define omni-channel customers, changes in customer demographics, increased urbanization, technology trends, and changes in government regulations. In addition to analyzing supply chain market trends, mapping is also carried out on the impact of technology application in departments or parts of the manufacturing industry. Mapping the impact of technology on each department to find

out what supply chain processes are affected by the application of technology. The results of mapping market trends and impact companies are referred to as “Strategic Focus” which is used as the basis for defining supply chain processes going forward. After getting the current supply chain condition, supply chain mapping is focused on “Challenges” and “Improvements” that will be faced in the future after the application of technology. Defining the challenges in the supply chain to plan forecasts that will occur in the future in the production process flow from start to finish. After getting an estimate of the challenges that the supply chain will face, a plan to improve aspects of supply chain integration, supply chain performance, and information sharing is defined. The results of mapping supply chain challenges and supply chain improvements are referred to as "Execution Focus" which will later be implemented in the form of technology implementation to realize the Golden Generation 2045.

2 Literature Review

2.1 Golden Generation 2045

Welcoming the rise of Indonesia's in Golden Generation 2045, it is necessary to develop technology infrastructure in the future in order to create a quality, advanced, independent and modern Indonesian society [14]. Success in building technology infrastructure will make a major contribution to the achievement of the overall national development goals [15]. To realize Indonesia as a developed country, one of the important things to do is increase labor productivity and utilize technological advances to accelerate economic development. One of the pillars or goals of Indonesia Emas 2045 is "Human Development and Mastery of Science and Technology" which is contained in the vision of the four pillars of development by targeting an increase in the contribution of science and technology to development. In the midst of the era of globalization and difficult times due to the COVID-19 pandemic, technological developments and innovations are the biggest determinants of position, especially their application in the manufacturing industry. To accelerate development in the manufacturing industry, technology must be utilized by strengthening several things, namely infrastructure, industrialization and innovation. Future technological changes will be dominated by information and communication technology which will become a new trend in the industry [16]. The acceleration of technological infrastructure development can support various essential activities carried out by the community. Therefore, alignment between the strategies of the manufacturing industry, government, policy makers and other parties needs to be built to develop an established technology infrastructure and be able to compete in this digital era.

2.2 Supply Chain Component

Supply chain is a management concept for the procurement of goods and services for the industry as well as managing relationships between partners to maintain the level of availability of products and services needed optimally. Supply chain components are divided into 3, namely Supply Chain Integration (SCI), Supply Chain Performance (SCP) and Information Sharing (IS). Supply chain integration increases the degree of partnership with external supply chain members or suppliers, increases customer engagement and improves supply chain partners' efforts on information flow [17]. SCI improves supply chain performance through the transfer of real-time, reliable and accurate information both across supply chain partners externally and within individual organizational functions [18]. Information sharing has become an important feature among industries as a value-creating factor for making decisions about ordering, capacity allocation, production planning and materials.

3 Research Methods

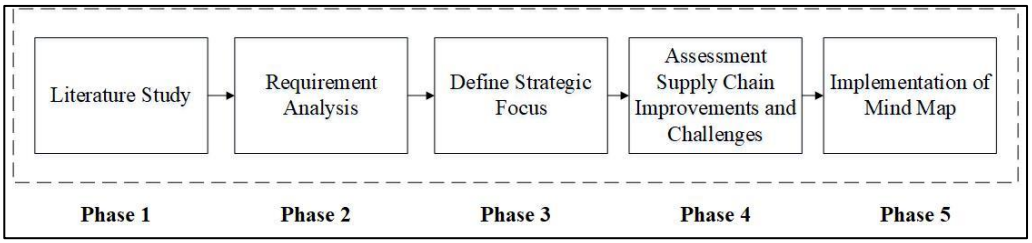

Fig. 1. Research Stages [19]

Figure 1 shows the research stages that were passed to obtain a supply chain mapping mind map. Research starts from:

- Phase 1: Literature Study. Identify supply chain problems in the manufacturing industry, define the objectives and scope of research.
- Phase 2: Requirements Analysis. Mapping the factors studied in formulating strategic plans to get an overview of the challenges and improvements that can be implemented. The formulation of a strategic plan for the current condition of the supply chain takes into account 2 aspects, namely market trends and impact companies.
- Phase 3: Define Strategic Focus. Mapping the causes of the emergence of aspects of market trends and impact companies.'
- Phase 4: Assessment of Supply Chain Improvements and Challenges. Mapping the supply chain process improvement plan which will be implemented in the form of technology, as well as the challenges faced in the implementation process. In this phase, the mapping results are referred to as “Execution Focus” because later it will be implemented in a technology.
- Phase 5: Implementation of Mind Map. The results of the mapping of the “Strategic Focus” and “Execution Focus” sections are described in the form of a mindmap. An outline of what needs to be done in supply chain digitization is obtained to assist the development of technology infrastructure for the 2045 gold generation.

4 Result And Analysis

4.1 Requirement Analysis

The emergence of supply chain management is able to manage relationships and coordination between processes from other industries in business pipelines, from suppliers to customers, also prioritizing the flow of goods between companies from upstream to downstream [20]. Therefore, it is important to formulate a supply chain strategy that covers the entire process from market research, product determination and marketing, managing raw material supply, production process to distributing to final consumers. To get an overview of the current supply chain, what challenges and improvements will be made, then the factors that affect the supply chain process are formulated. These factors will later be investigated in greater depth regarding the causes of their occurrence and what actions can be taken to build supply chain technology infrastructure.

Table 1. Aspects of Supply Chain Research (Ganesan)

Focused	Aspects	Factors
Strategic	Market Trends	Omni-channel customer, demographic changes, increasing urbanization, technological trends
	Impact Divisions	Financial, Marketing, Information Technology, Production
Execution	Challenges	Forecasting using Consumption Data and Trends, Sourcing, Manufacturing, Omni-chain for the Omni-Channel
	Improvements	Supply Chain Integration, Supply Chain Performance, Information Sharing

Table 1 shows the aspects of the supply chain that will be analyzed. The analysis process starts from the formulation of a supply chain improvement strategy by defining factors from the market trend and the impact that will be experienced by the furniture industry. These factors will be mapped in more detail regarding the causes of their occurrence. The results of market trend factors and impact companies are used as the basis for formulating challenges and improvements in the supply chain process. The execution of improvements and the challenges that will be faced can provide an overview of the technological infrastructure for the preparation of the 2045 golden Indonesian generation.

4.2 Define Strategic of Supply Chain

Supply chain strategy is a formal approach to managing the network between an organization and its suppliers aimed at maximizing value at all stages of the production cycle [21]. Supply chain strategy formulation helps manufacturing industries deliver products to customers with as little friction as possible. In addition, the formulation of a supply chain strategy is needed to decide on the supply chain structure, select the location and capacity of the facilities, and choose the sources from which the information is collected. This plan ensures that every phase of the supply chain is optimized, including material sourcing, manufacturing, shipping, and logistics. To determine a supply chain strategy, it is necessary to analyze the causes of market trends and impact divisions that occur in the manufacturing industry today. Table 2 shows the supply chain strategy in the manufacturing industry which is then mapped in the form of a mindmap. This mindmap mapping is needed to meet the supply chain challenges and improvements to be made. In market trends, there are factors that need to be considered the cause of their emergence in the supply chain process. Omni-channel customer focuses on delivering customer service through multiple channels to enhance a consistent experience. Demographic changes focus on changes in the composition of the population that affect the process of buying and selling products. Increasing urbanization focuses on migration or population growth in an area that has high sales potential. Technological trends focus on emerging technologies that help digitize production, marketing and finance processes. In impact divisions, there are factors that need to be considered the cause of its emergence if technology is applied to the supply chain. If there is a new technology infrastructure implementation, several divisions in the manufacturing industry will be affected by these changes. These divisions include finance, marketing, information technology, and production. Each of these divisions will have their own focus for improvement in the supply chain process.

Table 2. Supply Chain Strategic

Factors	Cause of Factors
	Market Trends
Omni-channel Customer	Deliver products as soon as possible, maintain the right amount of inventory, improving customer experience logistics as added value.
Demographic Changes	Population growth rates, pattern of migration and differences in the economic factors responsible for the timing and speed of these drivers of demographic change.
Increasing Urbanization	Increasing city density, emerging market metropolies, shopping near workplace.
Technological Trends	Hyper-automation, immersive experience and applications, supply chain security, edge ecosystems, augmented data intelligence.
	Impact Dvisions
Financial	Procure to pay cycle, reactive to digital changes, unclear technology investments, order to cash cycle.
Marketing	Aging consumers in developed nations, urban middle-class consumers in emerging countries.
Information Technology	Missunderstanding between technology and business, software development method, ease of integration, neet to better security.
Production	Mass-customization, visibility of production, optimization of production process, having the lowest cost, consistency.

4.3 Assessment of Challenge and Improvements for Supply Chain

Supply chain management is currently undergoing major changes due to changes or market developments [22]. The supply chain management process is not an easy thing. The supply chain involves many parties inside and outside a company and handles a very wide range of activities [23]. Various supply chain uncertainties and increasing competition in the market require a strong management approach and model to be able to survive in the business world. Furthermore, it will explain the challenges and improvements that can be made to improve supply chain processes, especially in the aspects of supply chain integration, supply chain performance, and information sharing.

Table 3. Execution Focus of Supply Chain

Factors	Cause of Factors
	Challenges
Forecasting using Consumption Data and Trends	Anticipatory shipping, assisting customers to consume, multiple channels for collaborating and competing.
Sourcing	Supply risk (banned suppliers, supplier identification, scarce materials), overflow of product change information.
Manufacturing	Increase inventory, more supply chain diversification, various products, define same manufacture standard.
Omni-chain for the Omni-channel	Location of inventories, many delivery options (home delivery, pick-up points), managing multiple channels to the same consumer.
	Improvements

Supply Chain Integration	Maintaining cooperative relationships, involving suppliers in improving service quality, providing feedback and being responsive to customer needs, internal communication departments, working together in conflict resolution.
Supply Chain Performance	Planning costs, procurement costs, production costs, shipping costs, inventory usage time, debt payment time, delivery in good condition, according to quantity, and on time.
Information Sharing	Sharing with suppliers regarding sales and purchases, market and product development, product trend forecasting, production costs, and future plans.

Table 3 shows the execution actions taken to improve supply chain processes. The supply chain improvement process focuses on 3 things related to integration, performance, and information sharing. Supply chain integration focuses on enhancing partnerships with external supply chain members and customer engagement. Supply chain performance focuses on obtaining real-time, reliable and accurate information for all internal and external supply chain partners. Information sharing focuses on creating value in the decision-making process for ordering goods, production planning and much more. In addition to a list of what improvements have been made, the challenges that the supply chain will face in the future are also explained. Challenges will arise once improvements have been made by building appropriate technology infrastructure for the manufacturing industry. Thus, the process of mapping challenges and improvements is expected to provide an overview of the supply chain in the future and as the basis for the development of technology infrastructure for the Golden Generation 2045.

4.4 Implementation of Mind Map

Supply chain mapping is the process of documenting information across industries, from suppliers and individuals involved in the production process. This supply chain map is then used to identify opportunities and mitigate risks in the manufacturing industry. This is the first step to prepare Indonesia's Golden Generation in 2045 in building appropriate technology infrastructure for the manufacturing industry.

Figure 2 shows the results of strategy mapping, challenges and improvements to be made in the manufacturing industry. To determine the development of technology infrastructure, the manufacturing industry needs to consider market trends and the impact of their application on each division/department. Market trends that need attention are omni-channel customers, demographic changes, increasing urbanization, and technological trends. Then, if technology is applied, of course there will be changes in supply chain processes in various divisions. The divisions affected by the technology infrastructure development are finance, marketing, information technology, and production. Based on the strategic mapping of market trends and impact divisions, the challenges that will be faced in technology development are identified. The challenges of implementing this technology are forecasting, supply risk, manufacturing, and omni-chain. Therefore, to overcome the challenges that arise in the supply chain, technology development should focus on 3 main processes. The processes that must be improved are related to supply chain integration, supply chain performance, and information sharing. Supply chain mapping allows the manufacturing industry to implement strategies to react quickly if there are problems with suppliers, missing orders, spikes in demand or other unexpected things. The maturity of technology development can also be further refined because this mapping provides an overview of costs, timeframes, and emerging risks. Thus, the manufacturing industry gains an advantage over its competitors because it has succeeded in building a technological infrastructure that is in accordance with the conditions of its business processes.

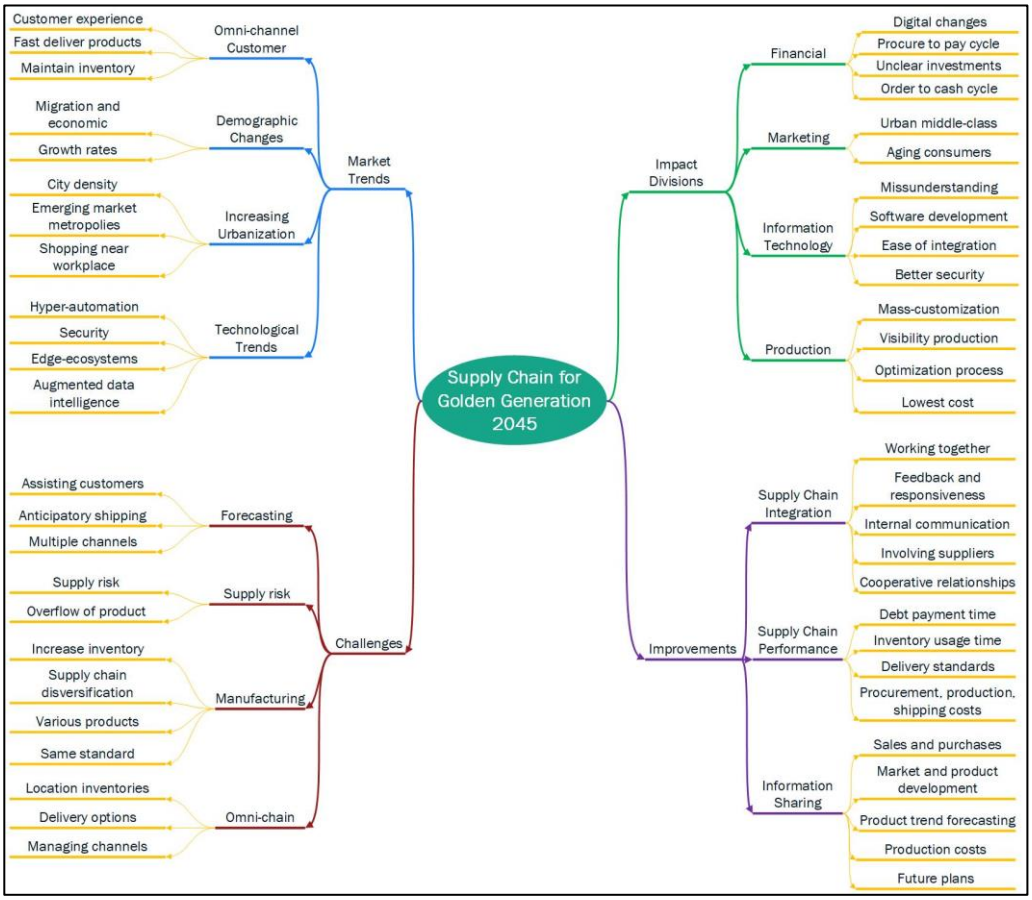

Fig. 2. Supply Chain Mapping for Manufacture Industry

5 Conclusion

The manufacturing industry plays an important role in the Indonesian economy, so that it is made a development priority in the era of Indonesia's digitalization revolution in 2045. One of the pillars to prepare the Golden Generation 2045 is "Human Development and Mastery of Science and Technology". To realize the Golden Generation 2045, the manufacturing industry must begin to prepare, especially in the development of technology infrastructure for supply chain process improvement. The supply chain concept emphasizes 3 aspects, namely supply chain integration, supply chain performance, and information sharing. Various problems arise in the face of supply chain complexity, such as lack of transparency, complex production processes, and poor partner relations. Technological acceleration also raises new problems, such as increasingly critical consumer demands, short product life cycles due to changes in the market environment, and maturity of the material/product flow process. Therefore, a strategic mapping was carried out to maximize the supply chain process and prepare the technology infrastructure to be implemented. To determine the development of technology infrastructure, the manufacturing industry needs to consider market trends and the impact of their application on each division/department. Market trends analysis has succeeded in defining the factors that cause the need for supply chain technology development, namely omni-channel customers, changes in customer

demographics, increased urbanization, technological trends, and changes in government regulations. In addition to analyzing supply chain market trends, mapping is also carried out on the impact of technology application in departments or parts of the manufacturing industry. The results of mapping market trends and impact companies are referred to as "Strategic Focus". After getting the current supply chain condition, supply chain mapping is focused on the "Challenges" and "Improvements" that will be faced when implementing technology. Defining the challenges in the supply chain to plan forecasts that will occur in the future in the production process flow from start to finish. Therefore, to overcome the challenges that arise in the supply chain, technology development should focus on 3 main processes. The processes that must be improved are related to supply chain integration, supply chain performance, and information sharing. The results of mapping supply chain challenges and supply chain improvements are referred to as "Execution Focus" which will later be used as the basis for technology development to realize the Golden Generation 2045.

The researchers would like to thank "Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi", "Direktorat Jenderal Pendidikan Tinggi, Riset, Dan Teknologi" on Funding for Research on National Competitive Programs and Assignments in Higher Education for Fiscal Year 2022, Number: 0267/E5/AK.04/2022.

References

1. R. Nurcahyo and A. D. Wibowo, "Manufacturing Capability, Manufacturing Strategy and Performance of Indonesia Automotive Component Manufacturer," *Procedia CIRP*, vol. 26, pp. 653–657, 2015, doi: 10.1016/j.procir.2014.07.046.
2. J. F. Andry, H. Tannady, and F. Nurprihatin, "Eliciting Requirements of Order Fulfilment in A Company," *IOP Conf. Ser. Mater. Sci. Eng.*, vol. 771, pp. 1–6, 2020, doi: 10.1088/1757-899X/771/1/012023.
3. M. Ghobakhloo, "The Future of Manufacturing Industry: A Strategic Roadmap Toward Industry 4.0," *J. Manuf. Technol. Manag.*, vol. 29, no. 6, pp. 910–936, 2018, doi: 10.1108/JMTM-02-2018-0057.
4. A. Atil, K. Nawaz, A. Lahiani, and D. Roubaud, "Are Natural Resources a Blessing or a Curse for Financial Development in Pakistan? The Importance of Oil Prices, Economic Growth and Economic Globalization," *Resour. Policy*, vol. 67, no. March, pp. 1–11, 2020, doi: 10.1016/j.resourpol.2020.101683.
5. H. Kusuma, H. F. Hariyani, and W. Hidayat, "The Relationship Between Crime and Economics Growth in Indonesia," *2nd Int. Conf. Islam. Econ. Business, Philanthr. Theme "Sustainability Socio Econ. Growth,"* vol. 3, no. 13, pp. 1105–1113, 2019, doi: 10.18502/kss.v3i13.4271.
6. F. Nurprihatin, Elvina, G. D. Rembulan, K. Christianto, and H. Hartono, "Decision Support System for Truck Scheduling in Logistic Network Through Cross-Docking Strategy," *J. Phys. Conf. Ser.*, pp. 1–11, 2021, doi: 10.1088/1742-6596/1811/1/012009.
7. R. Klinc and Z. Turk, "Construction 4.0–Digital Transformation of One of the Oldest Industries," *Econ. Bus. Rev.*, vol. 21, no. 3, pp. 1–19, 2019, doi: 10.15458/ebr.92.
8. M. H. Lee *et al.*, "How to Respond to the Fourth Industrial Revolution, or the Second Information Technology Revolution? Dynamic New Combinations Between Technology, Market, and Society Through Open Innovation," *J. Open Innov. Technol. Mark. Complex.*, vol. 4, no. 3, pp. 1–24, 2018, doi: 10.3390/joitmc4030021.
9. LIPI, "Indonesia Emas Berkelanjutan 2045 (Kumpulan Pemikiran Pelajar Indonesia Sedunia)." pp. 1–195, 2021.
10. H. Wang, C. Pan, Q. Wang, and P. Zhou, "Assessing Sustainability Performance of Global Supply Chains: An Input-Output Modeling Approach," *Eur. J. Oper. Res.*, vol. 285, no. 1, pp. 393–404, 2020, doi: 10.1016/j.ejor.2020.01.057.

11. G. F. Frederico, J. A. G. Reyes, A. Anosike, and V. Kumar, "Supply Chain 4.0: Concepts, Maturity and Research Agenda," *Supply Chain Manag.*, vol. 25, no. 2, pp. 262–282, 2020, doi: 10.1108/SCM-09-2018-0339.
12. I. Kocoglu, S. Z. Imamoglu, H. Ince, and H. Keskin, "The Effect of Supply Chain Integration on Information Sharing: Enhancing the Supply Chain Performance," *Procedia - Soc. Behav. Sci.*, vol. 24, pp. 1630–1649, 2016, doi: 10.1016/j.sbspro.2011.09.016.
13. V. L. da Silva, J. L. Kovaleski, and R. N. Pagani, "Technology Transfer in the Supply Chain Oriented to Industry 4.0: A Literature Review," *Technol. Anal. Strateg. Manag.*, vol. 31, no. 5, pp. 546–562, 2019, doi: 10.1080/09537325.2018.1524135.
14. F. N. Fajri, S. N. Zahira, and A. R. Rahayu, "The Influence of Science and Technology, the Length of Education on the Achievement of Indonesia's Human Development Index in 2018-2020," *Din. Ekon. J. Ekon. dan Pembanguna*, vol. XIII, no. 2, pp. 271–279, 2022.
15. D. Adshead, S. Thacker, L. I. Fuldauer, and J. W. Hall, "Delivering on the Sustainable Development Goals through Long-Term Infrastructure Planning," *Glob. Environ. Chang.*, vol. 59, pp. 1–14, 2019, doi: 10.1016/j.gloenvcha.2019.101975.
16. L. Da Xu, E. L. Xu, and L. Li, "Industry 4.0: State of the Art and Future Trends," *Int. J. Prod. Res.*, vol. 56, no. 8, pp. 2941–2962, 2018, doi: 10.1080/00207543.2018.1444806.
17. S. Tiwari, "Supply Chain Integration And Industry 4.0: A Systematic Literature Review," *Benchmarking*, vol. 28, no. 3, pp. 990–1030, 2021, doi: 10.1108/BIJ-08-2020-0428.
18. H. Fatorachian and H. Kazemi, "Impact of Industry 4.0 on Supply Chain Performance," *Prod. Plan. Control*, vol. 32, no. 1, pp. 63–81, 2021, doi: 10.1080/09537287.2020.1712487.
19. Y. J. Chen, "Structured Methodology for Supplier Selection and Evaluation in a Supply Chain," *Inf. Sci. (Ny).*, vol. 181, no. 9, pp. 1651–1670, 2011, doi: 10.1016/j.ins.2010.07.026.
20. M. N. Merino, J. M. M. Marin, J. M. Fuentes, and P. J. M. Jurado, "Information and Digital Technologies of Industry 4.0 and Lean Supply Chain Management: A Systematic Literature Review," *Int. J. Prod. Res.*, vol. 58, no. 16, pp. 5034–5061, 2020, doi: 10.1080/00207543.2020.1743896.
21. I. Sillanpaa, *Implementing Supply Chain Strategies*. 2019.
22. S. Min, Z. G. Zacharia, and C. D. Smith, "Defining Supply Chain Management: In the Past, Present, and Future," *J. Bus. Logist.*, pp. 1–12, 2019, doi: 10.1111/jbl.12201.
23. 23.D. Nakandala and H. C. W. Lau, "Innovative Adoption of Hybrid Supply Chain Strategies in Urban Local Fresh Food Supply Chain," *Supply Chain Manag.*, vol. 24, no. 2, pp. 241–255, 2019, doi: 10.1108/SCM-09-2017-0287.