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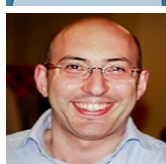
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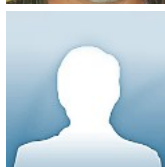
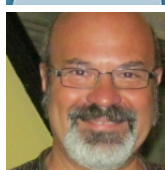
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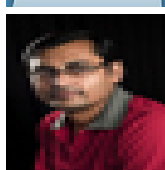
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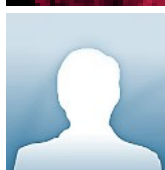
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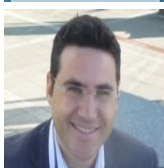


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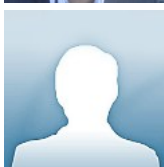
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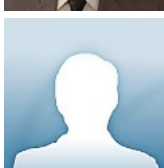
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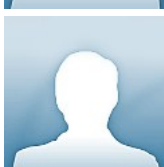
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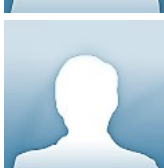


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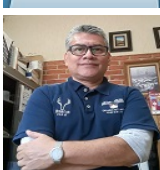
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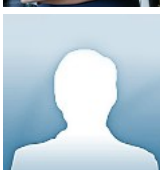
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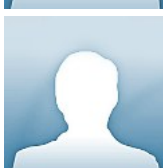
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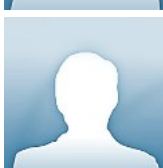
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A Review on Success Factors of Logistic Innovation in Agro-Industry

Yovita Yulia M Zai¹, Rika Ampuh Hadiguna², Feri Afrinaldi³

Faculty of Engineering, Postgraduated Program in Industrial Engineering, ⁶Andalas University, Limau Manis – Padang, West Sumatera, Indonesia

*Corresponding author E-mail: yovitayuliamzai@gmail.com, hadiguna@eng.unand.ac.id,

Abstract

Innovation is much required to efficiently manage the logistics system. At the same time, to come up with a successful innovation is also a challenge for the agro-industry. There are many literatures which defined the success factors of logistics innovation. This study investigates the success factors of logistics innovation for agro-industry and determines factors relevant to the business process of agro-industry based on literature published between 2015 and 2018. Through a Systematic Literature Review with fifteen were determined as success factors of logistics innovation in agro-industry, i.e. (1) technology utilization, (2) sustainability, (3) distribution and transportation management, (4) infrastructure, (5) strategic planning, (6) technical support and service architecture, (7) integrated information technology, system, and management, (8) regulation/ policy, (9) logistics cost, (10) collaboration, (11) logistic competence, (12) alliance strategy, (13) continuous improvement, (14) efficiency in business processes, and (15) hunting on positive practices. The Fifteen factors have the same degree of importance and have the same contribution to the successful achievement of logistics innovation.

Keywords: Innovation, Logistics System, Agro-Industry.

1. Introduction

In the industrial competition, logistics play a major role in sustaining competitive advantage. The availability of the right amount of material becomes important in logistics. Overstock material is a waste. Inventory management of both material and storage movement activities can improve the cost efficiency of logistics. Cost efficiency can bring the company into cost leadership. The value of a product can be increased through logistics by ensuring the product will reach the market where it is needed, and available in the market at the right time and amount. Indonesia logistic cost is 24% higher than other countries such as: USA, UK, Japan, France, Canada, Italy (1).

Firms that survive, grow, and compete are those which understand the role of logistics and create logistics innovation. Logistic innovation is a "novelty" in the management of processes, goods, and information ranging from procurement to the hands of consumers to achieve effectiveness and efficiency. Logistics becomes the determinant factor of the nation's competitiveness as has been compiled in the blueprint of Indonesia's National Logistics System. ³The national logistics system was created through the issuance of presidential regulation No. 26 of 2012 on the blueprint for the development of a national logistics system. This blueprint carries the logical vision of 2025: "Locally Integrated, Globally ¹⁶connected for National Competitiveness and Social Welfare". The development of a national logistics system is intended to connect all areas ranging from among villages, between ports, and between countries. The challenge for Indonesia now lies in competitiveness using science, technology and innovation. Indonesia ranks 36 out of 137 in terms of competitiveness (2). Ranked 87 out of 127 in terms of innovation competitiveness (3). And 80 out of 137 in

terms of technological readiness (2). By looking at the vision and position of Indonesia's competitiveness, it is necessary to improve competitiveness, science and technology in the logistics sector.

Industry players aware of the role of logistics. Industry players who aware of the importance of logistics will optimize the strategic, tactical or operational decisions to improve the logistics system. Understanding the role of logistics is not enough to answer today's business challenges. Future industries that include: (a) Agro-based industries; (b) the transport-equipment industry; (c) Information technology and telecommunication equipment (telematics) industries; are the industries that prioritized its development in the future.

Indonesia as a potential country in the agro-industry also needs to make various logistic innovation in order to compete with other countries. Logistic innovation issues will be an important key in the logistics of agro-industry. This is because agro-industry has different characteristics with other industries. The agro-industry sector is a future industry considering its important and strategic role for the national industrial structure as well as the national economy. The important and strategic role is created because the industrial sector is supported by the availability of raw materials in the form of abundant natural resources in the country that comes from agriculture, fishery/ marine, livestock, plantation and forestry sectors. So, it is necessary to formulate/ determine the success factors in logistic innovation for agro-industry. Addressing this requirement, this study conducts a Systematic Literature Review (SLR).



2. Literature Review

2.1 Systematic Literature Review

One of the most efficient methods of conducting a review of previous studies is the Systematic Literature Review (SLR) method (4). The SLR method works by evaluating and summarizing the literature systematically and conical. There are three stages in the use of this method, i.e.: planning, review, and delivery of results (5).

In the planning stage, it is necessary to identify the needs in the review by including the main criteria of the paper to be reviewed. At the review stage, enter the keywords of the research topic studied and then sort in accordance with the relevance of the study. In the last stage, the findings are explained through the evaluation and delivery of the summary results.

2.2 Logistic Innovation

Innovation is a social and economic success as a result of the introduction. Innovation is a discovery of new ways or new combinations that can create major changes. The major changes increased the use value or value of benefits (perceived by consumers/ or users) and monetary value or price (6). (7) state that innovation is the process of creating something new. This definition of innovation explains that innovation is a "novelty" that provides value to consumers and added value to producers (firms) where economic and social success is generated.

Logistics is one source of significant competitive advantage for the company (8). Logistics as an efficient planning, implementation and control process that include the flow of costs, raw material storage, inventory, and other related information from the origin to the point of destination with the purpose of customer needs can be achieved (9). Logistics serves as an option of cost leadership strategy and service leader strategy (1)..

To transport goods from the origin to the point of destination will require some activities known as 'key activities in logistics' i.e.: (1) customer service, (2) demand forecasting/ planning, (3) inventory management, (4) logistics communications, (5) material handling, (6) traffic and transportation, and (7) warehousing and storage. The logistical context is identical to the organization, movement, and storage of material and humans. The target of logistics activities is the availability of a system capable of bringing the right products, in the right location, and at the right time so that the service level of consumers expect can be achieved (5).

The Blueprint of National Logistics System Development (5), logistics is defined as part of a supply chain that handles goods, information and money through procurement, storage (warehousing), transportation), distribution (distribution), and delivery service (delivery service). Systems used to improve, move, and effectiveness of the movement of goods, information, and money from the point of origin to the point of destination according to the type, quality, quantity, time and place desired by the consumer. Logistic innovation can be interpreted as a "novelty" process of planning, implementation and control of goods, information, money, and decisions in the business/ company that leads to the increased value of use to consumers with care about economic, social and environmental threats and increased efficiency and effectiveness for the Company.

2.3 Agro-industry

Explicitly the meaning of agro-industry was first disclosed by (10) that is a company that processes plant-based (plant-derived) or animal (produced by animals) materials. The processes used include alteration and preservation through physical or chemical, storage, packaging and distribution. Agro-industry is an interconnected activity i.e.: production, processing, transportation, storage, funding, marketing and distribution of agricultural products. From the view of social economic experts, agro-industry

(processing of agricultural products) is part of five subsystems agribusiness agreed, namely subsystems of supply of production facilities and equipment, farming, processing, marketing, facilities and coaching. Agro-industry thus includes Agricultural Product Processing, Agricultural Machinery and Equipment Industry and Agricultural Sector Service Industries.

Agricultural Products Processing Industry can be divided into several sections as follows: (1) food Crops: including those rich in carbohydrate, palawija and horticultural crops; (2) plantation crops, including sugarcane, coffee, tea, rubber, coconut, palm oil, tobacco, cloves, cocoa, vanilla, cinnamon and others, (3) forest product crops, including processed and non-timber products such as resin, rattan, tengkawang and other forest product, (4) fisheries, including the processing and storage of fish and fresh seafood, canning and processing and by-products of fish and sea, (5) livestock, including processing of fresh meat, milk, skin and other by-products.

Agricultural machinery and equipment industry is divided into two activities as follows: (1) agricultural power, which includes tools and machinery of land processing (hoes, plows, tractors and others); (2) processing, which includes tools and machinery processing various agricultural commodities, such as grinding thresher machine, rice milling machine, drying machine and so forth. Agricultural Sector Service Industry is divided into three activities as follows: (1) trading, which includes the transportation activities, packaging and storage of both raw materials and products of agricultural processing industries; (2) Consultation, including planning, management, quality control and evaluation and project appraisal; (3) communication, concerning software technology that involves the use of computers and other modern communication tools. With agriculture as its center, agro-industry is an economic sector that includes all companies, agents and institutions that supply all agricultural needs and take commodities from agriculture to be processed and distributed to consumers.

3. Methods

This paper takes a Systematic Literature Review (SLR) approach. This study investigates the success factors of logistic innovation in agro-industry. Given the focus of this paper, the keywords included in the electronic resources, i.e.: Science Direct, Google Scholar, Wiley Online Library, and also in books. Based on Figure 1 it can be seen that the term innovation first appeared in 1934, the term logistics began to bloom discussed since 1998, the term logistics innovation began to grow for research in the Year 2000, and research in the field of logistics innovation in agro-industry began to grow in 2012. By 2015 until now, research has begun to lead to successful logistical innovation. Based on the evolution of the literature, this study includes publication was published in the last three years between 2015 and 2018. The articles of the study mainly indexed in minimum Scopus indexed journal and for books have ISBNs would be referred. Stages in paper search can be seen in Figure 2.

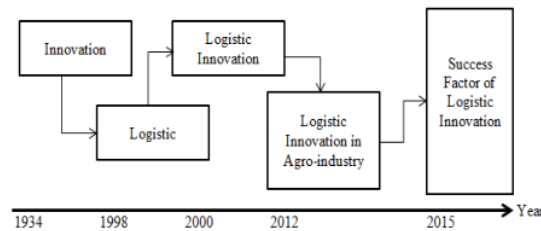


Fig. 1. Evolution of Logistic Innovation Literature's

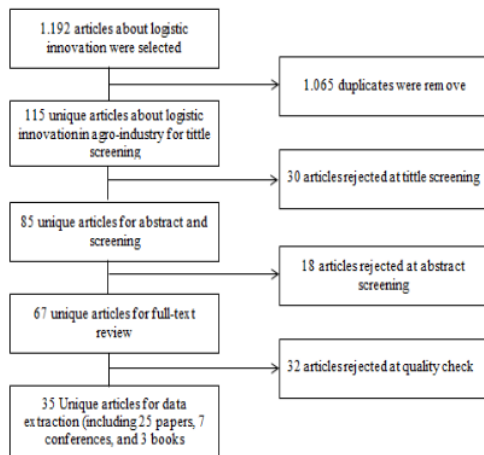


Fig. 2. Search Strategy and Final Selection

4. Results and Discussion

Agro-industry is a mainstay industry of the future in Indonesia because it is supported by natural resources potential from agriculture, fishery/ marine, livestock, plantation and forestry. There are at least five main reasons why agro-industry is important to become the locomotive of future national economic growth for Indonesia i.e.: (1) The processing industry is able to transform comparative advantage into a compatibility advantage that ultimately strengthens the competitiveness of Indonesian agribusiness products; (2) Have added value and a large market share so that progress can affect the growth of the national economy as a whole; (3) Having a great link both upstream and downstream (forward and backward linkages), so as to attract the progress of other sectors; (4) Has a local raw material base (comparative advantage) that can be renewed so as to ensure sustainability; (5) Have the ability to transform the national economic structure from agriculture to industry with agro-industry as its driving force.

The results of the review of the various papers resulted in sixteen factors becoming the key to successful logistical innovation in the agro-industry. Table 1 shows the results a review on success factor of logistic innovation in agro-industry.

Table 1. Assessment The Success Factors of logistic Innovation in Agro-Industry

S.No.	Success Factors	Description	Sources
1	Efficiency in business processes	The improved process so it is cheaper and faster	(11,12)
2	Continuous improvement	Ongoing efforts to develop and improve products, services and processes. Creating the best solution for the existing problem, the results will continue to survive and develop even better.	(13–15)
3	Hunting on positive practices	actions or logistical activities that are positive results	(16)
4	Integrated information technology, systems, and management	Information systems and technologies involving various functional units as well as relationships with companies and outside parties.	(12,17–20)
5	Technology	in every process is	(11,13,14,17–19,21–

	utilization	directed to the optimal use of technology	28)
6	Technical support and service architecture	Various services provide assistance with technology aimed at helping users with specific problems.	(19,29–32)
7	Strategic planning	Strategic decisions that impact on the company's logistics performance within a span of time between 3 s.d. 5 years.	(13,19,32–34)
8	Distribution and transportation management	Management of the process of an ability to know the movement of a product from one location to the next where a movement like this usually form and produce a network or system	(12,15,20,24,34–36)
9	Alliance Strategy	long-term cooperation between the two companies in managing opportunities and risks	(1,19,37)
10	Collaboration	forms of cooperation, interaction, compromise of several elements related to individuals, institutions and/ or parties directly and indirectly involved in the consequences and benefits	(13,29,33,38)
11	Logistic competence	Competencies related to activities and logistics functions	(29,36,39)
12	Logistics Cost	expenditure aimed at bringing material from one place to the destination	(13,29,34,36)
13	Regulation/ policy	Any form of regulation to control business conduct, may be in the form of legal restrictions imposed by governments, industry regulations, trade association rules, and so on.	(13,18,19,33)
14	Infrastructure	Physical facilities developed / required by the user in carrying out logistical functions to support social and economic systems.	(13,19,32,35,36,40)
15	Sustainability	Socio-ecological processes characterized by the achievement of the same ideals, namely: the ability to maintain something by configuring civilization and human activity so as to meet their needs and express their greatest potential in the present, while preserving biodiversity and natural ecosystems, planning and acting to be able to defend the ideals for future generations.	(11,12,19,20,34,41–43)

The business efficiency of the agro-industry logistics process leads to business process optimization. To achieve this, continuous improvement is required throughout the logistics strategy. Logistics strategy is directed to achieve the target cost leader and service leader. Positive hunting in the form of best practices in logistic

innovation greatly helps the agro-industry to create innovative breakthroughs in logistics. The holding of innovation contests in logistics can present logistic innovation ideas for the agro-industry.

In the past few years many companies/ industries have utilized information technology solutions to optimize their business processes, but sometimes the solutions they develop are still halfway. They build the information technology solution in several separate systems, not in a single unit. This can cause some problems when there is a business process that requires collaboration or exchanges of information between work units or between business processes to complete the set of processes, which of course this will not be handled with information technology solutions such models. Integrated information and information technology systems are the solution to this problem.

Technology utilization in current logistics activities leads to digitalization. The application of digitization will support the successful realization of logistics innovation for agro-industry. Digitalisation is applied through the utilization of various technologies. Agro-industry should place the role of technology as supporting operations and data management. Some types of technologies that can be applied such as: 3D printing (Additive Layer Manufacturing) to robotics, Enterprise Resources Planning information systems, E-Commerce, application Decision Support System or abbreviated DSS, and others. Digitization will help in realizing the efficiency of time and cost in the business of logistics in agro-industry.

Strategic planning is a strategic decision that affects the company's logistics performance within a time span of 3 to 5 years. The decisions compiled in this strategic plan include: customer service management, distribution channel system, warehouse location, transportation mode options, strategic alliances, distribution and delivery systems, inventory management, distribution and transportation management, service level, and level stock. Implementation of this factor is an investment in increasing the competence of human resources, logistics and infrastructure sector investment. The technical standardization and processes within logistics system for agro-industry should also be structured in strategic planning to improve the efficiency and effectiveness of processes as strengthening [12] enhancing competitiveness.

Infrastructure plays an important role in determining the logistics performance of a company and even the state. Infrastructure is the physical facilities developed / required by the user in carrying out logistical functions as a supporter of social and economic systems. Transportation and warehousing are the main activities of the role of infrastructure. Logistics costs in Indonesia are still large because they are not yet supported by quality logistics infrastructure. Therefore, it needs to be improved: (1) integration of multimodal transport network through the alignment of various infrastructures to facilitate access to transport shipping/ shipping of oil from land to sea; (2) implement communication and information technology for planning and controlling logistics and warehousing transportation; (3) improve operational performance and service quality, for example by collaborating with strategic alliances (using third-party logistics (3 PL) in managing all material management activities for efficient solutions and improving overall logistics quality of the company.

Technological advances should be accompanied by adequate regulation and policy. This is needed to strengthen the national logistics system, primarily for export activities. Regulations and policies formulated effectively can realize the strengthening of the logistics system in agro-industry. The regulations and policies made must take into account the following aspects: social, economic, and environment, so as to achieve sustainability. The ranking result of success factors of logistic innovation in agro-industry can be seen in figure 3.

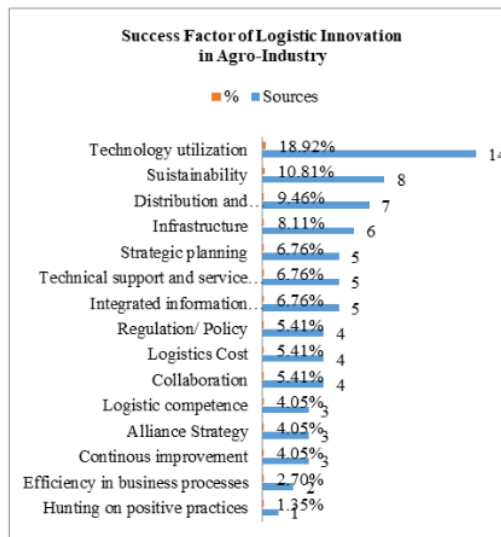


Fig. 3. Success Factor on Logistic Innovation in Agro-Industry

5. Conclusion and Recommendation

There are sixteen (15) factors that are determined as successful factors of logistics innovation in agro-industry of the search results using the Systematic Literature Review. These sixteen factors can be seen in Figure 5. The sixteen factors have the same degree of importance and have the same contribution to the successful achievement of logistics innovation. From the results of the study can be concluded that of the 15 factors, four (4) of them have a higher frequency of discussion than other factors. Therefore, it is deemed necessary to be given special attention to these 4 factors in creating logistic innovation in agro-industry. The 4 factors are: (1) technology utilization, (2) sustainability, (3) distribution and transportation management, and (4) infrastructure.

This study recommends that further research undertakes to deepen any successful factors of logistics innovation in agro-industry. The depth includes: observing the relationship between success factors of logistics innovation in agro-industry and determining what are the constraining factors or potential obstacles in the implementation of these factors.

6. Conflict of Interest

There was no conflict of interest in this study.

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References

- [1] Zaroni. Panduan Eksekusi Strategi "Logistics & Supply Chain" (Konsep Dasar - Logistik Kontemporer - Praktik Terbaik). Prasetya Mulya Publishing; 2017. 350 p.
- [2] World Economic Forum. "The Global Technological Readiness." The World Economic Forum; 2017.
- [3] WIPO. Global Innovation Index . GII. 2017.
- [4] C. D. Mulrow. Systematic reviews: Rationale for systematic reviews. *BMJ*. 1994;309, no: 6:597-599.

- [5] D. Tranfield, D. Denyer and PS. Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *Brit J Manag.* 2003;14, no: 3:207–222.
- [6] Fontana A. *Innovate We Can't How to Create Value Through Innovation in Your Organization and Society*. Revision. Bekasi: Cipta Inovasi Sejahtera.; 2011.
- [7] Barringer, B. R., and Ireland RD. *Entrepreneurship: Succesfully launching New Ventures*. Fourth Edition. England: Pearson Education; 2013.
- [8] Mentzer, J.T. and Williams L. "The Role of Logistics Leverage in Marketing Strategy". *J Mark Channels*. 2004;Vol. 8 No.:29–4.
- [9] Ballou RH. *Business Logistics: Supply Chain Management* (5th ed.). New Jersey: Prentice Hall; 2004.
- [10] Austin J. *Agroindustrial Project Analysis*. The John Hopkins University Press, editor. London; 1981.
- [11] Cherneva D VK. Outsourcing to 4PLs - Opportunities, Challenges, Future Outlook. In: *Hamburg International Conference of Logistics (HICL)*. 2015.
- [12] Egea FJ, Torrente RG, Aguilar A. An efficient agro-industrial complex in Almería (Spain): Towards an integrated and sustainable bioeconomy model. *N Biotechnol*. 2018;40:103–12.
- [13] Hadiguna RA. Inovasi untuk efektivitas logistik. Hadiguna, Rika Ampuh, Joninaldi; Kamil I, editor. Padang: Andalas University Press; 2015. 215 p.
- [14] Hadiguna RA. *SISTEM LOGISTIK*. 1st ed. Padang: Andalas University Press; 2017. 184–195 p.
- [15] Baranowski S, Busko E, Shishlo S, Usevich W, Androsik J, Mistseiko M, et al. Formation Mechanism of Logistics Cluster in Belarus. *Agric Agric Sci Procedia*. 2015;7:12–20.
- [16] Özmutaf NM, Aktekin E, Ergani B, Çıta K. The Effects of Innovative Features of Women Managers on their Business Performance: The Food Exporter Companies in Aegean Region Sample. *Procedia - Soc Behav Sci*. 2015;195:220–9.
- [17] See B von and KK. Innovations and Strategies for Logistics and Supply Chains. In: *Proceedings of the Hamburg International Conference of Logistics (HICL)*. 2015. p. 4–30.
- [18] Mehmman, Jens., Volker Frehe. and FT. Crowd Logistics – A Literature Review and Maturity Model. In: *Innovations and Strategies for Logistics and Supply Chains Proceedings of the Hamburg International Conference of Logistics (HICL)*. 2015. p. 117–46.
- [19] Kersten W, Blecker T. *Innovations and Strategies for Logistics and Supply Chains*. 2015.
- [20] Lainez M, González JM, Aguilar A, Vela C. Spanish strategy on bioeconomy: Towards a knowledge based sustainable innovation. *N Biotechnol*. 2018;40:87–95.
- [21] Erkan B, Yildirimci E. Economic Complexity and Export Competitiveness: The Case of Turkey. *Procedia - Soc Behav Sci*. 2015;195:524–33.
- [22] Durán CA, Córdova FM. Synergy and technology gaps in export logistics chains between a Chilean and a Spanish medium-sized port. *Procedia Comput Sci*. 2015;55(Ictm):632–41.
- [23] Harris I, Wang Y, Wang H. ICT in multimodal transport and technological trends: Unleashing potential for the future. *Int J Prod Econ*. 2015;159:88–103.
- [24] García-Olivares A, Solé J, Osychenko O. Transportation in a 100% renewable energy system. *Energy Convers Manag*. 2018;158(January):266–85.
- [25] Oussous A, Benjelloun FZ, Ait Lahcen A, Belfkih S. Big Data technologies: A survey. *J King Saud Univ - Comput Inf Sci*. 2017;
- [26] Habanyati EJ, Nyanga PH, Umar BB. Factors contributing to disadoption of conservation agriculture among smallholder farmers in Petauke, Zambia. *Kasetsart J Soc Sci*. 2018;6–11.
- [27] Park S. Development of Innovative Strategies for the Korean Manufacturing Industry by Use of the Connected Smart Factory (CSF). *Procedia Comput Sci*. 2016;91(Ictm):744–50.
- [28] De Araujo MVF, De Oliveira UR, Marins FAS, Muniz J. Cost assessment and benefits of using RFID in reverse logistics of waste electrical & Electronic equipment (WEEE). *Procedia Comput Sci*. 2015;55(Ictm):688–97.
- [29] Cherneva D VK. Outsourcing to 4PLs - Opportunities, Challenges, Future Outlook Hamburg International Conference of Logistics (HICL). In 2015.
- [30] Roumboutsos A, Kapros S, Vanelslander T. Research in Transportation Business & Management Green city logistics: Systems of Innovation to assess the potential of E-vehicles. *RTBM*. 2014;11:43–52.
- [31] Limbourg S, Giang HTQ, Cools M. Logistics service quality: The case of da Nang City. *Procedia Eng*. 2016;142:123–9.
- [32] Frederick, Lim & S. E-commerce Last-mile Supply Network Configuration and Logistics Capability. In: *International Conference of Logistics (HICL) – 20 Proceedings of the Hamburg International Conference of Logistics (HICL)*. 2015. p. 59–90.
- [33] Chen J, Yin X, Mei L. Holistic Innovation: An Emerging Innovation Paradigm. *Int J Innov Stud*. 2018;
- [34] Gurel O, Acar AZ, Onden I, Gumus I. Determinants of the Green Supplier Selection. *Procedia - Soc Behav Sci*. 2015;181:131–9.
- [35] Acar AZ, Gürol P. An Innovative Solution for Transportation among Caspian Region. *Procedia - Soc Behav Sci*. 2016;229:78–87.
- [36] Çemberci M, Civelek ME, Canbolat N. The Moderator Effect of Global Competitiveness Index on Dimensions of Logistics Performance Index. *Procedia - Soc Behav Sci*. 2015;195:1514–24.
- [37] Miyashita K. Japanese Forwarders' Local Import Hub in Asia: 3PL Power and Environmental Improvement. *Asian J Shipp Logist*. 2015;31(3):405–27.
- [38] Pateman H, Cahoon S, Chen S-L. The Role and Value of Collaboration in the Logistics Industry: An Empirical Study in Australia. *Asian J Shipp Logist*. 2016;32(1):33–40.
- [39] Fabová L, Janáková H. Impact of the Business Environment on Development of Innovation in Slovak Republic. *Procedia Econ Financ*. 2015;34(2014):66–72.
- [40] Beifert, A., Gerlitz, L., Prause G. Sustainable business development models for regional airports. In: Kersten, W., Blecker, T., Ringle C, editor. *Innovations and Strategies for Logistics and Supply Chains (Proceedings of the Hamburg International Conference of Logistics (HICL))*. Berlin: epubli GmbH; 2015. p. 256–284.
- [41] Geng R, Mansouri SA, Aktas E, Yen DA. The role of Guanxi in green supply chain management in Asia's emerging economies: A conceptual framework. *Ind Mark Manag*. 2017;63:1–17.
- [42] Hasan Z, Ali NA. The Impact of Green Marketing Strategy on the Firm's Performance in Malaysia. *Procedia - Soc Behav Sci*. 2015;172:463–70.
- [43] Sattaka P, Pattaratuma S, Attawipakpaisan G. Agricultural extension services to foster production sustainability for food and cultural security of glutinous rice farmers in Vietnam. *Kasetsart J Soc Sci*. 2017;38(1):74–80.

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Kernel Shell for Export Market

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1. Background of study: Suggest to the justification of “innovation is the most important element in logistic management”.
2. Suggest to enhance the discussion/justification on how the 4 factors are selected from Palm Kernell Shell logistic system perspective, and why the other 3 are not?
3. Grammatical errors and awkward sentence. Please get a good proofreader
4. Lack of theoretical foundation

✓ **Name of Reviewer:** Dr Tan Owee Kowang

- ✓ **Address:** Faculty of Management, Universiti Teknologi Malaysia,
✓ **Affiliation:** 81310 Johor Bahru, Malaysia
✓ **Telephone:** +6012-7891560
✓ **Email:** oktan@utm.my

A handwritten signature in blue ink, appearing to be 'Oktan', written over a horizontal line.

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Success Factors in *Palm Shell* Logistics Innovation for Export Market: The Case of West Sumatra - Indonesia.

Abstract

In the export business of palm shell, the exporters are well aware of the role of logistics to increase their competitive advantages. Innovation is much required to efficiently manage the logistics system. At the same time, to come up with a successful innovation is also a challenge for the exporters. There are many literature which defined the success factors for innovation in the area of logistics management. However, this paper aims to analyse the success factors of logistics innovation for export markets and determine factors relevant to the business process of exporting palm shell based on literature published between 2015 and 2018. The publication is from books and two electronic resources, i.e. Science Direct. A total of 1,167 articles are chosen because, owing to the high relevance. After the screening process, only 22 papers, 7 conference articles, and 3 books were included in this study. Through an in-depth discussion with experts, five factors were determined as success factors of logistics innovation in palm shells for the export markets, i.e. (1) strategic planning, (2) application of digitalisation, (3) priority on competition, (4) infrastructure and (5) regulation/ policy. The five factors have the same degree of importance and have the same contribution to the successful achievement of logistics innovation.

Keywords: innovation, :logistics system, :export, :Palm Shell.

Introduction

Indonesia is the largest palm shell producing country in the world. Palm shells are industrial waste from palm oil factories which can be utilized as a potential alternative energy

1 source. (Mangoensoekarjo, S. dan Semangun, 2005) explained that the Palm Shell has a high
 2 calorific value where the resulting heat value is 4,105 - 4,802 kcal / kg (1 kcal = 4,187 Joule =
 3 1.163 Wh). However, the consumption of domestic Palm Shell is limited to boiler fuels, so
 4 the export of plam kernel shell becomes a great business opportunity for Indonesia.

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5 The potential demand for Palm Shells reaches 7 - 8 million tons per year (Indonesian
 6 Economic Association, 2017). According to data from the Indonesian Palm Shell
 7 Entrepreneurs Association (Association of Indonesian Palm Shell Entrepreneurs, 2017), the
 8 export of national Palm Shell currently reaches 1.8 million tons for the international markets,
 9 of which 800,000 tons is for the Japanese market with world market price Palm Shell is about
 10 US \$ 80 / ton FOB or equivalent to US \$ 110 - 120 / ton CIF. The contribution of Indonesia's
 11 Palm Shell to the world's needs is 60%, while the rest is filled by Malaysia (Association of
 12 Indonesian Palm Shell Entrepreneurs, 2017).

13 Given the intense industrial competition, logistics play a major role in sustaining
 14 competitive advantage of the exporters of Palm Shell. The availability of the right amount of
 15 material becomes important in logistics. Overstock material is a waste. Inventory management
 16 of both material and storage movement activities can improve the cost efficiency of logistics.
 17 Cost efficiency can bring the company into cost leadership. The value of a product can be
 18 increased through logistics by ensuring the product will reach the market where it is needed,
 19 and available in the market at the right time and amount. Logistics cost in Indonesia + 14.7%
 20 of product sales price (Institute, 2013) and if calculated from the cost of the product, Indonesia
 21 logistic cost is 24% higger than other countries such as USA, UK, Japan, France, Canada, Italy
 22 (Zaroni, 2017) but less than 10% of Argentina, Spain, Brazil, Mexico, India, and China ranging
 23 from 11 to 20% (Rushton, Crouhcher, 2010).

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24 Firms that survive, grow, and compete are those which understand the role of logistics
 25 and create logistics innovation. Logistic innovation is a "novelty" in the management of

1 processes, goods, and information ranging from procurement to the hands of consumers to
2 achieve effectiveness and efficiency. Logistics becomes the determinant factor of the nation's
3 competitiveness as has been compiled in the blueprint of the Indonesia's National Logistics
4 System. The national logistics system was created through the issuance of presidential
5 regulation No. 26 of 2012 on the blueprint for the development of a national logistics system.
6 This blueprint carries the logical vision of 2025 which is "Locally Integrated, Globally
7 Connected for National Competitiveness and Social Welfare". The development of a national
8 logistics system is intended to connect all areas ranging from among villages, between ports,
9 and between countries. The challenge for Indonesia now lies in competitiveness using science,
10 technology and innovation. Indonesia ranks 36 out of 137 in terms of competitiveness (World
11 Economic Forum, 2017) . Ranked 87 out of 127 in terms of innovation competitiveness (WIPO,
12 2017). And 80 out of 137 in terms of technological readiness (World Economic Forum, 2017).
13 By looking at the vision and position of Indonesia's competitiveness, it is necessary to improve
14 competitiveness, science and technology in the logistics sector.

15 The exporters of Palm Shell are aware of the role of logistics and will optimize the
16 strategic, tactical or operational decisions to improve the logistic system. Understanding the
17 role of logistics is not enough to answer today's business challenges. Logistic innovation issues
18 will be an important key in the logistics of Palm Shell for export markets, so it is necessary to
19 formulate/ determine the innovation success factors in Palm Shell logistics for export markets.

20 Literature Review

21 The definition of logistics has evolved from the first era to the current era of industrial
22 revolution 4.0. Understanding of logistics evolves from a focused perspective on transport
23 activities to the view that logistics can be one source of competitive advantage for companies
24 with technology use. (Porter, 2008) mentions that logistics is a basic activity in the formation
25 of the value chain. Logistics is one source of significant competitive advantage for the company

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1 (Mentzer, J.T. and Williams, 2004). Logistics as an efficient planning, implementation and
2 control process that includes the flow of costs, raw material storage, half-finished goods
3 inventory, finished goods and other related information from the origin to the point of
4 destination with the purpose of customer needs can be achieved (Ballou, 2004). (Hadiguna,
5 2017) reveals five keywords as logistic definitions: goods, information, money, processes, and
6 decisions in which the key activities are procurement and transportation interactions.
7 According to (Zaroni, 2017), logistics serves as an option of cost leadership strategy and
8 service leader strategy.

9 Innovation is always associated with some practices that are grounded in value.
10 Innovation is about creating new tools, products or processes, giving birth to something "new"
11 that allows people to achieve something that can not be achieved before (Tidd, J., and Bessant,
12 2009). Innovation is not about the emergence of new or better products, but about the problem
13 solving that must arise first (Silverstein, D., Samuel, P., DeCarlo, 2009). Innovation is a social
14 and economic success as a result of the introduction or discovery of new ways or new
15 combinations that can create major changes that increase the use value or value of benefits
16 (perceived by consumers/ or users) and monetary value or price (Fontana, 2011). (Barringer,
17 B. R, and Ireland, 2013) state that innovation is the process of creating something new. This
18 definition of innovation explains that innovation is a "novelty" that provides value to
19 consumers and added value to producers (firms) where economic and social success is
20 generated. Logistic innovation can be interpreted as a "novelty" process of planning,
21 implementation and control of goods, information, money, and decisions in the business/
22 company that leads to increased value of use to consumers with care about economic, social
23 and environmental threats and increased efficiency and effectiveness for the company.

24 Studies related to logistic innovation have been largely done by previous researchers
25 with different focus. (Kamil, Insannul., Jonrinaldi., 2015) revealed that financing logistics

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1 infrastructure for the creation of connectivity will trigger innovation. Based on the World Bank
 2 study on Logistics Performance Index (LPI) released every year, the logistics performance of
 3 a country is determined by logistics infrastructure. Overall, the logistics performance of a
 4 country is determined by six main pillars, namely: (1) Customs efficiency and border
 5 management (customs); (2) Quality of trade and infrastructure of transportation
 6 (infrastructure); (3) Ease of arranging delivery at competitive prices (Ease of arranging
 7 shipments); (4) Competence and quality of logistics services (Quality of logistics services); (5)
 8 Ability to track and track submissions (Tracking and tracing); (6) Timely delivery frequency
 9 (Timeliness). (Amador, J., Cabral, 2014) describe the drivers and measures in the application
 10 of Global Value Chain is a reliable logistics system. (Hadiguna, 2015) sees that information
 11 and communication technology is the driving factor of logistics systems both micro (enterprise
 12 level) and macro (national level). (Hadiguna, 2017) unravels conceptually various approaches
 13 to solving problems in industrial logistics, such as: Fuzzy logic, that is used to assess risk based
 14 on knowledge and experience of decision makers, heuristic and meta heuristic techniques for
 15 completion of logistics cost optimization and optimization of delivery routes, and simulation
 16 techniques for solving dynamic and stochastic situation problems (such as warehouse location
 17 determination). The results of these studies show that innovation in industrial logistics requires
 18 a system thinking perspective in formulating success factors because it involves multiple
 19 stakeholders. The system thinking perspective is related to the business process of export of
 20 Palm Shell.

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21 Based on a review of the research found that research on logistics innovation with the
 22 research object of the palm shell is still relatively minimal. There are many researches in the
 23 field of oil palm, but almost nothing to discuss about the success factors of logistics innovation
 24 of Palm Shell. A similar study was conducted in 2014 by Vorst and Hadiguna in 2015. (Vorst,
 25 2014) discusses the three factors of successful agro-industry logistics innovation, namely:

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1 network infrastructure, planning and control, and stimulation of technology. The method used
2 is literature study and it is found that key decision on agro industry logistics, including:
3 transportation (gathering point, route, and loading), production (planning, mixing and
4 scheduling), inventory control (product type, product quantity, place), network design
5 (factories, distribution centers, and retailers), and the integral aspects (supply chain
6 management). (Hadiguna, 2015) discloses six main drivers of logistics competitiveness,
7 including: key commodities, transport infrastructure, agents and logistics service providers,
8 human resources, information and communication technologies, and regulations and policies.

9 Some of the points that distinguish this research from Vorst and Hadiguna are: (1)
10 possible changes in conditions affecting the Palm Shells industry for current export markets,
11 (2) research coverage in the Palm Shells industry in West Sumatra, (3) it is necessary to re-
12 identify the factors found to be relevant to the characteristics of the logistics system and
13 business process conditions of the Palm Shells for export markets.

14

15 **Methods**

16 This paper take a previous study and in-depth discussion approach. The aim of this
17 previous study is to analyze the success factors of logistics innovation for export markets. In-
18 depth discussion with experts aims to identify and determine factors relevant to the business
19 process of exporting palm shell. Given the focus of this paper, the key words in search are
20 innovation, logistics systems, and exports. Included publication were published in the last three
21 years between 2015 and 2018. The publication are from two electronic resources: Science
22 Direct and Google Scholar, and from books. Articles mainly indexed in minimum scopus
23 indexed journal and for books have ISBNs would be refered. 1.167 articles are chosen because
24 owing to the high relevance. After the screening process, this process resulted in the 22 papers,
25 7 conference, and 3 books included in this previous study.

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1 In-depth discussions were conducted with senior managers at the best and leading shell
2 exporters in West Sumatra. This exporter is a company that has a level of fulfillment of export
3 demand and financial stability is very high. The results of the in-depth discussions will be
4 confirmed by previous study.

5

6 **Data Collection and Analysis**

7 Data collection was conducted in West Sumatera-Indonesia using primary and
8 secondary data. The business process of export of palm shells as the primary data is used as an
9 initial analytical tool. This data aims to see how business processes related to logistics in the
10 export activities of palm shells. primary data can be seen in the business process following the
11 export of palm shells.

12 Business process on export of palm shells in West Sumatra especially started from
13 the Palm Oil Factory. The process started done by pre order. The exporter orders the palm shell
14 with the specified amount and then made full payment. After that, the palm shell is sent to
15 stockpile or Palm Shell collecting place. Usually the stockpile is leased by the exporter. In
16 stockpile, palm shell are received through weighing, bulk, cleaning, spinning, timing, and
17 loading process.

18 In the business of exporting palm shell, the **exportir** prepares supporting documents
19 and follows the procedures, including: sales contracts, trade invoices, Letter of Credit (L/C),
20 Notice of Export of Goods, Bill of Leading (B/L), Insurance Policy, Certificate of Origin,
21 Quality Statement Letter, and export bills. For export procedures, include: correspondence,
22 trade contracting, L/C issuance, preparing export goods, registering Notice of Export of Goods,
23 ship booking, delivery of goods to port, customs inspection, loading of goods to ship, taking
24 care of Certificate of Origin, L/C , and delivery of goods to importers.

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1 Secondary data was obtained from mass media and online media related to export,
 2 logistics system, and the logistic innovation. A list of successful factors of logistic innovation
 3 can be seen in table 1 below:

4 **Table 1. Assesment of Success Factors in Previous Study**

S.No.	Success Factors	References
1	Efficiency in business processes	(Cherneva D, 2015a; Egea, Torrente, & Aguilar, 2018)
2	Continous improvement	(Baranowski et al., 2015; Hadiguna, 2015, 2017)
3	Hunting on positive practices	(Özmutaf, Aktekin, Ergani, & Çıta, 2015)
4	Integrated information technology, systems, and management	(Egea et al., 2018; Kersten & Blecker, 2015; Lainez, González, Aguilar, & Vela, 2018; Mehmman, Jens., Volker Frehe., 2015; See, 2015)
5	Technology utilization	(Cherneva D, 2015b; De Araujo, De Oliveira, Marins, & Muniz, 2015; Durán & Córdova, 2015; Erkan & Yildirimci, 2015; García-Olivares, Solé, & Osychenko, 2018; Hadiguna, 2015, 2017; Harris, Wang, & Wang, 2015; Kersten & Blecker, 2015; Mehmman, Jens., Volker Frehe., 2015; Oussous, Benjelloun, Ait Lahcen, & Belfkih, 2017; Park, 2016; See, 2015)
6	Technical support and service architecture	(Cherneva D, 2015b; Frederick, Lim, 2015; Kersten & Blecker, 2015; Limbourg, Giang, & Cools, 2016; Roumboutsos, Kapros, & Vanelslander, 2014)
7	Strategic planning	(Chen, Yin, & Mei, 2018; Frederick, Lim, 2015; Gurel, Acar, Onden, & Gumus, 2015; Hadiguna, 2015; Kersten & Blecker, 2015)
8	Distribution and transportation management	(Acar & Gürol, 2016; Baranowski et al., 2015; Çemberci, Civelek, & Canbolat, 2015; Egea et al., 2018; García-Olivares et al., 2018; Gurel et al., 2015; Lainez et al., 2018)
9	Alliance Strategy	(Kersten & Blecker, 2015; Miyashita, 2015; Zaroni, 2017)
10	Collaboration	(Chen et al., 2018; Cherneva D, 2015b; Hadiguna, 2015; Pateman, Cahoon, & Chen, 2016)
11	Logistic competence	(Çemberci et al., 2015; Cherneva D, 2015b; Fabová & Janáková, 2015)
12	Logistics Cost	(Çemberci et al., 2015; Cherneva D, 2015b; Gurel et al., 2015; Hadiguna, 2015)
13	Regulation/ policy	(Chen et al., 2018; Hadiguna, 2015; Kersten & Blecker, 2015; Mehmman, Jens., Volker Frehe., 2015)
14	Infrastructure	(Acar & Gürol, 2016; Beifert, A., Gerlitz, L., Prause, 2015; Çemberci et al., 2015; Frederick, Lim, 2015; Hadiguna, 2015; Kersten & Blecker, 2015)
15	<i>Green Logistic</i>	(Geng, Mansouri, Aktas, & Yen, 2017; Gurel et al., 2015; Hasan & Ali, 2015)
16	Sustainability	(Beifert, A., Gerlitz, L., Prause, 2015; Cherneva D, 2015b; Egea et al., 2018; Gurel et al., 2015; Kersten & Blecker, 2015; Lainez et al., 2018)
17	Attention to economic aspects (eco-efficiency), environment (environmental sustainability), social, and safety	(Egea et al., 2018; Geng et al., 2017; Gurel et al., 2015; Hasan & Ali, 2015; Lainez et al., 2018)

1 The research performs data analysis by sharpening, classifying, directing, removing
2 unnecessary, and organizing data so that final conclusions can be taken from in-depth
3 discussion with experts. Presentation of data in the form of text and narrative, as well as
4 drawing conclusions as a basis for action. Interviews were conducted with senior managers.

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6 **Results of Discussion With Experts**

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7 In the logistics system of Palm Shell for export markets, the main functions of
8 industrial logistics include: ordering, purchasing, inventory, and shipping. Aspects of
9 operational and environmental costs are a priority in managing these logistics functions. The
10 contribution of logistic costs to non-logistic costs on the export business of Palm Shell reaches
11 25% (14% tax cost and 11% operational cost). This figure can be suppressed with innovative
12 breakthroughs in its logistics system. There are five factors to consider for success in logistics
13 innovation of oil palm shells for export markets. These factors are: (1) strategic planning, (2)
14 application of digitalisation, (3) priority on competition, (4) infrastructure, (5) regulation/
15 policy.

16 Strategic planning is a strategic decision that affects the company's logistics
17 performance with a time span of 3 to 5 years. Exporters of palm shells need to plan well the
18 decisions compiled in this strategic plan include: customer service management, distribution
19 channel system, stockpile location, transportation mode options, strategic alliances,
20 distribution and delivery systems, inventory management, and level stock. Implementation of
21 this factor is an investment in increasing the competence of human resources, logistics and
22 infrastructure sector investment. The technical standardization and processes within the palm
23 oil shell logistics system for export markets should also be structured in strategic planning to
24 improve the efficiency and effectiveness of processes as strengthening and enhancing
25 competitiveness.

1 The application of digitization will support the successful realization of shell logistics
2 innovation for export markets. Digitalisation is applied through the utilization of various
3 technologies. Exporters of palm shells should place the role of technology as supporting
4 operations and data management. Some types of technologies that can be applied such as: 3D
5 printing (Additive Layer Manufacturing) to robotics, Enterprise Resources Planning
6 information systems, E-Commerce, application Decision Support System or abbreviated DSS,
7 and others. Digitization will help in realizing the efficiency of time and cost in the business of
8 export process of palm shells.

9 Palm shell exporters need to have competitive priority. Competitive priority includes
10 elements of flexibility, quality, cost, and delivery. Flexibility refers to the exporter's ability to
11 respond effectively to changing environmental conditions and this is necessary in the face of
12 uncertainty. Quality refers to the exporter's attention to the eight dimensions of quality. Cost
13 through the strategy of cost leadership, differentiation, and focus. Delivery referred to the
14 concept of capability related to the issue of time: the accuracy of delivery, the speed of delivery,
15 and the development of speed of service. Competitive priority is a strategic capability because
16 it helps to create, develop, and maintain competitive advantage. In the process, there are
17 continuous improvements. This continuous improvement is intended to develop and improve
18 products, services and processes. Creating the best solution for the existing problem, the results
19 will continue to survive and develop even better. This capability is attributed to market
20 demands in which firms compete.

21 Infrastructure plays an important role in determining the logistics performance of a
22 company and even the state. Infrastructure is the physical facilities developed / required by the
23 user in carrying out logistical functions as a supporter of social and economic systems.
24 Transportation and warehousing are the main activities of the role of infrastructure. In the
25 export of palm shells, the necessary infrastructure includes: seaports, roads, railways, and

1 information and communication technologies. Logistics costs in Indonesia are still large
2 because they are not yet supported by quality logistics infrastructure. Procurement of palm
3 shells from various Palm Oil Mill (PKS) and individuals in West Sumatra is still dominant
4 inland trucking. Therefore, it needs to be improved: (1) integration of multimodal transport
5 network through the alignment of various infrastructures to facilitate access to transport
6 shipping/ shipping of oil from land to sea; (2) implement communication and information
7 technology for planning and controlling logistics and warehousing transportation; (3) improve
8 operational performance and service quality, for example by collaborating with strategic
9 alliances (using third party logistics (3 PL) in managing all material management activities
10 from MCC to distribution (export) for efficient solutions and improving overall logistics
11 quality of the company.

12 Technological advances should be accompanied by adequate regulation and policy.
13 This is needed to strengthen the national logistics system, primarily for export activities.
14 Regulations and policies formulated effectively can realize the strengthening of the logistics
15 system of the palm shell industry for export markets. The regulations and policies made must
16 take into account the following aspects: social, economic, and environment, so as to achieve
17 sustainability. Important points to be reexamined in the export of this palm shell include: the
18 setting of export tax rates and other financing charges, the truck operating hours policy, the
19 policy of shipping palm shells not scattered along the highways, and the policy of exempting
20 illegal levies in the consolidation of loading and unloading in warehouses and transport to
21 seaports.

22

23 **Conclusion and Recommendation**

24 There are five factors that are determined as successful factors of logistics innovation
25 of the palm shells for the export markets by experts through in-depth discussions. These five

1 factors, namely: (1) strategic planning, (2) application of digitalisation, (3) priority on
2 competition, (4) infrastructure, (5) regulation/ policy. The five factors have the same degree of
3 importance and have the same contribution to the successful achievement of logistics
4 innovation. Even though the shell of Indonesian origin is highly sought after by the world,
5 exporters should see that the competition in the export market is very tight. Inadequate
6 infrastructure, costly logistics, and tortuous bureaucracy are the main causes of Indonesia's
7 weak export competitiveness. Therefore, exporters give input to innovate logistics by
8 emphasizing the success factors above.

9 This study recommends that further research undertakes to deepen any successful
10 factors of logistic shell logistics innovation for export markets. The depth includes: observing
11 the relationship between success factors of palm shell logistics innovation for export markets
12 and determining what are the constraining factors or potential obstacles in the implementation
13 of these factors.

14

15 **Conflict of interest**

16 The authors declares no conflicts of interest.

17

18 **Acknowledgments**

19 This research is supported by the Center of Education and Industrial Training of the
20 Ministry of Industry of the Republic of Indonesia.

21

22 **References (Alphabetical order)**

- 23 Acar, A. Z., & Gürol, P. (2016). An Innovative Solution for Transportation among Caspian
24 Region. *Procedia - Social and Behavioral Sciences*, 229, 78–87.
25 <https://doi.org/10.1016/j.sbspro.2016.07.116>
26 Amador, J., Cabral, S. (2014). Global Value Chains Surveying Drivers and Measures. In
27 *Working Paper Series No. 1739 October 2014*.
28 Association of Indonesian Palm Shell Entrepreneurs. (2017). *Ekspor Cangkang Sawit ke*

- 1 *Jepang Tumbuh*. Jakarta: Bisnis.com. Retrieved from
 2 [http://industri.com/read/20170712/99/670679/ekspor-cangkang-sawit-ke-jepang-](http://industri.com/read/20170712/99/670679/ekspor-cangkang-sawit-ke-jepang-tumbuh-ini-sebabnya)
 3 [tumbuh-ini-sebabnya](http://industri.com/read/20170712/99/670679/ekspor-cangkang-sawit-ke-jepang-tumbuh-ini-sebabnya)
- 4 Ballou, R. H. (2004). *Business Logistics: Supply Chain Management (5th ed.)*. New Jersey:
 5 Prentice Hall.
- 6 Baranowski, S., Busko, E., Shishlo, S., Usevich, W., Androsik, J., Mistseiko, M., ... Szymanek,
 7 M. (2015). Formation Mechanism of Logistics Cluster in Belarus. *Agriculture and*
 8 *Agricultural Science Procedia*, 7, 12–20. <https://doi.org/10.1016/j.aaspro.2015.12.022>
- 9 Barringer, B. R., and Ireland, R. D. (2013). *Entrepreneurship: Successfully launching New*
 10 *Ventures. Fourth Edition*. England: Pearson Education.
- 11 Beifert, A., Gerlitz, L., Prause, G. (2015). Sustainable business development models for
 12 regional airports. In C. Kersten, W., Blecker, T., Ringle (Ed.), *Innovations and Strategies*
 13 *for Logistics and Supply Chains (Proceedings of the Hamburg International Conference*
 14 *of Logistics (HICL))* (pp. 256–284). Berlin: epubli GmbH.
- 15 Çemberci, M., Civelek, M. E., & Canbolat, N. (2015). The Moderator Effect of Global
 16 Competitiveness Index on Dimensions of Logistics Performance Index. *Procedia - Social*
 17 *and Behavioral Sciences*, 195, 1514–1524. <https://doi.org/10.1016/j.sbspro.2015.06.453>
- 18 Chen, J., Yin, X., & Mei, L. (2018). Holistic Innovation: An Emerging Innovation Paradigm.
 19 *International Journal of Innovation Studies*. <https://doi.org/10.1016/j.ijis.2018.02.001>
- 20 Cherneva D, V. K. (2015a). Outsourcing to 4PLs - Opportunities, Challenges, Future Outlook.
 21 In *Hamburg International Conference of Logistics (HICL)*.
- 22 Cherneva D, V. K. (2015b). Outsourcing to 4PLs - Opportunities, Challenges, Future Outlook
 23 Hamburg International Conference of Logistics (HICL).
- 24 De Araujo, M. V. F., De Oliveira, U. R., Marins, F. A. S., & Muniz, J. (2015). Cost assessment
 25 and benefits of using RFID in reverse logistics of waste electrical & Electronic equipment
 26 (WEEE). *Procedia Computer Science*, 55(Itqm), 688–697.
 27 <https://doi.org/10.1016/j.procs.2015.07.075>
- 28 Durán, C. A., & Córdova, F. M. (2015). Synergy and technology gaps in export logistics chains
 29 between a Chilean and a Spanish medium-sized port. *Procedia Computer Science*,
 30 55(Itqm), 632–641. <https://doi.org/10.1016/j.procs.2015.07.055>
- 31 Egea, F. J., Torrente, R. G., & Aguilar, A. (2018). An efficient agro-industrial complex in
 32 Almería (Spain): Towards an integrated and sustainable bioeconomy model. *New*
 33 *Biotechnology*, 40, 103–112. <https://doi.org/10.1016/j.nbt.2017.06.009>
- 34 Erkan, B., & Yildirimci, E. (2015). Economic Complexity and Export Competitiveness: The
 35 Case of Turkey. *Procedia - Social and Behavioral Sciences*, 195, 524–533.
 36 <https://doi.org/10.1016/j.sbspro.2015.06.262>
- 37 Fabová, E., & Janáková, H. (2015). Impact of the Business Environment on Development of
 38 Innovation in Slovak Republic. *Procedia Economics and Finance*, 34(2014), 66–72.
 39 [https://doi.org/10.1016/S2212-5671\(15\)01602-0](https://doi.org/10.1016/S2212-5671(15)01602-0)
- 40 Fontana, A. (2011). *Innovate We Can't How to Create Value Through Innovation in Your*
 41 *Organization and Society*. (Revision). Bekasi: Cipta Inovasi Sejahtera.
- 42 Frederick, Lim, & S. (2015). E-commerce Last-mile Supply Network Configuration and
 43 Logistics Capability. In *International Conference of Logistics (HICL) – 20. Proceedings*
 44 *of the Hamburg International Conference of Logistics (HICL)* (pp. 59–90).
- 45 García-Olivares, A., Solé, J., & Osychenko, O. (2018). Transportation in a 100% renewable
 46 energy system. *Energy Conversion and Management*, 158(January), 266–285.
 47 <https://doi.org/10.1016/j.enconman.2017.12.053>
- 48 Geng, R., Mansouri, S. A., Aktas, E., & Yen, D. A. (2017). The role of Guanxi in green supply
 49 chain management in Asia's emerging economies: A conceptual framework. *Industrial*
 50 *Marketing Management*, 63, 1–17. <https://doi.org/10.1016/j.indmarman.2017.01.002>

- 1 Gurel, O., Acar, A. Z., Onden, I., & Gumus, I. (2015). Determinants of the Green Supplier
 2 Selection. *Procedia - Social and Behavioral Sciences*, 181, 131–139.
 3 <https://doi.org/10.1016/j.sbspro.2015.04.874>
- 4 Hadiguna, R. A. (2015). *Inovasi untuk efektivitas logistik*. (I. Hadiguna, Rika Ampuh;
 5 Jonrinaldi; Kamil, Ed.). Padang: Andalas University Press.
- 6 Hadiguna, R. A. (2017). *SISTEM LOGISTIK* (1st ed.). Padang: Andalas University Press.
- 7 Harris, I., Wang, Y., & Wang, H. (2015). ICT in multimodal transport and technological trends:
 8 Unleashing potential for the future. *International Journal of Production Economics*, 159,
 9 88–103. <https://doi.org/10.1016/j.ijpe.2014.09.005>
- 10 Hasan, Z., & Ali, N. A. (2015). The Impact of Green Marketing Strategy on the Firm's
 11 Performance in Malaysia. *Procedia - Social and Behavioral Sciences*, 172, 463–470.
 12 <https://doi.org/10.1016/j.sbspro.2015.01.382>
- 13 Indonesian Economic Association. (2017). Biomass Needs So Orientation of Palm Oil Exports
 14 of the Future. *Bisnis.com*. Retrieved from
 15 [http://industri.bisnis.com/read/20170724/674524/kebutuhan-biomassa-jadi-orientasi-](http://industri.bisnis.com/read/20170724/674524/kebutuhan-biomassa-jadi-orientasi-ekspor-sawit-masa-depan)
 16 [ekspor-sawit-masa-depan](http://industri.bisnis.com/read/20170724/674524/kebutuhan-biomassa-jadi-orientasi-ekspor-sawit-masa-depan).
- 17 Institute, F. M. Biaya Logistik di Indonesia (2013).
- 18 Kamil, Insannul., Jonrinaldi., H. I. (2015). Answering the Challenges of Indonesia's Logistics
 19 Infrastructure: A Pouring Literature Review Stagnation of National Innovation. In
 20 *Indonesian Logistics Symposium*. Padang: Andalas University Press.
- 21 Kersten, W., & Blecker, T. (2015). *Innovations and Strategies for Logistics and Supply Ch*
 22 *ains*.
- 23 Lainez, M., González, J. M., Aguilar, A., & Vela, C. (2018). Spanish strategy on bioeconomy:
 24 Towards a knowledge based sustainable innovation. *New Biotechnology*, 40, 87–95.
 25 <https://doi.org/10.1016/j.nbt.2017.05.006>
- 26 Limbourg, S., Giang, H. T. Q., & Cools, M. (2016). Logistics service quality: The case of da
 27 Nang City. *Procedia Engineering*, 142, 123–129.
 28 <https://doi.org/10.1016/j.proeng.2016.02.022>
- 29 Mangoensoekarjo, S. dan Semangun, H. (2005). *Management of Palm Oil Agribusiness*.
 30 Yogyakarta: Gadjah Mada University Press.
- 31 Mehmman, Jens., Volker Frehe., and F. T. (2015). Crowd Logistics – A Literature Review and
 32 Maturity Model. In *Innovations and Strategies for Logistics and Supply Chains*.
 33 *Proceedings of the Hamburg International Conference of Logistics (HICL)* (pp. 117–146).
- 34 Mentzer, J.T. and Williams, L. . (2004). “The Role of Logistics Leverage in Marketing
 35 Strategy”. *Journal of Marketing Channels*, Vol. 8 No., 29–4.
- 36 Miyashita, K. (2015). Japanese Forwarders' Local Import Hub in Asia: 3PL Power and
 37 Environmental Improvement. *Asian Journal of Shipping and Logistics*, 31(3), 405–427.
 38 <https://doi.org/10.1016/j.ajsl.2015.09.005>
- 39 Oussous, A., Benjelloun, F. Z., Ait Lahcen, A., & Belfkih, S. (2017). Big Data technologies:
 40 A survey. *Journal of King Saud University - Computer and Information Sciences*.
 41 <https://doi.org/10.1016/j.jksuci.2017.06.001>
- 42 Özmutf, N. M., Aktekin, E., Ergani, B., & Çita, K. (2015). The Effects of Innovative Features
 43 of Women Managers on their Business Performance: The Food Exporter Companies in
 44 Aegean Region Sample. *Procedia - Social and Behavioral Sciences*, 195, 220–229.
 45 <https://doi.org/10.1016/j.sbspro.2015.06.353>
- 46 Park, S. (2016). Development of Innovative Strategies for the Korean Manufacturing Industry
 47 by Use of the Connected Smart Factory (CSF). *Procedia Computer Science*, 91(Itqm),
 48 744–750. <https://doi.org/10.1016/j.procs.2016.07.067>
- 49 Pateman, H., Cahoon, S., & Chen, S.-L. (2016). The Role and Value of Collaboration in the
 50 Logistics Industry: An Empirical Study in Australia. *The Asian Journal of Shipping and*

- 1 *Logistics*, 32(1), 33–40. <https://doi.org/10.1016/j.ajsl.2016.03.004>
- 2 Porter, M. E. (2008). *The Global Competitiveness report 2008-2009*. Geneva: World Economic
3 Forum.
- 4 Rouboutsos, A., Kapros, S., & Vanelslander, T. (2014). Research in Transportation Business
5 & Management Green city logistics : Systems of Innovation to assess the potential of E-
6 vehicles. *RTBM*, 11, 43–52. <https://doi.org/10.1016/j.rtbm.2014.06.005>
- 7 Rushton, Croucher, dan B. (2010). *The Handbook of Logistics & Distribution Management*.
8 (KoganPage, Ed.). UK.
- 9 See, B. von and K. K. (2015). Innovations and Strategies for Logistics and Supply Chains. In
10 *Proceedings of the Hamburg International Conference of Logistics (HICL)* (pp. 4–30).
- 11 Silverstein, D., Samuel, P., DeCarlo, N. (2009). *The Innovator's Toolkit: 50 Techniques for*
12 *Predictable and Sustainable Organic Growth*. New Jersey: John Wiley & Sons.
- 13 Tidd, J., and Bessant, J. (2009). *Managing Innovation: integrating, Technological, market, and*
14 *Organizational Change. 4th Edition*. England: John Wiley & Sons.
- 15 Vorst, J. G. A. J. Van Der. (2014). Innovations in Agro-Food Logistics Key decisions in Agro-
16 Logistics.
- 17 WIPO. (2017). Global Innovation Index . GII. Retrieved from
18 http://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2017.pdf.
- 19 World Economic Forum. (2017). “The Global Technological Readiness.” The World
20 Economic Forum.
- 21 Zaroni. (2017). *Panduan Eksekusi Strategi “Logistics & Supply Chain” (Konsep Dasar -*
22 *Logistik Kontemporer - Praktik Terbaik)*. Prasetya Mulya Publishing.
- 23

Determination of Success Factors of Logistics Innovation of Palm Kernel Shell for Export Market

Abstract

In the export business of palm kernel shell, the businessmen are well aware of the role of logistics in increasing competitive advantage. Nevertheless, the issue of innovation becomes a challenge for companies in the management of logistics system. Therefore, it is necessary to formulate the successful factors of logistics innovation of palm kernel shell for export market. This research traces the success factors of logistics innovation of palm kernel shell for export markets. As a conceptual thought formulated through literature study, thought approaches are based on data and information through news searches, previous research results and other secondary sources. There are four successful factors of logistics innovation of palm kernel shell for export market, namely: competitive priority, 4.0 industry implementation, regulation, and strategic planning.

Keywords: industrial logistics system, innovation, conceptual, success factors, export of palm kernel shell.

Introduction

Indonesia is the largest palm kernel shells producing country in the world. One of the byproducts of palm kernel shell that has high economic value, namely: palm kernel shell. Palm kernel shell are industrial waste from Palm Oil Factory which can be utilized as a potential alternative energy source. Mangoensoekarjo and Semangun (2005) explained that the palm kernel shell has a high calorific value where the resulting heat value is 4,105 - 4,802 kcal / kg (1 kcal = 4,187 Joule = 1.163 Wh). Nevertheless, the consumption of domestic palm kernel

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Commented [05]: The abstract need to highlight there are 7 factors identified based on prior study. And elaborate why 4 are selected from the perspective of "Palm kernel shell"

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1 shell is limited to boiler fuels, so the export of palm shells becomes a great business opportunity
2 for Indonesia.

3 The potential demand for palm kernel shells reaches 7 - 8 million tons per year
4 (Indonesian Economic Association, 2017). According to data from the Indonesian Palm Kernel
5 Shell Entrepreneurs Association (Association of Indonesian Palm Shell Entrepreneurs) in
6 2017, the export of national palm kernel shell currently reaches 1.8 million tons to international
7 markets, of which 800,000 tons to fill the Japanese Market, 50% of total volume shipments to
8 the world are destined to Japan with world market price palm kernel shell is about US \$ 80 /
9 ton FOB or equivalent US \$ 110 - 120 / ton CIF. The contribution of Indonesia's palm kernel
10 shell to the world's needs is 60%, while the rest is filled by Malaysia (Association of Indonesian
11 Palm Kernel Shell Entrepreneurs, 2017).

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12 Welcoming the business opportunity of the export of palm kernel shell, businessmen
13 (exporters) of palm kernel shells need to understand the role of logistics as one source of
14 significant competitive advantage for the company. The objective of logistics is to provide
15 assurance that the product can be provided appropriately (the right): quantity, quality, place,
16 time, condition, customer, and cost (Rushton et al, 2010). In the context of corporate
17 management, the important role of logistics in achieving competitive advantage is: product cost
18 efficiency (cost leader) and product value increase (service leader). Logistics cost in Indonesia
19 ± 14.7% of product sales price (FEUI Management Institute, 2013) and calculated from cost
20 of product, Indonesia logistic cost is 24% (Zaroni, 2017). In aggregate to Gross Domestic
21 Product (GDP), logistics cost in Indonesia is 24%, bigger than other countries such as: USA,
22 UK, Japan, France, Canada, Italy less than 10%, or Argentina , Spain, Brazil, Mexico, India,
23 and China ranging from 11 to 20% (Rushton et al, 2010). Hence...?

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Commented [A9]: names as "exporters", not business man,

Commented [A10]: they" need to understand" or "they are aware of"?

Commented [A11]: do u means role of logistics is significant toward CQ?

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24 Firms that survive, grow, and compete are those who understand the role of logistics
25 and create logistical innovation. Logistics becomes the determinant factor of the nation's

Commented [A15]: what is logistical innovation, elaborate

1 competitiveness as has been compiled in the blueprint of the National Logistics System
 2 (Sislognas). The challenge for Indonesia now lies in competitiveness, science and technology,
 3 and innovation. Indonesia ranks 36 out of 137 in terms of competitiveness (WEF, 2017), ranked
 4 87 out of 127 in terms of innovation competitiveness (WIPO, 2017), and 80th out of 137 in
 5 terms of technological readiness (WEF, 2017).

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6 The businessmen (companies/ exporters) of palm kernel shell already understand the
 7 role of logistics well. This is seen from the decisions that have been made by the company,
 8 whether it is strategic, tactical, or operational. These decisions have been attached to the
 9 mechanism/ The businessmen (companies/ exporters) of palm kernel shell already understand
 10 the role of logistics well. This is seen from the decisions that have been made by the company,
 11 whether it is strategic, tactical, or operational. These decisions have been attached to the
 12 mechanism/ business process on the export palm kernel shell in Indonesia in general and West
 13 Sumatra in particular.

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Commented [A18]: The producer and exporter

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14 Understanding the role of logistics alone is not enough to answer today's business
 15 challenges. Logistic innovation issues will be an important key in the logistics of palm kernel
 16 shell for export markets, so it is necessary to formulate/ determine the success factors in
 17 logistics innovation of oil palm shell for export markets. This paper is a conceptual concept
 18 formulated through literature studies. Data and information obtained through searching news,
 19 research results, and other secondary sources.

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21 Literature Review

22 The definition of logistics has evolved from the first era to the current era of industrial
 23 revolution 4.0. Understanding of logistics evolves from a focused perspective on transport
 24 activities to the view that logistics can be one source of competitive advantage for companies
 25 with technology use. Porter (2008) mentions that logistics is a basic activity in the formation

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1 of the value chain. Logistics is one source of significant competitive advantage for the company
2 (Mentzer, 2004). Logistics as an efficient planning, implementation and control process that
3 includes the flow of costs, raw material storage, half-finished goods inventory, finished goods
4 and other related information from the origin to the point of destination with the purpose of
5 **customer needs can be achieved** (Ballou, 2004). Hadiguna (2017) reveals five keywords as
6 logistic definitions: goods, information, money, processes, and decisions in which the key
7 activities are procurement and transportation interactions. According to Zaroni (2017), logistics
8 serves as an option of cost leadership strategy and service leader strategy.

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9 Innovation is always associated with some practices that are grounded in value.
10 Innovation is about creating new tools, products or processes, giving birth to something "new"
11 that allows people to achieve something that can not be achieved before (Tidd & Bessant,
12 2009). Innovation is not about the emergence of new or better products, but about the problem
13 solving that must arise first (Silverstein, 2009). Innovation is a social and economic success
14 as a result of the introduction or discovery of new ways or new combinations that can create
15 major changes that increase the use value or value of benefits (perceived by consumers/ or
16 users) and monetary value or price (Fontana, 2011. Barringer and Ireland (2013) state that
17 innovation is the process of creating something new. This definition of innovation explains that
18 innovation is a "novelty" that provides value to consumers and added value to producers (firms)
19 where economic and social success is generated. Logistic innovation can be interpreted as a
20 "novelty" process of planning, implementation and control of goods, information, money, and
21 decisions in the business/ company that leads to increased value of use to consumers with care
22 about economic, social and environmental threats and increased efficiency and effectiveness
23 for the Company.

24 Studies related to logistic innovation have been largely done by previous researchers
25 with different focus. Kamil, Jonrinaldi, and Halim (2015) revealed that **financing logistics**

1 infrastructure for the creation of connectivity will trigger innovation. Referring to the World
 2 Bank study on Logistics Performance Index (LPI) released every year, the logistics
 3 performance of a country is determined by logistics infrastructure. Overall, the logistics
 4 performance of a country is determined by six main pillars, namely: (1) Customs efficiency
 5 and border management (customs); (2) Quality of trade and infrastructure of transportation
 6 (infrastructure); (3) Ease of arranging delivery at competitive prices (Ease of arranging
 7 shipments); (4) Competence and quality of logistics services (Quality of logistics services); (5)
 8 Ability to track and track submissions (Tracking and tracing); (6) Timely delivery frequency
 9 (Timeliness). Amador and Cabral (2014) describe the drivers and measures in the application
 10 of Global Value Chain is a reliable logistics system. Hadiguna (2015) sees that information and
 11 communication technology is the driving factor of logistics systems both micro (enterprise
 12 level) and macro (national level). Hadiguna (2017) unravels conceptually various approaches
 13 to solving problems in industrial logistics, such as: Fuzzy logic, that is used to assess risk based
 14 on knowledge and experience of decision makers, heuristic and meta heuristic techniques for
 15 completion of logistics cost optimization and optimization of delivery routes, and simulation
 16 techniques for solving dynamic and stochastic situation problems (such as warehouse location
 17 determination). The results of these studies show that innovation in industrial logistics requires
 18 a system thinking perspective in formulating success factors because it involves multiple
 19 stakeholders. The system thinking perspective is related to the business process of export of
 20 palm kernel shell.

21 Based on a review of the research found that research on logistics innovation with the
 22 research object of the palm shell is still relatively minimal. A lot of research in the field of oil
 23 palm, but almost nothing to discuss about the success factors of logistics innovation of palm
 24 kernel shell. A similar study was conducted in 2014 by Vorst and Hadiguna ini 2015. Vorst
 25 (2014) discusses the three factors of successful agro-industry logistics innovation, namely:

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 From here onward to line 10 discuss "Logistic performance"

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 factor for logistic

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1 network infrastructure, planning and control, and stimulation of technology. The method used
 2 is literature study and it is found that key decision on agro industry logistics, including:
 3 transportation (gathering point, route, and loading), production (planning, mixing and
 4 scheduling), inventory control (product type, product quantity, place), network design
 5 (factories, distribution centers, and retailers), and the integral aspects (supply chain
 6 management). Hadiguna (2015) discloses six main drivers of logistics competitiveness,
 7 including: key commodities, transport infrastructure, agents and logistics service providers,
 8 human resources, information and communication technologies, and regulations and policies.

9 Some of the points that distinguish this research from Vorst and Hadiguna are: (1)
 10 possible changes in conditions affecting the palm kernel shells industry for current export
 11 markets, (2) research coverage in the palm kernel shells industry in West Sumatra, (3) it is
 12 necessary to re-identify the factors found to be relevant to the characteristics of the logistics
 13 system and business process conditions of the palm kernel shells for export markets.

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15 **Methods**

16 This research is a conceptual thinking that uses literature study method related to
 17 logistic innovation. Data and information are obtained through searching for news, previous
 18 research results and other secondary sources. Based on the literature study, a list of successful
 19 factors of logistic innovation was formulated in accordance with the characteristics and
 20 business processes of palm kernel shell exports.

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22 **Data Collection**

23 Data collection was conducted to obtain information needed in order to achieve the
 24 research objectives, including methods: questionnaires, observations, interviews, and
 25 documents (Gulo, 2010: 110). The data collecting is done by researcher with observation and

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1 document. Through observation, researchers recognize the work processes and business
2 processes of the export of palm kernel shell. Through the document, researchers know the
3 success factors of logistics innovation.

4

5 ***Data Analysis***

6 In this study, researchers adopted qualitative data analysis techniques that are based
7 on the opinions of Miles & Huberman. According to Miles and Huberman (2014), there are
8 three qualitative data analysis techniques, namely: data reduction, data presentation, and
9 conclusion. The researcher performs a form of analysis that sharpens, classifies, directs,
10 discards unnecessary, and organizes the data so that final conclusions can be taken.
11 Furthermore, researchers perform the presentation of data in the form of narrative text and
12 charts, as well as drawing conclusions as a basis for taking action.

13

14 **Results (or Results and Discussion)**

15 In general, business processes or purchasing mechanisms of palm kernel shell in
16 general in Indonesia and West Sumatra especially started from the Palm Oil Factory which is
17 done by pre order. The company (exporter) orders the palm kernel shell with the specified
18 amount and then made full payment. After that, the palm kernel shell is sent to stockpile or
19 palm kernel shell collecting place. Usually the stockpile is leased by the company (exporter).
20 In stockpile, palm kernel shell are received through weighing, bulk, cleaning, spinning, timing,
21 and loading process. In the business of exporting palm kernel shell, the company prepares
22 supporting documents and follows the procedures, including: sales contracts, trade invoices,
23 Letter of Credit (L/C), Notice of Export of Goods, Bill of Lading (B/L), Insurance Policy,
24 Certificate of Origin, Quality Statement Letter, and export bills. For export procedures, include:
25 correspondence, trade contracting, L/C issuance, preparing export goods, registering Notice of

- 1 Export of Goods, ship booking, delivery of goods to port, customs inspection, loading of goods
 2 to ship, taking care of Certificate of Origin, L/C , and delivery of goods to importers.
 3 Searching for news, research results, and other secondary sources, a list of successful
 4 logistical innovation factors is listed :

Factors of Successful Logistics Innovation

No.	Factor	Definition	Source (Researched by :)
1	Strategic Planning	Strategic decisions that impact on the company's logistics performance with a span of time between 3 s.d. 5 years.	(Aronietis, dkk, 2012) (Cherneva & Voigt, 2015) (Frederick, Lim, & Srai, 2015) (Guohua dan Panpan, 2011) (Hadiguna, 2015) (Hahn & Kuhn, 2012) (Kersten, Blecker, & Ringle, 2015) (Klumpp, Bioly, Zelewski, 2009) (Petit dan Beresford, 2012) (Roumboutsos, Kapros, Vanelslander, 2014) (Turğut, Banu Tuğba., Gamze Tağ Ahmet Herekoğlu Hakan Tozan Ozalp Vayvay, 2011) (Vorst, 2014) (Yunkai, 2006)
2	Implementation of industrial technology 4.0	Utilization of various types of technologies that are connected digitally, ranging from 3D printing to robotics, new types of materials and production systems. Here is implemented, digitalization, autonomization, transparency, mobility, modularization, product and process socialization.	(Aronietis, dkk, 2012) (Beifert, Prause, & Gerlitz, 2015) (Cherneva & Voigt, 2015) (Esper, dkk, 2007) (Guohua dan Panpan, 2011) (Hadiguna, 2015) (Hahn & Kuhn, 2012) (Kamadaja Logistics, 2015) (Kamil, 2015) (Klumpp, Bioly, Zelewski, 2009) (Petit dan Beresford, 2012) (Vorst, 2014) (Yunkai, 2006)
3	<i>Competitive Priority</i>	Strategic capabilities that can help companies to create, develop, and maintain competitive advantages related to market demands in which firms compete, include elements:	(Allameh et al, 2011) (Banerjee & Siemens, 2015) (Beifert, Prause, & Gerlitz, 2015) (Bidokhti et al, 2011) (Cherneva & Voigt, 2015)

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		Flexibility, Quality, Cost, and Delivery.	(Daneshfard & Zakeri, 2010) (Esper, dkk, 2007) (Flint et al, 2005) (Fuller, Hutler, & Hautz, 2013) (Kunal, 2013) (Guohua dan Panpan, 2011) (Hadiguna, 2017) (Hahn & Kuhn, 2012) (Hjalmarsson, dkk, 2014) (Hugos, 2003) (Kalogerakis & Wagenstetter, 2014) (Kamadjaja Logistics, 2015) (Kamil, 2015) (Kersten, Blecker, & Ringle, 2015) (Kersten, Blecker, Ringle, 2015) (Kersten, Seidel, & Wagenstetter, 2012) (Lin & Ho, 2008) (Pfeifer & Gebauer, 2013) (Roumboutsos, Kapros, Vanelslander, 2014) (Sedziuviene & Vveinhardt, 2010) (See & Kalogerakis, 2015) (Tabarsa & Ormozdi, 2008) (Turğut, Banu Tuğba., Gamze Tağ Ahmet Herekoğlu Hakan Tozan Ozalp Vayvay, 2011) (Vorst, 2014) (Wagner & Busse, 2008) (Yousefifar et al, 2015)
4	Infrastructure	Physical facilities developed / required by the user in carrying out logistical functions to support social and economic systems.	(Beifert, Prause, & Gerlitz, 2015) (Frederick, Lim, & Srail, 2015) (Guohua dan Panpan, 2011) (Hadiguna, 2015) (Kamadjaja Logistics, 2015) (Kamil, 2015) (Kersten, Blecker, Ringle, 2015) (Klumpp, Bioly, Zelewski, 2009) (Roumboutsos, Kapros, Vanelslander, 2014) (Turğut, Banu Tuğba., Gamze Tağ Ahmet Herekoğlu Hakan Tozan Ozalp Vayvay, 2011)

			(Wirges et al, 2012)
5	Regulation	Any form of regulation to control business conduct, may be in the form of legal restrictions imposed by governments, industry regulations, trade association rules, and so on.	(Filippetti & Archibugi, 2011) (Frederick, Lim, & Srari, 2015) (Guohua dan Panpan, 2011) (Hadiguna, 2015) (Kersten, Blecker, & Ringle, 2015) (Mehmann, Frehe, & Teuteberg, 2015) (Roumboutsos, Kapros, Vanelslander, 2014) (Simatupang, 2011)
6	Sustainability	Socio - ecological processes characterized by the achievement of the same ideals, namely: the ability to maintain something by configuring civilization and human activity so as to meet their needs and express their greatest potential in the present, while preserving biodiversity and natural ecosystems, planning and acting to be able to defend the ideals for future generations.	(Beifert, Prause, & Gerlitz, 2015) (Cherneva & Voigt, 2015) (Elkington, 1994) (Green et al, 2012) (Kersten, Blecker, Ringle, 2015) (Klumpp, Bioly, Zelewski, 2009) (Komisi Eropa, 2001) (Seuring, S. and Müller, M., 2008) (Roth & Kaberger, 2002) (Roumboutsos, Kapros, Vanelslander, 2014) (Taniguchi, Thompson, Yamada, 2014) (Turğut, Banu Tuğba., Gamze Tağ Ahmet Herekoğlu Hakan Tozan Ozalp Vayvay, 2011)
7	Continuous improvement	Ongoing efforts to develop and improve products, services and processes. Creating the best solution from the existing problem, the results will continue to survive and develop even better.	(Cherneva & Voigt, 2015) (Hadiguna, 2015) (Klumpp, Bioly, Zelewski, 2009) (Petit dan Beresford, 2012) (Vorst, 2014)

1

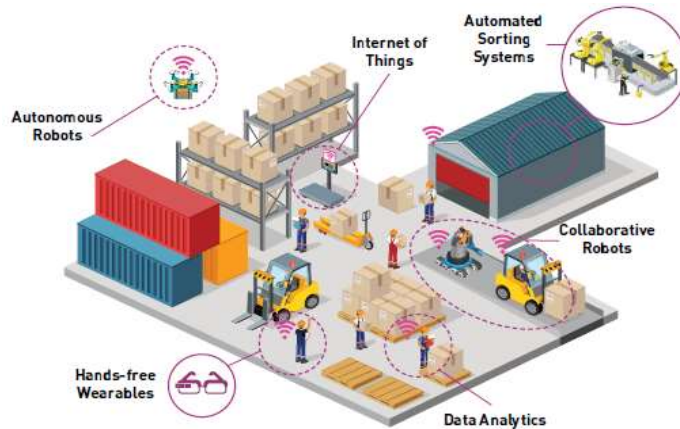
2 **Discussion (or Results and Discussion)**

3 In the logistics system of palm kernel shell for export markets, the main functions of
4 industrial logistics include: ordering, purchasing, inventory, and shipping. Aspects of
5 operational and environmental costs are a priority in managing these logistics functions. The

Commented [038]: Suggest to enhance the discussion/justification on how the 4 factors are selected from Palm Kernel Shell logistic system perspective.

1 contribution of logistic costs to non-logistic costs on the export business of palm kernel shell
 2 reaches 25% (14% tax cost and 11% operational cost). This figure can be suppressed with
 3 innovative breakthroughs in its logistics system.

4 Hay Group Logistics Manpower Study (2015) mentions that technological advances
 5 will result in greater productivity and shape the future of logistics. Modern warehouses
 6 equipped with key technology solutions will achieve greater productivity, improve volume
 7 handling, inventory speed and accuracy at lower costs. Warehouse of the future (modern) can
 8 be seen in Figure 1 below.



9

10 **Figure 1:** Warehouse of the Future (Modern)

11 **Source:** Republic Polytechnic COI SCM (Hay Group Logistics Manpower Study, 2015)

12

13 There are four factors to consider in order to succeed in logistics innovation of oil
 14 palm shells for export markets. The first is competitive priority which includes elements of
 15 flexibility, quality, cost, and delivery. Flexibility refers to the ability to respond effectively to
 16 constantly changing environmental conditions and this is necessary in the face of uncertainty.
 17 Quality is concerned with the eight dimensions of quality. Cost through the strategy of cost
 18 leadership, differentiation, and focus. Delivery referred to the concept of capability related to

Commented [039]: How to link to the success factors? The discussion must support the proposed success factors

Commented [040]: Which factors?

Commented [041]: Are these 4 factors on top of the 7 factors proposed in the Table

Commented [042]: How to link to the 4 factors

1 the issue of time: the accuracy of delivery, the speed of delivery, and the development of speed
2 of service.

3 The characteristics of the 4.0 industry are digitization through the utilization of
4 various technologies. The exporters of palm kernel shell should also prepare the
5 implementation of the 4.0 industry in the company's logistics system. Implementation of the
6 4.0 industry is a low energy concept, reliable, integrated, transparent, high adaptability,
7 providing technical support and service architecture. The second factor would be to place the
8 role of technology as supporting operations and data management. Some types of technologies
9 such as 3D printing (Additive Layer Manufacturing) to robotics, Enterprise Resources Planning
10 information systems, E-Commerce, Decision Support System application or abbreviated DSS,
11 and others.

12 The third factor deals with regulation. Technological advances should be
13 accompanied by adequate regulation. This is needed to strengthen the national logistics system,
14 primarily for export activities. Regulations and policies formulated effectively can realize the
15 strength of the logistics system of the palm kernel shell industry for export markets.

16 The last factor is strategic planning. The decisions compiled in this strategic plan
17 include: customer service management, distribution channel system, supply points, factory
18 location, depot system configuration, depot type and amount, depot location and size,
19 transportation mode choice, strategic alliance, distribution and delivery system, inventory
20 management, and inventory levels. Implementation of this factor is an investment in increasing
21 the competence of human resources logistics and infrastructure sector investment. Technical
22 standardization and processes within the palm kernel shell logistics system for export markets
23 also need to be structured in strategic planning to improve the efficiency and effectiveness of
24 processes as strengthening and enhancing competitiveness.

25 XX

Commented [043]: This inline with Factor 2, ok

Commented [044]: Which one is 1st factor?

Commented [045]: Another factor?

Commented [046]: This is the 5th factor in the table

Commented [047]: Why the other 3 factors are not relevant to palm kernel shell logistic system

1

2 **Conclusion and Recommendation**

3 There are four factors that need to be considered in achieving successful innovation
4 in palm kernel shell logistics system for export market, namely: competitive priority, 4.0
5 industry implementation, regulation, and strategic planning. The success of logistics innovation
6 of palm kernel shell for the export market is determined by an appropriate logistical strategy
7 that is strategic, tactical, and operational. These four factors are a recommendation to focus
8 business actors in innovating the logistics system of palm kernel shell industry for export
9 market. Implementation of industry 4.0 through the use of various technologies will further
10 bring the company's business processes more efficiently and effectively and bring positive
11 impacts on sustainability and continuous improvement. Eventhough it has been embodied in
12 the blueprint of the national logistics system, infrastructure financing needs to be prepared for
13 the acceleration of logistics functions to support social and economic systems.

14

15 **Conflict of interest**

16 The author whose names are listed report the following details of affiliation or
17 involvement in an organization or entity with a financial or non-financial interest in the subject
18 matter or materials discussed in this manuscript.

19

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25

1 **References(Alphabetical order)**

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3 Allameh, S.M., Zare, S.M, and Davoodi, S.M.R. (2011). *:Examining the Impact of KM*
4 *Enablers on Knowledge Management Processes*". Procedia.

5 Amador, J., Cabral, S. (2014). Global Value Chains Surveying Drivers and Measures.
6 *Working Paper Series No. 1739 October 2014.*

7 Aronietis, R., Ferrari, C., Frouws, K., Guihéry, L., Kapros, S., Lambrou, M., et al. (2012). A
8 system's innovation approach in identifying policy measures in support of
9 interoperability and information flow in surface transport. *E-Freight 2012 Conference,*
10 *9–10 May.*

11 Asosiasi Pengusaha Cangkang Sawit Indonesia (Apcasi). (2017). *Ekspor Cangkang Sawit ke*
12 *Jepang Tumbuh. Jakarta: Bisnis.com,*

13 [http://industri.com/read/20170712/99/670679/ekspor-cangkang-sawit-ke-jepang-](http://industri.com/read/20170712/99/670679/ekspor-cangkang-sawit-ke-jepang-tumbuh.-ini-sebabnya)
14 [tumbuh.-ini-sebabnya](http://industri.com/read/20170712/99/670679/ekspor-cangkang-sawit-ke-jepang-tumbuh.-ini-sebabnya)

15 Ballou, R.H. (2004). *Business Logistics: Supply Chain Management (5th ed.)*. Prentice Hall,
16 New Jersey.

17 Banerjee & Siemens. (2015). Logistics of E-Groceries.de. *International Conference of*
18 *Logistics (HICL) – 20. Proceedings of the Hamburg International Conference of*
19 *Logistics (HICL), 20, pp. 91-116.*

20 Barringer, B. R, and Ireland, R. D. (2013). *Entrepreneurship: Succesfully launching New*
21 *Ventures. Fourth Edition*. England: Pearson Education.

22 Beifert, A., Gerlitz, L., Prause, G. (2015). Sustainable business development models for
23 regional airports. In: Kersten, W., Blecker, T., Ringle, C. (eds.) *Innovations and*
24 *Strategies for Logistics and Supply Chains (Proceedings of the Hamburg International*
25 *Conference of Logistics (HICL)), pp. 256–284. epubli GmbH, Berlin (2015) 9.*

- 1 Bidokhti et al., A. Amin Bidokhti, Sh. Makvand-Hosseini, Z. Ehsani. (2011). Investigation of
2 relation between organizational culture and knowledge management in educational
3 system of Semnan. Iran. *Rahbord quarterly journal*, 20 (59) (2011), pp. 191-216.
- 4 Cherneva D, Voigt KI. (2015). Outsourcing to 4PLs - Opportunities, Challenges, Future
5 Outlook Hamburg International Conference of Logistics (HICL). *Conference
6 contribution*.
- 7 Daneshfard, K. and Zakeri, M. (2010), "The impact of knowledge management on fostering
8 the competitiveness of advisory engineering firms (case study: Tehran Advisory
9 Engineers)", *Journal of Insight*, Vol. 45, pp. 21-38.
- 10 Elkington, J. (1994), "Towards the sustainable corporation: Win-win-win business strategies
11 for sustainable development", *California Management Review*, Vol. 36 No. 2, pp. 90-
12 100.
- 13 Esper, T.L., Fugate, B.S. and Sramek, B.D. (2007), "Logistics Learning Capability: Sustaining
14 the Competitive Advantage Gained through Logistics Leverage". *Journal of Business
15 Logistics*, Vol. 28 No. 2, pp. 57-81.
- 16 Esper, T.L., Jensen, T.D., Turnipseed, F.L. and Burton, S. (2003). The last mile_an
17 examination of effects of online retail delivery strategies on consumers. *Journal of
18 Business Logistics* 24(2) 177-203.
- 19 European Commission (2001), "*European Transport Policy for 2010: time to decide*". Office
20 for Official Publications of The European Communities, Luxembourg.
- 21 Filippetti, A., & Archibugi, D. (2011). Innovation in times of crisis: National Systems of
22 Innovation, structure, and demand. *Research Policy*, 40, 179–192.
- 23 Flint, D. J., Larsson, E., Gammelgaard, B. and Mentzer, J. T., 2005. Logistics Innovation: A
24 Customer Value-Oriented Social Process. *Journal of Business Logistics*, 26(1), pp.
25 113–147.

- 1 Fontana, A. (2011). *Innovate We Can't How to Create Value Through Innovation in Your*
2 *Organization and Society*. Edisi Revisi. Bekasi: Cipta Inovasi Sejahtera.
- 3 Frederick, Lim, & Srai. (2015). E-commerce Last-mile Supply Network Configuration and
4 Logistics Capability. *International Conference of Logistics (HICL) – 20. Proceedings*
5 *of the Hamburg International Conference of Logistics (HICL), 20, pp. 59-90.*
- 6 Füller, J., Hutter, K. and Hautz, J. (2013). The Future of Crowdsourcing: From Idea Contests
7 to MASSive Ideation. In: *A. S. Huff, K. M. Möslin, and R. Reichwald, eds. 2013.*
8 *Leading open innovation*. Cambridge, Mass.: MIT Press, pp. 241–261.
- 9 GJ Hahn, H Kuhn. (2012). Designing decision support systems for value-based management:
10 A survey and an architecture. *Decision Support Systems 53 (3), 591-598.*
- 11 Green Jr, K.W., Zelbst, P.J., Meacham, J. and Bhadauria, V.S. (2012), “Green supply chain
12 management practices: impact on performance”, *Supply Chain Management: An*
13 *International Journal, Vol. 17 No. 3, pp. 290-305.*
- 14 Gulo. 2010. *Research Methodology*. Jakarta : Grasindo.
- 15 Guohua, ZHOU and Panpan XIE. (2011). *The Research on Influence Factors of Logistics*
16 *Service Innovation*.
- 17 Hadiguna, Rika Ampuh. (2015). Model Development: Integrated Human Logistics: Lesson
18 Learned West Sumatra Disaster Management. *Humanitarian Logistics Seminar*
19 *integrated in Padang Disaster Management*. Hotel Grand Inna Muara Padang, June 5,
20 2015 by Coordinating Ministry for Economic Affairs.
- 21 Hay Group Logistics Manpower Study. (2015). *Future Warehouse*. Singapore: Republic
22 Polytechnic COI SCM.
- 23 Hjalmarsson, A., Johannesson, P., Jüll-Skielse, G. and Rudmark, D. (2014). Beyond innovation
24 contests: A framework of barriers to open innovation of digital services. *Proceedings*

- 1 of the European Conference on Information Systems (ECIS). 2014, Tel Aviv, Israel,
2 June 9-11, 2014. [S. l.]: AISEL.
- 3 Hugos, M.H. (2003), *Essentials of Supply Chain Management*, John Wiley & Sons.
- 4 Indonesian Economic Association. (2017). Biomass Needs So Orientation of Palm Oil Exports
5 of the Future. Jakarta: Bsnis.com,
6 [http://industri.bisnis.com/read/20170724/674524/kebutuhan-biomassa-jadi-orientasi-](http://industri.bisnis.com/read/20170724/674524/kebutuhan-biomassa-jadi-orientasi-ekspor-sawit-masa-depan)
7 [ekspor-sawit-masa-depan.](http://industri.bisnis.com/read/20170724/674524/kebutuhan-biomassa-jadi-orientasi-ekspor-sawit-masa-depan)
- 8 Institute of Management Faculty of Economics and Business University of Indonesia (LM-
9 FEB UI). (2013). *Logistics Charges in Indonesia*.
- 10 Kalogerakis, K. and Wagenstetter, N. (2014). A general framework for open service innovation
11 in logistics. In: T. Blecker, W. Kersten, and C. Ringle, eds. 2014. *Innovative Methods*
12 *in Logistics and Supply Chain Management. Current Issues and Emerging Practices*.
13 Berlin: epubli GmbH, pp. 27–47.
- 14 Kamil, Insannul., Jonrinaldi., Halim Irsyadul. (2015). Answering the Challenges of Indonesia's
15 Logistics Infrastructure: A Pouring Literature Review Stagnation of National
16 Innovation. *Indonesian Logistics Symposium, 2015*. Padang: Andalas University.
- 17 Kersten, W., Seidel, A. and Wagenstetter, N. (2012). Innovations management in der Logistik.
18 *Analyse und Bewertung bestehender Innovations management-Methoden für*
19 *Logistikdienstleistungsunternehmen. Industrie Management, (28), pp. 31–34.*
- 20 Kersten, Wolfgang., Thorsten Blecker and Christian M. Ringle. (2015). Innovations and
21 Strategies for Logistics and Supply Chains. *International Conference of Logistics*
22 *(HICL) – 20. Proceedings of the Hamburg International Conference of Logistics*
23 *(HICL), 20, P1 -P201.*
- 24 Klump, M., Ostertag, M. (2009). “Quality Management Impact on Logistics Networks
25 measured by Supply Chain Performance Indicators”, in *Global Logistics Management*

- 1 – *Sustainability, Quality, Risks*, Kersten, W., Blecker, T., Fläming, H. (Eds.), Berlin,
2 2008, p. 129-148.
- 3 Klumpp, Matthias ., Bioly-Dipl.-Kfm. Sascha., Zelewski Stephan. (2009). Sustainability and
4 Technology Innovation in Logistics - Friends or Foes? *Second International*
5 *Conference on Multinational Enterprises and Sustainable Development, Nancy-Mets,*
6 *France 2009.*
- 7 Kunal K. Ganguly Kalyan K. Guin, (2013), "A fuzzy AHP approach for inbound supply risk
8 assessment", *Benchmarking: An International Journal*, Vol. 20 Iss 1 pp. 129 - 146.
- 9 Lin, C. and Ho, Y. (2008), "An empirical study on logistics service providers' intention to adopt
10 green innovation", *Journal of Technology Management & Innovation*, Vol. 3 No. 1, pp.
11 17-26.
- 12 Lin, C., Ho, Y. and Chiang, S. (2009) "Organizational Determinants of Green Innovation
13 Implementation in the Logistics Industry", *The International Journal of Organizational*
14 *Innovation*, Vol. 2 No. 1, pp. 5-12.
- 15 Mangoensoekarjo, S. dan Semangun, H. (2005). *Management of Palm Oil Agribusiness.*
16 Yogyakarta: Gadjah Mada University Press.
- 17 Mehmman, Jens., Volker Frehe., and Frank Teuteber. (2015). Crowd Logistics – A Literature
18 Review and Maturity Model. (2015). Innovations and Strategies for Logistics and
19 Supply Chains. *International Conference of Logistics (HICL) – 20. Proceedings of the*
20 *Hamburg International Conference of Logistics (HICL)*, 20, pp.117-146.
- 21 Mentzer, J.T. and Williams, L.R. (2004), "The Role of Logistics Leverage in Marketing
22 Strategy". *Journal of Marketing Channels*, Vol. 8 No. 3/4, pp. 29-47.
- 23 Miles, M.B, Huberman, A.M, dan Saldana, J. (2014). *Qualitative Data Analysis, A. Methods*
24 *Sourcebook, Edition 3.* USA: Sage Publications.

- 1 Petit, S., Beresford, A. (2012). Critical Success Factors in The Supply of Humanitarian Aid.
2 *Proceeding of International HumLog Workshop: Performance Measurement in*
3 *Humanitarian Logistics, Essen, 24 September 2012, 72-87.*
- 4 Pfeifer, B. and Gebauer, J. (2013). Ideenwettbewerbe bei Lufthansa Cargo — Erfolgreicher
5 Open Innovation-Ansatz im B2B-Bereich. *Ideenmanagement : Zeitschrift für*
6 *Vorschlagswesen und Verbesserungsprozesse, 39, pp. 53–55.*
- 7 Pfohl, Christian -Hans, Burak Yahsi and Tamer Kurnaz. (2015). The Impact of Industry 4.0 on
8 the Supply Chain. *Innovations and Strategies for Logistics and Supply Chains.*
9 *International Conference of Logistics (HICL) – 20. Proceedings of the Hamburg*
10 *International Conference of Logistics (HICL), 20, pp.31-58.*
- 11 Porter, M. E. (2008). The Global Competitiveness report 2008-2009. Geneva, World Economic
12 Forum.
- 13 Roth, A. and Kaberger, T. (2002), “Making transport systems sustainable”, *Journal of Cleaner*
14 *Production, Vol. 10 No. 4, pp. 361-371.*
- 15 Rouboutsos, Athena ., Kapros, Seraphim ., Vanelander, Thierry. (2014). Green city
16 logistics: Systems of Innovation to assess the potential of E-vehicles. *Research in*
17 *Transportation Business & Management 11 (2014) 43–52*
- 18 Rushton, Croucher, dan Baker. (2010). *The Handbook of Logistics & Distribution*
19 *Management: KoganPage, UK.*
- 20 Sedziuviene, N. and Vveinhardt, J. (2010). “Competitiveness and innovations: role of
21 knowledge management at a knowledge organization”, *Inzinerine konomika-*
22 *Engineering Economics, Vol. 21 No. 5, pp. 525-536.*
- 23 See, Birgit von and Katharina Kalogerakis. (2015). Innovations and Strategies for Logistics
24 and Supply Chains. *International Conference of Logistics (HICL) – 20. Proceedings of*
25 *the Hamburg International Conference of Logistics (HICL), 20, pp. 4-30.*

- 1 Seuring, S. and Müller, M. (2008), "From a literature review to a conceptual framework for
2 sustainable supply chain management", *Journal of Cleaner Production*, Vol. 16 No. 15,
3 pp. 1699-1710.
- 4 Silverstein, D., Samuel, P., DeCarlo, N. (2009). *The Innovator's Toolkit: 50 Techniques for*
5 *Predictable and Sustainable Organic Growth*. New Jersey: John Wiley & Sons.
- 6 Simatupang, TM., R Sridharan. (2011). A drama theory analysis of supply chain collaboration.
7 *International Journal of Collaborative Enterprise* 2 (2-3), 129-146
- 8 Tabarsa, G. and Ormozdi, N. (2008), "Clarifying and measuring thematic factors to establish
9 knowledge management: case study: National Iranian Oil Products Distribution
10 Company Tehran", *Management Message*, Vol. 26, pp. 39-69.
- 11 Taniguchi, Eiichi et al. (2014). Recent Trends and Innovations in Modelling City Logistics.
12 *Selection and peer-review under responsibility of the Organising Committee of the 8th*
13 *International Conference on City Logistics.Procedia - Social and Behavioral Sciences*
14 *125 (2014) 4 – 14.*
- 15 Tidd, J., and Bessant, J. (2009). *Managing Innovation: integrating, Technological, market,*
16 *and Organizational Change. 4th Edition*. England: John Wiley & Sons.
- 17 Turban, E.Aronson, J.R, & Liang, T.P. (2007). *Decision Support Systems and Intelligent*
18 *Systems. 7th Editionn*. New Delhi: Prentice Hall of India.
- 19 Turğut, Banu Tuğba., Gamze Tağ Ahmet Herekoğlu Hakan Tozan Ozalp Vayvay. (2011)."A
20 fuzzy AHP based decision support system for disaster center location selection and a
21 case study for Istanbul", *Disaster Prevention and Management: An International*
22 *Journal*, Vol. 20 Iss 5 pp. 499 - 520.
- 23 Vorst, Jack G.A.J. van der. (2014). *Innovations in Agro-Food Logistics*. Wageningen:
24 Wageningen University.

- 1 Wagner, S. M. and Busse, C. (2008). Managing Innovation at Logistics Service Provider - An
2 Introduction. In: S. M. Wagner, and C. Busse, eds. 2008. Managing innovation. The
3 new competitive edge for logistics service providers. Berne, Stuttgart, Vienna: Haupt,
4 pp. 1–1.
- 5 WIPO. (2017). Global Innovation Index . GII 2017, WIPO,
6 http://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2017.pdf.
- 7 Wirges, J., Linder, S., & Kessler, A. (2012). Modelling the development of a regional charging
8 infrastructure for electric vehicles in time and space. *European Journal of Transport
9 and Infrastructure Research*, 12. (pp. 391–416).
- 10 World Economic Forum. (2017). “The Global Technological Readiness”. The World
11 Economic Forum.
- 12 Yousefifar, Ramin., Julian Popp, Theresa Beyer and Karl-Heinz Wehking. (2015). Innovations
13 and Strategies for Logistics and Supply Chains. *International Conference of Logistics
14 (HICL) – 20. Proceedings of the Hamburg International Conference of Logistics
15 (HICL), 20, pp. 285-304.*
- 16 Yunkai, Zhuo. (2006). Logistics service innovation model’s analysis: “Square pyramid” model.
17 *Theory Discuss, 2006(6): p17~19 (in Chinese)*
- 18 Zaroni. (2017). *Logistics & Supply Chain (Basic Concepts-Contemporary Logistics-Best
19 Practices)*. Jakarta: Prasetiya Mulya Publishing.