

A REVIEW OF LOGISTICS MANAGEMENT RELATED KNOWLEDGE MANAGEMENT

Izzah N.^{1,*}, Liu Yao^{2,*}, Cheng Jack K.³

^{1, 2, 3} Faculty of Industrial Management, University Malaysia Pahang, 26300, Gambang, Pahang, Malaysia

*For correspondence; Tel. + (60) 0182082011, E-mail: damiza87@gmail.com

ABSTRACT: *Though resource based view (RBV) has been applied extensively in supply chain studies to examine how firms utilize logistics resources to attain superior performance, relatively little attention has been directed to exploring the effects of operational routines on logistics and supply chain competencies. This study focus on logistics service providers' (LSPs) strategy and operations. Logistics service providers should adapt their systems and procedures to customers' specific requirements, to ensure high relationship performance. Satisfied customers especially from e-business partners should promote the providers' adaptations, because these adaptations enhance the probability of contract renewal and reduce the risk of providers' unexpected termination of the contract, because of the growth in online shopping has presented challenges for physical distribution service quality provided by retailers and sellers including both multi-channel and pure players, and logistics service providers. This paper aims to combine the perspectives of logistics-service providers and e-business in the development of value-added logistics services. The purpose was to create a theory-based and initially tested framework that could help both service providers and e-business activities identify new opportunities for developing performance.*

Keywords: Efficiency logistics management; Logistics service providers; E-business performance; Knowledge management

1. INTRODUCTION

Logistics management has assumed a very prominent role as it provides the backbone economic growth and to facilitate international trade. It is one of the key service offerings required in the business environment today, especially in e-business performances as a driver of growth in developing economies. As it has one of the catalysts for the development of industrialization in Malaysia, the performance of this management will have an impact of the nation's industrialization and its competitiveness in international trade. Logistics management is not only consists the physical movement of goods, but it has to be efficient in the facilitation of the movement through documents processing, coordination, monitoring and financing activities. Thus, logistics management covers the whole of infrastructure and systems competency [1].

Today, the dust has settled and many of the promising new e-business companies have failed or are struggling for economic survival. The failure of so many companies in e-business can be in part accounted for by the neglect of logistics as a key factor of success, implying a prominent role for companies specializing in the logistics segment [4]. Logistics service providers are thus confronted with change in their respective market environments. It is therefore surprising that little attention, especially in Malaysia industry has been paid to an assessment of these changes and their direct as well as indirect implications for logistics service providers and e-business performance. This study tries to explore about the challenges of logistics management, especially in logistics service providers and how its competency impact on operations of e-business performance.

2. EFFICIENCY OF LOGISTICS MANAGEMENT

Each of the challenges and constraints that exist can be used as an opportunity. What matters is how efficiently logistics companies face the challenges and constraints, so all these depend on the whole competency management. Studies regarding logistics management efficiency have received considerable attention in the logistics literature [for examples

see 2, 13, 14, 37, 38 and 39]. In logistics, such interest might be attributed to the belief that logistics management efficiency is formed from several dimensions, such as a logistics operations with knowledge management (LOKM) framework [see 13, 14] and also namely a business, logistics and management (BLM) framework [24, 25, 26]. Previous studies have used the LOKM and BLM framework to study the competency of logistics managers [see 11, 13, 14, 29, 38]. Studies about the efficiency of Malaysian logistics management have not been widely pursued. The closest studies to the problem were conducted by [9, 29, 30].

According [29] they examine about what are the dimensions of logistics management efficiency for Malaysian logisticians. The research method used was to survey Malaysian logisticians to obtain their perceptions of the importance of areas of management efficiency, in their current position.

In their study, [30] investigated the need for human resource management (HRM) dimensions in the supply chain management (SCM) of suppliers. Suppliers were required to develop specific HRM practices such as multi-skilling, teamwork and effective job rotation.

Meanwhile, [29] make a comparison between logistics management from Singapore and Malaysia based on the views of top management. Their findings showed that successful logistics management executives in complex business environments need to be multi-skilled generalists rather than technically-oriented specialists.

In related literature, [11, 13, 14 23] have studied difference perspectives on logistics management competency. [13] create a new climate of logistics management where is they contribute to the knowledge management and logistics operations literatures in numerous ways and remediate these omissions in the literature by considering the combined effect of LOKM [as per 13] and global manufacturing reach, on both logistics differentiation and organizational performance. Then, [11] emphasized that in order for supply chain and logistics organizations to have a competitive advantage, they

need to hire employees with key supply chain management (SCM) skills, implement leadership styles, create a learning working environment and create cross-functional teams. [23] explored the challenges for management development in order to bridge the gap between current capabilities (managerial skills and competencies for logistics and SCM managers) and those required for future success.

Substantial studies, made by logistics researchers from around the world, have studied the relationship between knowledge management and logistics impact on organizational performance, also HRM and logistics, in the context of logistics management efficiency [see 11, 13, 14, 29, 38, 40]. However, attempts to explore the dimensions of efficiency in Malaysian logistics management have been few [see 9, 29, 30]. But the study about impact and relationship about logistics management especially for logistics service providers and e-business activities still not exist especially in Malaysia industrial. Due to the small number of studies in this area, it presents an opportunity to explore these dimensions. The current study was designed to fill this gap and to enhance our understanding of how Malaysian logistics management perceived efficient related knowledge management to give positive impact on others business performances such as e-business performances. Therefore, the objective of this study was to explore the extent to which efficient of logistics-related knowledge management on e-business development.

The development of competencies, in the 21st century, for managers requires effective program design and teaching methods for teach [3]. They further explained that competencies need to be effective and they can be explored through two dimensions; firstly, competencies as behavioral manifestations of talent, and secondly, competencies in a holistic theory of personality. In relation to logistics management competency, knowledge, knowledge management and skills are perceived as important factors for logistics firms to stay competitive in the 21st century [6,13,14, 22].

Furthermore, [13, 14] focused on four types of knowledge management and logistics management; i) Logistics-Related Knowledge Generation (LRKG), which is personnel's collection and evaluation of knowledge relative to its usefulness to business decisions; ii) Logistics-Related Knowledge Dissemination (LRKD), which is personnel are timely sharing of knowledge of the business environment with appropriate logistics operations management and other personnel within the firm; iii) Logistics-Related Knowledge Shared Interpretation (LRKS), which is the process of quickly achieving a cohesive understanding of knowledge by logistics operations management personnel; iv) Logistics-Related Knowledge Responsiveness (LRKR, it has the speed with which unified action is taken by logistics oriented personnel based upon available knowledge of the business environment. Besides that, [7] focused on two types of knowledge and skills for logistics management: i) these were termed, broad skills, knowledge generation and dissemination (such as communication, computer, understanding end customer, and project management); ii) specialized supply chain skills, knowledge shared interpretation and responsiveness (like supplier relationship management and

coordination, material management, metrics, and market knowledge).

3. LOGISTICS-RELATED KNOWLEDGE MANAGEMENT

Having skills in strategic knowledge management is vital for managers and staffs especially for achieve efficiency of management [17]. In logistics, effective strategic knowledge management plays an important role in determining successful management of logistics service providers' activities [34]. Hence, for successful strategic knowledge management skills (SKMS) implementation by [9], Malaysian logistics must feel that value is central to SKMS implementation by logistics firms. To have successful SKMS implementations, these logisticians need to focus on several factors such as effective teamwork in knowledge dissemination, communication in knowledge shared interpretation, negotiation in knowledge responsiveness, management skills in knowledge generation, and value-added perspective in creative ability [9, 13, 14].

From an effective teamwork perspective in scope of knowledge dissemination, [18] provided a comprehensive review of the core literature pertaining to frontline logistics personnel and their managers. They believe that one of the factors for creating success in business logistics depends on logistics managers creating enthusiasm among team members by educating employees about the business, and those managers must demonstrate a commitment to creative in make ideas, must create new thing in operations and management, to know where is their creative ability actually, and then implement into a reality by granting employee's responsibility and authority.

Further analyses by [33] demonstrated that cross functional teamwork is seen as one of the most important ingredients for top supply chain managers to execute effective management strategy.

They provides literature about communication, negotiation and management skills in relation to logistics management [38, 40, 41], meanwhile some authors [13,14] provide these elements also in knowledge shared interpretation, knowledge responsiveness and knowledge generation, where is it integrated between logistics and knowledge management. These skills were found to be the area that educational and training institutions should aim to further develop, to enable the local logistics workforce to perform their job successfully [38]. Also, others [13] suggested logistics management should collaboration with educational institution to give real experience to graduate. From a related paper, to succeed in an uncertain environment, logistics managers must acquire skills in communication which lead to effective management skills. From the value added perspective in creative ability, logistics firms need to focus more on the value adding services in their transportation and warehousing activities, since these two items were largely ignored in terms of lead-time performance [16]. In addition to the existence of e-business in the industrial economy, business logistics are becoming increasingly important role to mobilize e-business operations better. Therefore, this study try to examine about the management of transportation and warehousing services improved indirectly has a positive impact on the performance

of e-business. In short, we assumed the positive impact on the performance of e-business can be viewed when a customer's e-business ordering a second and so on, just as fast and accurate delivery. First perspective, here also can be seen that the management of logistics and e-business operations mutually need each other, with an increased use of technology gadgets widespread in Malaysia, and the ease of accessing the internet wherever based on previous studies such as [12; 13, 14, 15, 21].

Malaysian logistics have seen the importance of understanding business logistics and others business climate where is more to using of technology [20, 38]. So, global knowledge and skills are necessary for logisticians to be able to meet global challenges in a globalized market that progress rapidly like e-business [26, 38]. They must be a talented logistician who not only has a depth of logistics knowledge and capabilities but also knowledge and capabilities about non-logistics items; such as, finance, sales, marketing, customer service, and information systems, or their partners such as in e-business parts [5, 29, 38, 40]. Malaysian logistics need to acquire knowledge management about organizational awareness such as other business-based technology such as e-business operations and understanding of the logistics industry among their competitors [9].

It was necessary for logistics managers to incorporate awareness of diversity in their logistics business [18]. This would provide a better understanding of how to elevate logisticians' professionalism. A previous study suggested a maturing of the logistics knowledge management discipline: in the sense that a more specialized set of management skills is needed for logisticians [26]. Whereas, Pohlen's examination of higher education institutions and professional bodies [27], he identifies the need for higher education institutions and professional bodies to provide effective logistics and transportation modules for graduates to be able to demonstrate their leadership knowledge and skills in practical situations. According to [13] in knowledge generation, he mentions about the collaboration between logistics management and educational institution is good to show them a real experience in logistics management like attending events that allow networking, such as business colleges, research bodies, industry associations, trade shows etc.

For Malaysian logistics managers, they are expected to demonstrate vision as part of their effective leadership skill [9]. For example, creating a closed-loop supply chain orientation may be facilitated when the supply chain leader demonstrates visionary leadership and a strong command of communication skills as their transformational leadership styles [10]. They believed that by developing a specific supply chain leadership style the transformation to such an orientation would be enhanced [10]. The importance of ensuring successful communication internally and externally in logistics firms has been the main concern in many logistics papers [22, 35, 40]. In logistics management operations, critical relationship success factors include buyers and suppliers' responses [36]. In addition to that, [8] proposed future studies on the collaboration between the parties involved in logistics and supply chain management activities such as e-business management. She added that such

collaborations offer the potential to make high impact on creative ability contributions and generate new knowledge as knowledge generation like suggested [13, 14] for logistics management efficiency.

In logistics management efficiency by [9], suggested to higher education institutions (HEIs) for the logistics management. HEIs which offer logistics management programs should consider developing modules and courses in their programs which are able to demonstrate learning outcomes covering knowledge and skills in strategic management, business, and effective leadership. These learning outcomes must be able to be learnt and applied by logistics graduates so that they can achieve competency. As for employers, this study can be used as a general guideline for the recruitment and development of logisticians. For example, during the recruitment process, employer may test potential candidates regarding their knowledge and skills pertaining to strategic management skills, business knowledge, and leadership skills for determining level of efficiency.

4. CONCLUSION

Previous studies regarding the need for logistics' efficiency, based on the Business-Logistics-Management (BLM) Model, have been conducted by various researchers [24, 25, 26, 29, 38]. Recently logistics oriented knowledge management (LOKM) Model by [13] where is these researchers proposed a model that describes a linkage between LOKM and overall logistical performance, it's really match with logistics management and business based on technologies for today. Actually, they extend and improve upon recent research which suggests that the ability of a global firm to compete based on logistical capabilities can be predicted by its ability to manage knowledge development processes, i.e., the broader findings of [14]. The models, however, was limited to the skills required by logistics managers within the scope of business, logistics and management functions in manufacture industry only. Whereas, the model of BLM was proposed by Richard F. Poist in 1984 with the justification that new logistics executives must possess a combination of business, logistics, and management skills [28], and the model of LOKM was proposed by [13, 14], they provided that the modern technologies logistics executive must added a combination of logistics, knowledge, knowledge management, business, skills and technologies.

Elsewhere [13] suggested, modern logistics executives required the LOKM knowledge and skills in order to manage logistics activities. However, the LOKM Model and others model like BLM has limitations. First, the target population in the longitudinal studies from 2008 to 2012 was mainly focused on top management in logistics firms [see 13, 14, 38 24, 25 26] and only focus to manufacture industries. The majority of items in the LOKM and BLM components section are perceptions from the top logistics management samples. Therefore, it was still lacking in terms of its ability to capture the perception of other managerial levels, such as middle and low. As supported by [19], every manager requires conceptual, human and technical skills, but the level of each skill differs depending on their managerial level. Besides that, which they limited to those within

manufacturing organizations only and not taken from outsource a majority of its logistics activities to third party logistics providers [13].

Second, they were limited to a single respondent per organization. Thus, inter-rater-agreement cannot be calculated [3], and thus, the results may be unduly influenced by respondent opinions and perspectives. To address this possibility, this study tries to extent of research in other industrial settings like to examine the impact of LOKM on e-business performances, and do with multiple respondents per firm.

Lastly, the limitations of survey design did not allow for the capture of some potentially important control variables. This sort of step is especially important in controlling for the antecedent influence of organizational behavior, for example, since the performance of other functions certainly influences organizational performance and vice versa. This research explores to these relationships where is this study adding a moderator on logistics-related knowledge management to examine the impact into e-business development performances.

5. REFERENCE

- [1] Abdul, A. Z., Yaacob, M.R., Ibrahim, M. D., Mohd Zawawi, N. F., "A study of logistics development in the Malaysia Eastern region: A descriptive Analysis" *International Journal of Business and Social Research*, **2**(4) (2012).
- [2] Borsch, C., "Only a multipronged strategy can advance the function life cycle logistics" *Naval Engineers Journal*, **123** (1):31-37 (2011).
- [3] Boyatzis, R. E., Stubbs, E. C., Taylor, S. N., "Learning cognitive and emotional intelligence competencies through graduate management education" *Academy of Management Learning and Education*, **1**(2):150-162 (2002).
- [4] Bretzke, W. R., "Electronic commerce also Herausforderung a die logistics" *Logistics Management*, **2**(1):8-15 (2000).
- [5] Busse, C., Wallenburg, C. M., "Innovation management of logistics service providers: Foundations, review, and research agenda" *International Journal of Physical Distribution & Logistics Management*, **41**(2):187-218 (2011).
- [6] Chapman, R. L., Soosay, C. J., Kandampully, J., "Innovation in logistics services and the new business model: A conceptual framework" *Managing Service Quality*, **12**(6):358-371 (2002).
- [7] Crook, T. R., Ketchen, D. J., Combs, J. G., Todd, S. Y., "Strategic resources and performance: ameta-analysis" *Strategic Management Journal*, **29**(11):1141-1154 (2008).
- [8] Daugherty, P. J., "Review of logistics and supply chain relationship literature and suggested research agenda" *International Journal of Physical Distribution & Logistics Management*, **41**(1):16-31 (2011).
- [9] Dazmin, D., Kwek, C. L., Kay, H. K., Jessica, S. Y. H., "Dimensions of Competency among Malaysian Logisticians: An Exploratory Investigation" *International Journal of Humanities and Social Science*, **2**(10):92-100 (2012).
- [10] Defee, C. C., Esper, T., Molenkopf, D., "Leveraging closed loop orientation and leadership for environmental sustainability" *Supply Chain Management: An International Journal*, **14**(2):87-98 (2009).
- [11] Esper, T. L., Defee, C. C., Mentzer, J. T., "A framework of supply chain orientation" *International Journal of Logistics Management*, **21**(2):161-179 (2010).
- [12] Frank, F., Fischer, F., "Grand challenges in technology enhanced learning" *British Journal of Educational Technology*, **45**(3) (2013).
- [13] Fugate, B. S., Autry, C. W., Beth, D. S., Germain, R. N., "Does knowledge management facilities logistics-based differentiation? The effect of global manufacturing reach" *International Journal Production Economics*, **139**:496-509 (2012).
- [14] Fugate, B. S., Stank, T. P., Mentzer, J. T., "Linking improved knowledge management to operational and organizational performance" *Journal of Operations Management*, **27**:247-264 (2009).
- [15] Gunasekaran, A., Ngai, E. W. T., "Information systems in supply chain integration and management" *European Journal of Operational Research*, **159**:269-295 (2004).
- [16] Hong, J., Chin, A. T. H., Liu, B., "Logistics service providers in China: Current status and future prospects" *Asia Pacific Journal of Marketing and Logistics*, **19**(2):168-181 (2007).
- [17] Huber, G. P., Power, D. J., "Retrospective reports of strategic-level managers: Guidelines for increasing their accuracy" *Strategic Management Journal*, **6**(2):171-180 (1985).
- [18] Keller, S. B., Ozment, J., "Research on personnel issues published in leading logistics journals: What we know and don" *Logistics Management*, **20**(3): 378-407 (2009).
- [19] Katz, R. L., "Skills of an effective administrator" *Harvard Business School Publishing Corporation: Boston, MA*, (2009).
- [20] Kumar, S., "A study of the supermarket industry and its growing logistics capabilities" *International Journal of Retail and Distribution Management*, **36**(3):192-211 (2008).
- [21] Lin, E. Y. H., Ming, K. C., Jiang, W. C., "An e-Business Logistic Model in Taiwan" *Journal of Comparative International Management*, **9**(1):19-35 (2006).
- [22] Londe, L. B. J., Powers, R. F., "Disintegration and reintegration: Logistics of the twenty-first century" *International Journal of Logistics Management*, **4**(2), 1-12 (1993).
- [23] Mangan, J., Christopher, M., "Management development and the supply chain manager of the future" *International Journal of Logistics Management*, **6**(2):178-191 (2005).
- [24] Murphy, P. R., Poist, R. F., "Skill requirements of contemporary senior-and entry-level logistics managers: A comparative analysis" *Transportation Journal*, **45**(3):46-60 (2006).
- [25] Murphy, P. R., Poist, R. F., "Skill requirements of senior level logisticians: Practitioner perspectives"

- International Journal of Physical Distribution & Logistics Management*, **21**(3):3-14 (1991).
- [26] Murphy, P. R., Poist, R. F., "Skill requirements of senior level logisticians: A longitudinal assessment" *Supply Chain Management: An International Journal*, **12**(6) (2007).
- [27] Pohlen, T. L., "Meeting the challenge of educating the transportation and logistics professional: The American Society of Transportation and Logistics on the 50th anniversary" *Transportation Journal*, **50**(1):84-90 (2011).
- [28] Poist, R. F., "Managing Logistics in an Era of Change" *Defense Transportation Journal*, September/ October 23-30 (1984).
- [29] Razzaque, M. A., Sirat, M. S., "Skill requirements: Perception of the senior Asian logisticians" *International Journal of Physical Distribution & Logistics Management*, **31**(5):374-395 (2001).
- [30] Rohzan, O., Rohayu, A. G., "Supply chain management and suppliers HRM practice" *International Journal of Supply Chain Management*, **13**(4):259-262 (2008).
- [31] Rudolf, O. L., Nikolai, K. R., Katharina, H., "Customer specific adaptation by providers and their perception of 3PL-relationship success" *International Journal of Physical Distribution & Logistics Management*, **41**(9):822-838 (2011).
- [32] Rudolf, O. L., "Partner specific adaptations, performance, satisfaction and loyalty in third party logistics relationships" *Logistics Research Journal*, **3**:37-47 (2011).
- [33] Sandberg, E., Abrahamsson, M., "The role of top management in supply chain management practices" *International Journal of Retail and Distribution Management*, **38**(1):57-69 (2010).
- [34] Sandberg, E., "Logistics collaboration in supply chains: Practice vs. theory" *International Journal of Logistics Management*, **18**(2):274-293 (2007).
- [35] Sauvage, T., "The relationship between technology and logistics third-party providers" *International Journal of Physical Distribution & Logistics Management*, **33**(3):236-253 (2003).
- [36] Shaharudin, M. R., Zailani, S., Tan, K. C., "Barriers to Product Returns and Recovery Management in a Developing Country: Investigation using Multiple Methods" *Journal of Cleaner Production*, 3-20 (2014).
- [37] Stank, T. P., Davis, B. R., Fugate, B. S., "A strategic framework for supply chain oriented logistics" *Journal of Business Logistics*, **26**(2):27-46 (2005).
- [38] Thai, V. V., Cahoon, S., Tran, H. T. "Skill requirements for logistics professionals: Findings and implications" *Asia Pacific Journal of Marketing and Logistics*, **23**(4):553-574 (2011).
- [39] Wu, Y., Hou, J., "An employee performance estimation model for the logistics industry" *Decision Support System*, **48**(4):568-581 (2010).
- [40] Wu, Y. J., Chou, Y. H., "A new look at logistics business performance: Intellectual capital perspective" *International Journal of Logistics Management*, **18**(1):41-63 (2007).
- [41] Yazdanparast, A., Manuj, I., Swartz, S. M., "Co-creating logistics value: A service-dominant logic perspective" *International Journal of Logistics Management*, **21**(3):375-403 (2010).

*For correspondence; Tel. + (60) 0182082011, E-mail:damiza87@gmail.com