Strengthening Supply Chain Operational Performance through Relational and Organizational Culture Capabilities

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***Abstract*— In today's dynamic business environment, the competition is no longer between firm, but between supply chains to gain competitive advantages. The trends have made industrial practitioners focusing more on the key factors influencing the performance of the supply chain operation. The powers of relational capability in managing supply chain have gained an incredible attention from researchers and practitioners because of the benefits of supply chain performance. However, the influences of organizational culture capability is equally critical for supply chain performance to keep growing. This paper makes an initial attempt to identify the critical success factors of supply chain operational performance amongst textile and apparel companies in Malaysia. The total of 201 questionnaires were sent to Malaysia's textile and apparel company that is listed in the Federation of Malaysian Manufacturers (FMM) and Malaysian External Trade Development Corporation (MATRADE) directory. The total of 121 usable responses were obtained and analyzed through Statistical Package for Social Science (SPSS). The discussion of this study is followed by presenting the results of survey on the relationship of relational capability and organizational culture capability on supply chain operational performance. The results shown that the relationship between relational capability and organizational culture capability have significant impact on the performance of supply chain operation.**

Keywords*— *Critical success factors, relational capability, organizational culture capability, supply chain operational performance, textile and apparel industry in Malaysia

1. Introduction

Current business trend indicated that supply chain become one of the important element of world trade. Therefore, business operations need supply chain to strengthening the business processes. A rich understanding of characteristics and the role played by each supply chain function enable work efficiency and effectiveness. However, ref. [1] indicates that business operations cannot run solely by supply chain itself, since it was not a one-way street. Supply chain consists of all upstream and downstream activities from the purchase of materials until the fulfilment of customer demands and satisfaction. Hence, the focus on upstream and downstream flows of information and material is important. Firms can even be more competitive if the data obtained from various supply chain functions [2]. Consistent with the basic concept of supply chain management, this study focused on supplier partnership, customer relationship, information sharing, and information quality as relational capability; organizational involvement, organizational consistency, organizational adaptability and organizational innovativeness as organizational culture capability to achieve higher supply chain operational performance in textile and apparel industry. The multifaceted nature of textile and apparel industry has made their supply chains studies more challenges [3]. The curiosity of mentioned situations lead this study to form two research questions on supply chain operational performance in Malaysian textile and apparel industry. Firstly, is there a relationship between relational capability and supply chain operational performance in Malaysian textile and apparel company? Second, is there a relationship between organizational culture capability and supply chain operational performance in Malaysian textile and apparel company? Therefore, this study aims to understand the relationship between relational capability and organizational culture capability and supply chain operational performance in Malaysian textile and apparel company.

2. Literature Review

2.1 Relational Capability

Relational capabilities can be view and discussed from different contexts in the literatures. Though there are common in literatures, but common definition of relational capabilities is still pending acceptance universally. In this case, a number of researchers have

been generally defined their understanding towards relational capability in their study. Relational capabilities can be defined as greater skills applied to manage the resources that have an impact in a single activity shared between companies [4]. This capability enables supply chain members energetic in business interaction to better comprehend particular information [5]. In addition, relational capability offers better communication, collaboration, and management of reciprocal business relationship in the near future [5]. A typical component of the relational capabilities required the flow of information in both forward and backward directions in the supply chain [6]. This is to create more mutual benefits and win-win situations to both parties in the supply chain. The benefits can be realized through collaborative activities and market improvement activities [7]. This study believed that relational capability should consist of only four indicators, which are supplier partnership, customer relationship, information sharing, and information quality to completely measure relational capabilities of a company.

2.1.1 Supplier Partnership

Supplier partnership can be defined as the relationship between the organization and suppliers who providing goods or services to the business to achieve significant ongoing benefits [8]. Technology advancement has gradually turned into a driver for the organization to develop a partnership with the suppliers [9]. Partnership with suppliers is to build up the trust based connections, creates the long term relationship, provides interconnected communication network, leverages higher synergy and collaborative business environment [10]. Moreover, supplier partnerships allow organizations to be cooperative with potential suppliers who are keen to share responsibility in achievement [11]. Suppliers who build up collaborative relationships with their customers should be technologically sophisticated, otherwise, normal market mechanisms become intermediate for the relationship between supplier and customer [12]. Accordingly, the organizations that have solid technological skills tend to be more potential to success in building partnerships.

2.1.2 Customer Relationship

Nowadays, the marketing strategy is shifted from the product oriented to the customer oriented. In such circumstances, it is clear that the influence of customer is sturdy and thus, prioritized. The great connection with customer tends to increase the success levels of the firm [13]. Customers are progressively requesting an alternate connection with suppliers than ever before. Therefore, the development of the database technologies allowed firms to identify the purchase behavior of customers through historical information recorded in the database. By having the database technology, firms able to make demands forecast more precisely [14]. For instance, in business and technology disciplines, customer relationship management (CRM) system is an application that supports firms get and hold gainful customers [15]. The difficulties are to correspond with customer by utilizing the right approach and at the correct time and talk about the right point. Therefore, form a long term relationship with customers not only allow the organizations to stay informed concerning the customer requests, but also one of the ways to stay competitive in an increasingly dynamic market [16].

2.1.3 Information Sharing

Information sharing is one of the critical success factors for supply chain management. In general, information sharing can be defined as the extent to which critical and proprietary information of an organization is communicated to a number of people or organizations. Besides, information sharing also can be simply understood as the way of communication between organizations or supply chain members [17], [18]. It is an involvement to view partner's property data through network connected systems [18]. This action enabled organizations to monitor the progress of the supply chain processes [19]. There is many data that is considered as private and confidential, which includes, data capturing, processing status, customer data, inventory data, order status, costing data, and performance status. Therefore, it can reflect cooperation between supply chain members [20]. However, the willingness to share information requires higher level of trust and great extent of consistency [21].

2.1.4 Information Quality

Information quality represents the quality of information [18], [22]. The term is often used synonymously with data quality in which all the information is transformed and created from two or more raw data obtained. Information quality can be defined as the degree to which the information fits the firm's needs. Therefore, the receiver is the person who can determine the degree of the quality of data obtained. As Li et al. [11] suggested, the quality of information is determined by the criteria of relevance, timeliness, completeness, accuracy, credibility [23], and adequacy [11]. Besides, based on Cao, Gan, and Thompson [24] suggestion, four dimensions which including data quality, timeliness, portability, and usability are high reliability and validity in measuring information quality.

2.2 Organizational Culture Capability

In general, culture can be defined as the combination of the language, behaviors, beliefs, rituals, rules, institutions, and practices that characterize a society [25]. Organizational culture has been broadly studied by anthropologists and other organizational researchers since the early 1980s [26]. Thus, resulted in plentiful definitions [26]–[32]. Deshpande and Webster [33] defined organizational culture as a set of shared assumptions and understandings about organizational functioning. It also can be generally defined as a set of behavior and actions of employees who work in an organization in which affects the way people and groups interact with each other [34], [35]. While, the characteristics of culture can be described as staffing, training, compensation, evaluation [36], common values, attitudes, assumptions and beliefs of employees in the organization [35]. In short, organizational culture capability can be understood as the way of employees think they should do.

2.2.1 Organizational Involvement

Organizational involvement can be defined as the act of employees takes part or participates in something. It is supported by Mishra and Shah [37] and Love and Roper [38] where organizational involvement also represents the degree of strategic integration of internal resources and communication across different departments into a particular project to ensure achieved time efficient and cost effective. The frequent connections with other departments enable effective communications and resulted in process simplification [39]. Referring to the argument of Echtelt, Wynstra, Weele, and Duysters [40], organizational involvement in their opinion means the resources such as capabilities, investment, information, knowledge, and ideas that employees provide to the tasks and the responsibilities they assume for the benefit of an organization.

2.2.2 Organizational Consistency

There is important to clearly understand the concept of consistency because it is the backbone of numerous influential theories such as social psychology and personality theories [41]. Westerners viewed themselves consistent among the different aspects of identity, while East Asian viewed themselves as multiple selves. However, there is believed that consistent persons received positive social evaluations from others [42]. Previous culture research has focused on examined the consistency of self-descriptions across contexts and multiple self-dimensions [43]. The result of English and Chen [43] showed that East Asians' relatively lack of consistency in the self-concept at the global level. However, Malaysian organization is believed to have consistency in a certain level.

2.2.3 Organizational Adaptability

Adaptability refers to the ability of the organization to reshape supply chains to cope with changed environment. The adaptabilities of supply chains are mostly depended on the ability of information systems to detect market changes and guide user to take appropriate actions [44]. For the executives' perception, adaptive expertise is focused on the aspects of resourceful and constructive when solving problems [45]. It is believed that, textile and apparel companies in Malaysia have strong adaptability in dealing with the quick change market.

2.2.4 Organizational Innovativeness

Innovativeness is a fundamental to success. In textile and apparel industry, product innovation and process innovation are continuous and almost infinite practice [46]. It is a notion of openness to new ideas as a feature of organization's culture [47], [48]. The act of innovation able to help organizations to increase the competitive advantage [49], [50] through overcome the difficulties and challenges of such intense competition [35]. Innovation can be described in a broadest sense such as involved new methods and new technologies in performing business activities [51], [52]. Particularly, innovation can be viewed as any practices that are new to organizations such as new products, new services, new equipment, new processes, new policies, projects, and new knowledge [53], [54] that are directly or indirectly associated to the routine business work [51], [53]–[55].

2.3 Supply Chain Operational Performance

Generally, supply chain performance is looking for the inter-organizational performance, while organizational performance is purely looking for the internal or individual organization performance [56]. Nowadays, business completion is switch to between supply chains rather than among organization. Thus, supply chain performance has increasingly received special attention by industrial practitioners [57]–[59]. The important of supply chain performance made the supply chain management become competitive and popular tools in managing organization operation [11]. The effective supply chain management enables organization to efficiently deliver goods and services to customers in the right time, lower total costs, and higher quality. The study of Omar et al. [16] and Jacques [60] supported the statement where the reality of success factor in supply chain such as low costs, high quality, flexible and quick response able to improve organization performance and supply chain performance.

The old adage "you cannot improve what you are not measuring" is certainly factual for individual, organization, and supply chains as well [61]. Table 1 explained each of the keys performance attribute of Supply Chain Operations Reference (SCOR) model.

Table 1. Key Performance Attribute of SCOR Model

Keys Performance Attribute	Descriptions
Reliability	Delivery and order fulfillment.
Responsiveness	Speed, cycle time, and order fulfillment.
Agility	Flexibility and adaptability responding to market.
Costs	Cost of goods sold, supply chain management costs, processing costs, warranty costs, and return processing costs.
Asset managemrnt	Inventory, cash-to-cash cycle time, return on supply chain fixed asset, and return on working capital.

Source: Adapted from Supply Chain Council [62]

Scott Stephens, chief technology officer of the Supply Chain Council point out that the main objective of the SCOR model is to enhance competitiveness in three characteristics, which minimize costs, maximize revenue, and enhance efficiency of asset management [63]. Besides, it can be explained with supply chain relationship level, human, culture, infrastructure, and ICT capability issues [64]. Therefore, the component of SCOR model has been chosen to measures supply chain performance in this study with an exception for asset management. This is because of this study is focused on operational performance, while financial performance is not included. Basically, efficiency and effectiveness are used to define the levels of the performance. Efficiency is used to define internal performance, while effectiveness is used to define external performance [65]. Efficiency and effectiveness in modern supply chain management are vitally important for firms to be globally competitive [60].

2.4 Relational Capability and Supply Chain Operational Performance

In SCM study, several researchers found that supplier partnership [66]–[71], customer relationship [66], [69]–[71], information sharing [66], [69], [70], [72], and information quality [8], [70], [72] improved supply chain operational performance. The higher level of supplier partnership, customer relationshsip, and information sharing can lead to optimize supply chain costs [73], [74], improved supply chain reliability [74]–[76], enhanced supply chain responsiveness [74], [76], and flexibility in managing uncertainties in supply and demand [73], [75].

2.5 Organizational Culture Capability and Supply Chain Operational Performance

Organizational culture have been proof to be critical factors of organization's performance since many years ago [77]–[79]. Generally, culture has direct effect on organization's success or failure. Several researchers demonstrated that organizational culture must align with organizational goals [80]–[85]. This is because organizational culture has a significant and positive effect on supply chain performance [68], [85]–[90], specifically improved flexibility [91] and enhanced responsiveness of global SCM [91], [92]. The study of. Thoo et al. [87] and Abdullah, Wahab, and Shamsuddin [93] found that organizational culture had a significant effect on supply chain performance of Malaysia SMEs. Furthermore, the study of Braunscheidel et al.[85] which include 218 responses from supply chain professionals that listed in New York's Institute of Supply Management (ISM) indicated that organizational culture has positive direct relationship with supply chain performance.

3. Research Model and Hypotheses

Research model of the study is presented in Figure 1 to illustrate the relationships of the variables that undertaken in this study.

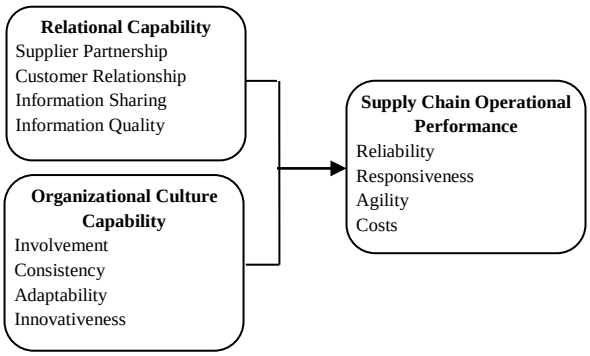

Figure 1. Research Model

Based on the aforementioned discussion, it is hypothesized that relational capability and organizational culture capability have positive relationship with supply chain operational performance. This leads to the hypotheses of this study as follows.

H1. Relational capability is positively influence to supply chain operational performance.

H2. Organizational culture capability is positively influence to supply chain operational performance.

4. Methodology

This study employed quantitative research method in testing objective theories [94]. Survey questionnaire was the instrument for the researcher to collect data for

analysis. All questions in the questionnaire are closed-ended with five-point Likert scales used to measure independent variables; six-point Likert scales used to measure dependent variable. This study consisted of 72 items, l25 items used to measure relational capability, 23 items used to measure organizational culture capability, and 24 items used to measure supply chain operational performance.

The samples of 201 organizations of this study were drawn by using simple random sampling techniques from the total population of 423 organizations in the directory provided by Federation of Malaysian Manufacturers (FMM) [95] and Malaysian External Trade Development Corporation (MATRADE) [96], [97]. While, the unit of data analysis for this study is organization. A total of 201 survey questionnaires were sent through email and mailed to the samples. The data was collected through the proper followed of data collection procedure advised by Whitley [98], Mentzer and Kahn [99], and Grant, Teller, and Teller [100]. This was resulted in good response rate, which is approximately 60.20% in which 125 survey questionnaires were returned, four were rejected due to the incomplete response, and the remaining 121 were certified to be complete and usable for the data analysis.

5. Data Analysis and Results

The total of 121 usable responses were used for the analysis through applications of Statistical Package for Social Science (SPSS) Version 20 for window [101]. Reliability test was conducted on all the variables, which including relational capability and organizational culture capability as independent variables, and supply chain operational performance as dependent variables. The Cronbach's alpha values of the study variables are shown in Table 2.

Table 2. Reliability Statistics

Variable	Number of Items / Standardized Items	Number of Deleted Item	Cronbach's Alpha
Supplier Partnership	6	0	0.894
Customer Relationship	5	0	0.922
Information Sharing	6	0	0.944
Information Quality	8	0	0.958
Involvement	6	0	0.962
Consistency	5	0	0.951
Adaptability	6	0	0.543
Innovativeness	6	0	0.959
Supply Chain Reliability	7	0	0.951
Supply Chain Responsiveness	6	0	0.939
Supply Chain Agility	6	0	0.953
Supply Chain Costs	5	0	0.948

Table 2 revealed that the reliability coefficient of the study variables are greater than 0.5 [102] which exceeded the minimum acceptable level. Table 2 shown that Cronbach's alpha α=0.543 is acceptable and between 0.894 and 0.962 are at the extremely high reliability in the questionnaire.

This study used descriptive statistics as shown in Table 3 to calculate the mean and standard deviation of the response received. The result revealed a large standard deviation and the data has spread out and further away from the mean.

Table 3. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
RC	121	2	5	4.02	.714
OCC	121	2	5	3.92	.832
SCOP	121	3	6	4.76	.957

A multiple linear regression was calculated to predict supply chain operational performance on relational capability and organizational culture capability. Table 4 shows the ANOVA result. A significant regression equation was found ($F(2, 118) = 148.375$, $P < 0.000$). This means there are significant relationship between relational capability and organizational culture toward supply chain operational capability.

Table 4. ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	78.592	2	39.296	148.375	.000[b]
	Residual	31.252	118	.265		
	Total	109.844	120			

Table 5 shows the Model Summary, which revealed that correlation R=0.846 indicating that there are strong relationship between variables. Besides, R^2=0.715 revealed that 71.5 percent of the variation amount in supply chain operational performance can be attributed to relational capability and organizational culture capability.

Table 5. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.846[a]	.715	.711	.515

Table 6 shows the coefficients analysis. Organizations' predicted supply chain operational performance is equal to 0.473 + 0.406(RC) + 0.677(OCC), where relational capability and organizational culture capability is measured on the level of extent based on the following codes which includes "1=Not at All", "2=Little Extent", "3=Moderate Extent", "4=Considerable Extent", and "5=Great Extent". Organization's supply chain operational performance increased 0.406 for each extent

of relational capability and 0.677 for each extent of organizational culture capability. Both relational capability and organizational culture capability were significant predictors of supply chain operational performance.

Table 6. Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.473	.270		1.754	.082
	RC	.406	.105	.303	3.872	.000
	OCC	.677	.090	.588	7.522	.000

6. Discussion

The findings of this study are discussed accordingly to the sequence of research questions, research objectives, and hypotheses. It is interesting to note that in all two hypotheses of this study were supported. This led to the relational capability and organizational culture capability somewhat significantly associated with supply chain operational performance.

7. Conclusion

This study was conducted to understand the factors that influence supply chain operational performance by textile and apparel companies in Malaysia. The total of 121 response received from the survey of this study has been analyzed through SPSS analytical technique. The result of this study revealed that "relational capability" which include supplier partnership, customer relationship, information sharing, and information quality, and "organizational culture capability" which include organization's involvement, consistency, adaptability, and innovativeness are critical success factors for strengthening supply chain operational performance. Therefore, Malaysia's textile and apparel companies should pay more attention on relational capability and organizational culture capability to improving the supply chain operational performance. However, more research on this area is needed in order to extensive the findings, so that generalizable to more industry.

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References

[1] P. Beske, "Dynamic capabilities and sustainable supply chain management," *Int. J. Phys. Distrib. Logist. Manag.*, vol. 42, no. 4, pp. 372–387, 2012.

[2] M. L. Tseng, K. J. Wu, and T. T. Nguyen, "Information technology in supply chain management: A case study," *Procedia - Soc. Behav. Sci.*, vol. 25, pp. 257–272, Jan. 2011.

[3] J. Soroor, M. J. Tarokh, and M. Keshtgary, "Preventing failure in IT-enabled systems for supply chain management," *Int. J. Prod. Res.*, vol. 47, no. 23, pp. 6543–6557, Aug. 2009.

[4] M. Rodríguez-Díaz and T. F. Espino-Rodríguez, "Developing relational capabilities in hotels," *Int. J. Contemp. Hosp. Manag.*, vol. 18, no. 1, pp. 25–40, 2006.

[5] M. Zohdi, R. Shafeai, and R. Hashemi, "Influence of relational capabilities on business performance case of : Kermanshah industrial city SMEs," *Int. Res. J. Appl. Basic Sci.*, vol. 4, no. 3, pp. 589–596, 2013.

[6] C. C. Pegels, *Proven solutions for improving supply chain performance*. USA: Information Age Publishing Inc., 2005.

[7] Y. Yan, S. H. Zhang, and F. Zeng, "The exploitation of an international firm's relational capabilities: An empirical study," *J. Strateg. Mark.*, vol. 18, no. 6, pp. 473–487, Oct. 2010.

[8] S. M. Qrunfleh, "Alignment of information systems with supply chains: Impacts on supply chain performance and organizational performance," University of Toledo, 2010.

[9] A. Agus, "The significant effect of information sharing and strategic supplier partnership on supplier performance," *Int. J. Bus. Manag. Sci.*, vol. 4, no. 1, pp. 75–92, 2011.

[10] I. Kocoglu, S. Z. Imamoglu, H. Ince, and H. Keskin, "The effect of supply chain integration on information sharing: Enhancing the supply chain performance," in *7th International Strategic Management Conference*, 2011, vol. 24, pp. 1630–1649.

[11] S. Li, B. Ragu-Nathan, T. S. Ragu-Nathan, and S. S. Rao, "The impact of supply chain management practices on competitive advantage and organizational performance," *Int. J. Manag. Scince*, vol. 34, no. 2, pp. 107–124, Apr. 2006.

[12] A. Kaufman, C. H. Wood, and G. Theyel, "Collaboration and technology linkages: A strategic supplier typology," *Strateg. Manag. J.*, vol. 21, no. 6, pp. 649–663, 2000.

[13] P. I. Jeffers, W. A. Muhanna, and B. R. Nault, "Information technology and process performance: An empirical investigation of the interaction between IT and non-IT resources," *Decis. Sci.*, vol. 39, no. 4, pp. 703–735, Nov. 2008.

[14] Y. Xu, D. C. Yen, B. Lin, and D. C. Chou, "Adopting customer relationship management technology," *Ind. Manag. Data Syst.*, vol. 102, no. 8, pp. 442–452, 2002.

[15] I. L. Wu and K. W. Wu, "A hybrid technology acceptance approach for exploring e-CRM adoption in organizations," *Behav. Inf. Technol.*, vol. 24, no.

4, pp. 303–316, Jul. 2005.
[16] R. Omar, S. Zailani, M. Sulaiman, and T. Ramayah, "Supplier involvement, customer focus, supply chain technology and manufacturing performance: Findings from a pilot study," in *2006 IEEE International Conference on Management of Innovation and Technology*, 2006, vol. 2, pp. 876–880.
[17] C. W. Lee, I.-W. G. Kwon, and D. Severance, "Relationship between supply chain performance and degree of linkage among supplier, internal integration, and customer," *Supply Chain Manag. An Int. J.*, vol. 12, no. 6, pp. 444–452, 2007.
[18] G. Ramantoko and H. Irawan, "Information sharing model in supporting implementation of e-procurement service: Case of Bandung city," *Int. J. Supply Chain Manag.*, vol. 1891, no. 3, pp. 252–257, 2017.
[19] T. M. Simatupang and R. Sridharan, "The collaboration index: A measure for supply chain collaboration," *Int. J. Phys. Distrib. Logist. Manag.*, vol. 35, no. 1, pp. 44–62, 2005.
[20] G. Li, H. Yan, S. Wang, and Y. Xia, "Comparative analysis on value of information sharing in supply chains," *Supply Chain Manag. An Int. J.*, vol. 10, no. 1, pp. 34–46, 2005.
[21] D. C. Hall and C. Saygin, "Impact of information sharing on supply chain performance," *Int. J. Adv. Manuf. Technol.*, vol. 58, no. 1–4, pp. 397–409, May 2011.
[22] B. Davis-Sramek, R. Germain, and K. Iyer, "Supply chain technology: The role of environment in predicting performance," *J. Acad. Mark. Sci.*, vol. 38, no. 1, pp. 42–55, Mar. 2010.
[23] S. Campo, N. Rubio, and M. J. Yague, "Information technology use and firm's perceived performance in supply chain management," *J. Bus. to Bus. Mark.*, vol. 17, no. 4, pp. 336–364, Nov. 2010.
[24] Q. Cao, Q. Gan, and M. A. Thompson, "Organizational adoption of supply chain management system: A multi-theoretic investigation," *Decis. Support Syst.*, vol. 55, no. 3, pp. 720–727, Jun. 2013.
[25] M. J. Schniederjans, D. G. Schniederjans, and A. M. Schniederjans, *Topics in lean supply chain management*. Singapore: World Scientific Publishing Co. Pte. Ltd, 2010.
[26] G. Hofstede, G. J. Hofstede, and M. Minkov, *Cultures and organizations: Software of the mind*. United States: Mc Graw Hill, 2010.
[27] J. A. Chatman and K. A. Jehn, "Assessing the relationship between industry characteristics and organziational culture: How different can you be?," *Acad. Manag. J.*, vol. 37, no. 3, pp. 522–553, 1994.
[28] J. Martin, "Organizational culture," England, 1847, 2004.
[29] C. A. O'Reilly, "Corporations, culture and commitment: Motivation and social control in organizations," *Calif. Manage. Rev.*, vol. 31, no. 3, pp. 9–25, 1989.
[30] R. E. Quinn, *Beyond rational management*. San Francisco: Jossey-Bass, 1988.
[31] E. H. Schein, "Organizational culture," *Am. Psychol.*, vol. 45, no. 2, pp. 109–119, 1990.
[32] H. M. Trice and J. M. Beyer, *The cultures of work organizations*. Upper Saddle River, NJ: Prentice Hall, 1993.
[33] R. Deshpande and F. E. Webster, "Organizational culture and marketing: Defining the research," *J. Mark.*, vol. 53, no. 1, pp. 3–15, 1989.
[34] J. E. Moore and L. A. Burke, "How to turn around `turnover culture' in IT," *Commun. ACM*, vol. 45, no. 2, pp. 73–78, Feb. 2002.
[35] G. Colovic, *Strategic Management in the Garment Industry*, 1st ed. New Delhi: Replika Press, 2012.
[36] R. B. McAfee, M. Glassman, and E. D. Honeycutt, "The effects of culture and human resource management policies on supply chain management strategy," *J. Bus. Logist.*, vol. 23, no. 1, pp. 1–18, 2002.
[37] A. A. Mishra and R. R. Shah, "In union lies strength: Collaborative competence in new product development and its performance effects," *J. Oper. Manag.*, vol. 17, no. 4, pp. 324–328, 2009.
[38] J. H. Love and S. Roper, "Organizing innovation: Complementarities between cross functional teams," *Technovation*, vol. 29, no. 3, pp. 192–203, 2009.
[39] J. W. Henke, R. A. Krachenburg, and T. F. Lyons, "Cross-functional teams: Good concept, poor implementation," *J. Prod. Innov. Manag.*, vol. 10, no. 3, pp. 216–229, 1993.
[40] F. E. A. van Echtelt, F. Wynstra, A. J. van Weele, and G. Duysters, "Managing supplier involvement in new product development: A multiple-case study," *J. Prod. Innov. Manag.*, vol. 25, no. 2, pp. 180–201, Mar. 2008.
[41] H. C. Triandis, "Cross-cultural psychology," *Asian J. Soc. Psychol.*, vol. 2, no. 1, pp. 127–143, Apr. 1999.
[42] E. M. Suh, "Culture, identity consistency, and subjective well-being," *J. Pers. Soc. Psychol.*, vol. 83, no. 6, pp. 1378–1391, 2002.
[43] T. English and S. Chen, "Culture and self-concept stability: Consistency across and within contexts among Asian Americans and European Americans," *J. Pers. Soc. Psychol.*, vol. 93, no. 3, pp. 478–90, Sep. 2007.
[44] D. H. Lee, "The impact of supply chain innovation on organizational performance: An empirical study in the health care organization," University of Nebraska, 2011.
[45] M. S. Castro, K. Ramos, and L. Molinaro, "Information and communication technology's professionals profile: Executives' perception analysis," Brazil, 2010.
[46] F. G. Ünay and C. Zehir, "Innovation intelligence and entrepreneurship in the fashion industry," in *International Conference on Leadership, Technology and Innovation Management*, 2012, vol. 41, pp. 315–321.
[47] M. Kibbeling, H. Bij, and A. Weele, "Market orientation and innovativeness in supply chains: Supplier's impact on customer satisfaction," *J. Prod. Innov. Manag.*, vol. 30, no. 3, pp. 500–515, May 2013.
[48] R. F. Hurley and G. T. M. Hult, "Innovation, market

orientation, and organizational learning: An integration and empirical examination," *J. Mark.*, vol. 62, no. 3, pp. 42–54, 1998.
[49] M. E. Porter, "The competitive advantage of nations," *Harv. Bus. Rev.*, pp. 73–93, 1990.
[50] M. N. Jali, Z. Abas, and A. S. Ariffin, "Social innovation in the context of strategic knowledge management processes for supply chain performance enhancement," *Int. J. Supply Chain Manag.*, vol. 6, no. 1, pp. 233–238, 2017.
[51] J. R. Kimberly and M. J. Evanisko, "Organizational innovation: The influence of individual, organizational, and contextual factors on hospital adoption of technological and administrative innovations," *Acad. Manag. Journal*\, vol. 24, no. 4, pp. 689–713, 1981.
[52] F. Damanpour, "Organizational innovation: A meta-analysis of effects of determinants and moderators," *Acad. Manag. J.*, vol. 34, no. 3, pp. 555–590, 1991.
[53] K. E. Knight, "A descriptive model of the intra-firm innovation process," *J. Bus.*, vol. 40, no. 4, pp. 478–496, 1967.
[54] F. Damanpour and W. M. Evan, "Organizational innovation and performance: The problem of organziational lag," *Adm. Sci. Q.*, vol. 29, no. 3, pp. 392–409, 1984.
[55] Z. Bakar and Z. Udin, "Business Continuity Management Factors and Organizational Performance: A study on the Moderating Role of it Capability," *J. Manag. Info*, vol. 7, no. 1, pp. 12–39, 2015.
[56] W. Huisman and M. Smits, "Investing in networkability to improve supply chain performance," in *System Sciences, 2007. HICSS 2007. 40th Annual Hawaii International Conference*, 2007, pp. 1–9.
[57] K. Watanarawee and M. Baramichai, "The evaluation of information sharing and transshipment mechanisms on supply chain performance: The case study from Thailand' retail chain," in *2010 2nd International Conference on Industrial and Information Systems*, 2010, pp. 506–509.
[58] F. Y. Chen and C. A. Yano, "Improving supply chain performance and managing risk under weather-related demand uncertainty," *Manage. Sci.*, vol. 56, no. 8, pp. 1380–1397, Jun. 2010.
[59] N. Agami, M. Saleh, and M. Rasmy, "A hybrid dynamic framework for supply chain," *IEEE Syst. J.*, vol. 6, no. 3, pp. 469–478, 2012.
[60] A. Jacques, "The role of electronic commerce in improving supply chain performance," *Adv. Manag.*, vol. 5, no. 3, pp. 7–10, 2012.
[61] K. C. Tan, S. B. Lyman, and J. D. Wisner, "Supply chain management: A strategic perspective," *Int. J. Oper. Prod. Manag.*, vol. 22, no. 6, pp. 614–631, 2002.
[62] Supply Chain Council, "Supply Chain Operations Reference (SCOR ®) model," USA, 2010.
[63] B. Dibenedetto, "Keeping SCOR: Supply chain council launches an online benchmarking tool," *The Journal of Commerce*, p. 30, 2007.
[64] F. B. Georgise, K.-D. Thoben, and M. Seifert, "Adapting the SCOR model to suit the different scenarios: A literature review & research agenda," *Int. J. Bus. Manag.*, vol. 7, no. 6, pp. 2–17, Mar. 2012.
[65] J. Pfeffer and G. R. Salancik, "Social control of organizations," in *The External Control of Organizations*, J. Greenman and R. E. Beach, Eds. New York, 1978, pp. 39–61.
[66] S.-A. Seyda, "A review of supply chain complexity drivers," *Comput. Ind. Eng.*, vol. 66, no. 3, pp. 792–797, 2013.
[67] D. Prajogo and J. Olhager, "Supply chain integration and performance: The effects of long-term relationships, information technology and sharing, and logistics integration," *Int. J. Prod. Econ.*, vol. 135, no. 1, pp. 514–522, Jan. 2012.
[68] R. Sukwadi, H.-M. Wee, and C.-C. Yang, "Supply chain performance based on the lean-agile operations and supplier-firm partnership: An empirical study on the garment industry in Indonesia," *J. Small Bus. Manag.*, vol. 51, no. 2, pp. 297–311, Apr. 2013.
[69] I. Sukati, A. B. Hamid, R. Baharun, and R. M. Yusoff, "The study of supply chain management strategy and practices on supply chain performance," in *The 2012 International Conference on Asia Pacific Business Innovation & Technology Management*, 2012, vol. 40, pp. 225–233.
[70] K. L. Lee, Z. M. Udin, and M. G. Hassan, "A review of relational capabilities on supply chain performance in textile and apparel industry," in *International Conference on Management & Business Sustainability 2014: 4th International Conference on Technology and Operations Management*, 2014, pp. 169–178.
[71] R. Divyaranjani, "Supply chain performance of customer and supplier relationship on Indian retail sector," *Int. J. Supply Chain Manag.*, vol. 7, no. 2, pp. 168–175, 2018.
[72] A. Charkaoui, A. A. Ouahman, and B. Bouayyad, "Modeling the logistics performance in developing countries: An exploratory study of Moroccan context," *Int. J. Acad. Res.*, vol. 4, no. 2, pp. 129–136, 2012.
[73] C. Dominguez, B. Ageron, G. Neubert, and I. Zaoui, "Inter-organizational strategic alignments in a jewelry supply chain using RFID: A case study," in *Supply Chain Performance: Collaboration, Alignment and Coordination*, V. Botta-Genoulaz, J.-P. Campagne, D. Llerena, and C. Pellegrin, Eds. United States: ISTE Ltd and John Wiley & Sons, Inc., 2010, p. 149.
[74] A. A. Thatte, S. S. Rao, and T. S. Ragu-Nathan, "Impact of SCM practices of a firm on supply chain responsiveness and competitive advantage of a firm," *J. Appl. Bus. Res.*, vol. 29, no. 2, pp. 499–530, 2013.
[75] T. Ramayah, T. Y. Sang, R. Omar, and N. Dahlan, "Impact of information technology (IT) tools, partner relationship and supply chain performance," *Asian Acad. Manag. J.*, vol. 13, no. 2, pp. 33–55, 2008.
[76] I. Sukati, A. B. A. Hamid, R. Baharun, H. H. Tat, and F. Said, "A study of supply chain management

practices: An empirical investigation on consumer goods industry in Malaysia," *Int. J. Bus. Soc. Sci.*, vol. 2, no. 17, pp. 166–177, 2011.

[77] W. E. Baker and J. M. Sinkula, "The synergistic effect of market orientation and learning orientation on organizational performance," *Acad. Mark. Sci.*, vol. 27, no. 4, pp. 411–427, 1999.

[78] W. M. Cohen and D. A. Levinthal, "Absorptive capacity: A new perspective on learning and innovation," *Adm. Sci. Q.*, vol. 35, no. 1, pp. 128–152, 1990.

[79] S. F. Slater and J. C. Narver, "Market orientation and the learning organization," *J. Mark.*, vol. 59, pp. 63–74, 1995.

[80] E. Christensen and G. G. Gordon, "An exploration of industry, culture and revenue growth," *Organ. Stud.*, vol. 20, no. 3, pp. 397–422, 1999.

[81] I. Goll and R. Sambharya, "Corporate ideology, diversification and firm performance," *Organ. Stud.*, vol. 16, no. 5, pp. 823–846, 1995.

[82] T. E. Deal and A. A. Kennedy, *Corporate cultures: The rites and rituals of corporate life*. MA: Addison-Wesley, 1982.

[83] D. R. Denison, *Corporate culture and organizational effectiveness*. New York: John Wiley & Sons, 1990.

[84] D. A. Nadler and M. L. Tushman, "A model for diagnosing organizational behavior," *Organ. Dyn.*, vol. 9, no. 2, pp. 35–51, Sep. 1980.

[85] M. J. Braunscheidel, N. C. Suresh, and A. D. Boisnier, "Investigating the impact of organizational culture on supply chain integration," *Hum. Resour. Manage.*, vol. 49, no. 5, pp. 883–911, 2010.

[86] S. Qrunfleh and M. Tarafdar, "Supply chain information systems strategy: Impacts on supply chain performance and firm performance," *Int. J. Prod. Econ.*, vol. 147, pp. 340–350, 2013.

[87] A. C. Thoo, A. B. A. Hamid, H. T. Huam, R. Baharun, R. M. Yusof, and A. Rasli, "The proposed conceptual model for investigating moderating effects of contextual factors on supply chain management practice-performance link in Malaysian small and medium enterprises," *Int. J. Bus. Manag.*, vol. 6, no. 12, pp. 135–146, Nov. 2011.

[88] K. L. Lee, Z. M. Udin, and M. G. Hassan, "Global supply chain capabilities in Malaysian textile and apparel industry," *Int. J. Supply Chain Manag.*, vol. 3, no. 2, pp. 31–40, 2014.

[89] K. L. Lee, Z. M. Udin, and M. G. Hassan, "Supply chain capabilities: A study in textile and apparel industry," in *Proceedings of 1st International Conference on Innovation Driven Supply Chain*, 2014.

[90] A. N. Sahim, N. K. NikMat, and E. Sudarmana, "The power of innovation, distribution and supervision factor in improving performance of supply chain management of subsidized fertilizer in Indonesia," *Int. J. Supply Chain Manag.*, vol. 7, no. 1, pp. 129–134, 2018.

[91] M. Zhang and P. S. Tansuhaj, "Organizational culture, information technology capability, and performance: The case of born global firms," *Multinatl. Bus. Rev.*, vol. 15, no. 3, pp. 43–78, 2007.

[92] M. R. Bin Razalli, "The consequences of service operations practice and service responsiveness on hotel performance: Examining hotels in Malaysia," Universiti Sains Malaysia, 2008.

[93] N. H. Abdullah, E. Wahab, and A. Shamsuddin, "Exploring the common technology adoption enablers among Malaysian SMEs: Qualitative findings," *J. Manag. Sustain.*, vol. 3, no. 4, pp. 78–92, Nov. 2013.

[94] J. W. Creswell, *Research design: Qualitative, quantitative, and mixed methods approaches*, 2nd ed. 2013.

[95] FMM Directory, "Federation of Malaysia manufacturers directory," Malaysia, 2017.

[96] MATRADE Directory, "MATRADE directory 2013," *The Official Portal of Malaysia External Trade Development Corporation: The National Trade Promotion Agency of Malaysia*, 2017. [Online]. Available: http://www.matrade.gov.my/en/malaysian-exporters/showcasing-malaysia-export/directory/malaysian-products-directory.

[97] R. V Krejcie and D. W. Morgan, "Determining sample size for research activities," *Educ. Psychol. Meas.*, vol. 38, pp. 607–610, 1970.

[98] E. W. Whitley, "The case for postal research," *J. Mark. Res. Soc.*, vol. 27, no. 1, pp. 5–13, 1985.

[99] J. T. T. Mentzer and K. B. Kahn, "A framework of logistics research," *J. Bus. Logist.*, vol. 16, no. 1, pp. 231–251, 1995.

[100] D. B. Grant, C. Teller, and W. Teller, "Web-based survey in logistics research: An empirical application," in *Research Methodologies in Supply Chain Management*, H. Kotzab, S. Seuring, M. Muller, and G. Reiner, Eds. Germany: Physica-Verlag, 2005, pp. 139–154.

[101] S. J. Coakes and L. Steed, *SPSS 14.0 for windows: Analysis without anguish*, 14th ed. Australia: John Wiley & Sons, Ltd., 2007.

[102] J. F. Hair, W. C. Black, B. J. Babin, and R. E. Anderson, *Multivariate data analysis*, 7th ed. New York, NY: Pearson Prentice Hall, 2010.