

Roles of IT Leadership in E-Service Quality Improvement of Online Family Business

1st Sandy Kosasi
Information System
STMIK Pontianak

Pontianak, West Kalimantan, Indonesia
sandykosasi@stmikpontianak.ac.id

2nd Po Abas Sunarya
Informatics Engineering Department
Universitas Raharja
Tangerang, Indonesia
abas@raharja.info

3rd I Dewa Ayu Eka Yuliani
Information System
STMIK Pontianak
Pontianak, West Kalimantan, Indonesia
dewaayu.ekayuliani@gmail.com

4th Diana Fitriani
Information System
STMIK Pontianak
Pontianak, West Kalimantan, Indonesia
dianafitriani_8881@yahoo.com

5th Madhiyono
Informatics Engineering
STMIK Pontianak
Pontianak, West Kalimantan, Indonesia
madhiyono@stmikpontianak.ac.id

Abstract—Contextually, the online business managed by family companies is unclear in empowering IT professionals and apt to be seniority-oriented in terms of hierarchical family structures. Management of services and supports of IT operation is still partial and inconsistent. This study aimed to determine the extent of influences and relationships between IT capability and IT support in association with roles of IT leadership, an inseparable unit improving e-service quality. Convergent triangulation and an explanatory design through follow-up explanation were applied. The research population included family companies managing the online business for more than five years in West Kalimantan. Questionnaires were completed by 239 respondents. SEM-PLS and in-depth interviews with five key informants were conducted for data analysis. The novelty of the research shows that IT leadership has a very crucial role in mediating IT capability and IT support to improve e-service quality. The contribution of results is that IT leadership should immediately exist due to its importance, and there should be the readiness of IT support to improve the e-service quality of online business

Keywords—IT Capability, IT Support, IT Leadership, E-Service Quality, Online Family Business.

I. INTRODUCTION

The era of digital technology disruption encourages companies to increase competitiveness due to radical changes of all kinds of online business. Those operated by families heavily relying on the use of Information Technology (IT) in providing guaranteed services to their customers are no exception. This circumstance is inseparable from the mechanism of management process requiring efficient implementation and obvious procedures [1]. Furthermore, it should also meet business expectations comprehensively through the availability and ease of obtaining quality information services [2]. An essential implication for stakeholders is that IT is urgently needed to provide better e-service quality with quick, accurate responsiveness [3] considering that more family companies, especially those in West Kalimantan, begin marketing their products through various online ways. Managing the online business can last without the limitation of space and time, and requirement of big capital. Nonetheless, a limited amount of knowledge of operating it, very high competition, supplier readiness, internet infrastructure, as well as trust and security of transaction from the threats of fraud appear to hinder the online management success [4].

A number of recent studies have indicated that family companies managing the online business often fail because of no readiness and capacity to empower IT service application and IT operation support [5]. Understanding on the obstacles or challenges of running this business is also absent and there are difficulties of correctly determining market segmentation regarding product variants. In terms of IT services, the availability and guarantee of holistic IT infrastructure capability are often neglected [6]. Moreover, IT service management tends to focus on internal needs, not external services [7]. Unclear framework for implementing IT service application and improving e-service quality further exists. Another aspect is that the community tends to be hesitant about making financial transaction online [8]. In addition, IT service application insignificantly facilitates the purchase and delivery of products in an efficient, effective, and timely manner in meeting customer needs and expectations [9]. Contextually, there is no mapping of application portfolios of IT services through involvement of IT leadership in empowering IT division. So far, the management has been conducted without empowering IT professionals. Lastly, decision-making is likely to be seniority-oriented in terms of hierarchical family structures.

Complication faced is not much dissimilar from previous studies [10,11], where IT leadership is not a necessity for family company management yet in representing compliance, reliability, and innovation to build strategic values to improve e-service quality. IT capability of providing and disseminating information through fine e-service quality based on customer expectations no longer pertains to accuracy, completeness, and updated information of products [12]. The capability of this quality is inseparable from roles of IT leadership in managing all process demanding the application of IT services to ensure the fulfillment of values of satisfaction, trust, and loyalty of customers [13]. Also, IT investment decisions minimally refer to the awareness of the need to improve e-service quality. Besides, selection of IT process still tends to be partial [14], and rarely, there is a connection between work units or division so that failure in marketing online products occurs. The capacity and supports of applying IT platforms to assure availability and continuity of online services are further ignored by family companies [15]. These two factors are the most crucial content for e-service quality improvement.

A significant amount of literature shows that enhancing e-service quality is linked to ownership of IT capability and IT support. The former enables family companies to operate online business more competitively, while the latter can affect relationships of online business activities [16,17,18]. Both of these elements are closely interrelated and analyze various resources of IT infrastructure. For value addition, their composition cannot be imitated and substituted [19,20]. The capability to mobilize and use IT-based resources goes through a combination of resources and other online business capacity. IT capability also represents the extent of IT knowledge perspectives and effective information management generated by companies for stakeholders and external parties.

This research concentrates on all family companies that have marketed their products through online business regardless of physical stores in regions of West Kalimantan, Indonesia. A principal consideration is that this area is still largely dominated by such companies with a wide range of segments and cultures. In addition, the potential for market growth is still very wide and investment opportunities are promising because the province is bordered by Malaysia. This condition provides opportunities for all family companies operating online business to establish communication and personal relationships with domestic and foreign customers, and to increase multinational competitiveness. Recently, the elaboration on IT capability and IT support has only focused on the performance of companies or industries in general. It is scarcely associated with the need for IT leadership in managing online business in order to ease and enhance e-service quality.

This study is interesting. As adhering to the principle of seniority, the management of online business incompletely believes that it is requisite to implement IT leadership in enhancing e-service quality [21,22]. Furthermore, understanding on the roles and mechanism of IT is still limited to operational activities, not becoming a strategic, critical element to win the competition [23]. This condition is also confirmed and strengthened by previous research [24,25,26], where there is rarity or even absence to find an explicit statement that improving e-service quality is strongly influenced by IT leadership in carrying out digital transformation of marketing products online. The formulation of research problems is that there is an allegation that enhancement of this quality is the result of direct or indirect influences of exogenous constructs, i.e. IT capability and IT support in relation to IT leadership of family companies in operating online business. The problem content is linked to the research goal, which is to find out the extent of influences and relationships between IT capability and IT support in relation to roles of IT leadership improving e-service quality, a crucial platform in operating online business which is apt to be inconsistent and very dynamic.

II. LITERATURE REVIEW

A. IT Capability

IT capability is the company ability to acquire, expand, connect, and reform IT resources, and to improve operational efficiency and strategy [27]. Primarily, it presents a unified picture of the company resources such as human resources, IT infrastructure, IT resources, and intangible assets covering IT skill, synergy, consumer orientation, and related knowledge [28]. IT capability enhances agility and efficiency

of business and enables companies to utilize digital technology to respond to changing market challenges. Referring to previous literature, it has three dimensions such as IT infrastructure, IT business spanning, and IT proactive stance [29].

B. IT Support

IT support enables companies to accelerate changes to achieve a mechanism with a high level of innovation and influences all business sectors. It works in installation, evaluation, and improvement of computer application performance and network system [30]. IT support plays essential roles in protecting against cybercrime, managing effective data, increasing customer support, overcoming technical problems, and monitoring the process [31]. There are four dimensions of this support such as hardware, software, database, and network system [32].

C. IT Leadership

IT leadership refers to process of social influences in the context of changes of attitude, feeling, thinking, and performance [33]. In a digital transformation ecosystem, a dynamic, effective, flexible type of leadership empowering IT infrastructure and IT configuration is requisite. This fact is linked to the readiness to master various kinds of communication technology to interact with business units, the readiness to manage pattern changes of organizational business process, and the ability to adapt to any changes of IT portfolios [34]. The success of IT leadership in managing online business relies on e-communication skill, e-social skill, e-team building skill, e-change management skill, e-technological skill, and e-trustworthiness [35].

D. E-Service Quality

E-service quality is an IT service performing through managed internet network interaction and has an interactive mechanism referring to the capability and availability of online information [36]. Such the quality is influential in making the decisions to develop competitive advantages in online retail business. In terms of interaction with websites, it means the level of websites effectively and efficiently facilitating the consumers in shopping, making purchases, and delivering products and services [37]. Enhancing the e-service quality is required to achieve customer satisfaction and increase consumer intention to make online purchasing decisions. Providing this quality exceeds commercial transaction services and refers to a framework involving system functionality, manageability, customer support, procedure, and content [38].

III. RESEARCH METHOD

This research applied convergent triangulation and an explanatory design through follow-up explanation. Identifying the research background, reviewing the literature, formulating the problems, designing the research, stating the hypotheses, collecting, processing, and analyzing the data, providing the research results, and drawing the conclusion were conducted [39]. The research population involved all family companies with more than 5-year experiences of marketing their products online in West Kalimantan. This experience period authentically represented continual results.

Data was obtained after questionnaires in the form of Google Form were distributed to 268 respondents. They were completed by 239 of them and returned to researchers. The response rate was high (89.18%). Respondents

addressed were all company presidents, marketing division, and IT work units. Likert scales were used to process the data with an interval of strongly agree (Score 6) to strongly disagree (Score 1) [39]. Eliminating the tendency of the hesitation factor, they can bring better accuracy and certainty [40]. Classification and distribution of respondents were based on main, daily tasks.

Research questionnaires referred to previous research through readjustment. They were wholly tested and, therefore, validity and reliability were assured. This research used SEM-PLS analysis model and SmartPLS ver 3.2.7 software. The test of the former pertains to a conceptual model, an algorithm analysis method, bootstrapping, a path diagram model, and model evaluation. Following this, conclusion and suggestions were provided [41]. In terms of normality, data distributed was processed through bootstrapping. Besides, quantitative analysis results were revalidated through justification by referring to explanation of 5 key informants. They were initially determined through a purposive technique and selected from the same population based on a number of criteria of inclusion and exclusion through interviews and FGDs [42]. Furthermore, to ensure information obtained, feedback process was carried out to reduce personal bias when analyzing the data. The research focused on the need for exploration and extent of influences and relationships between IT capability and IT support on e-service quality of family companies operating online business directly and indirectly through roles of IT leadership.

A tested hypothesis structure consisted of H1: IT capability had positive influences on IT leadership; H2: IT support had positive influences on IT leadership; H3: IT support had positive influences on IT capability; H4: IT capability had positive influences on e-service quality; H5: IT support had positive influences on e-service quality; H6: IT leadership had positive influences on e-service quality; H7: IT capability had positive influences on e-service quality mediated by IT leadership; and H8: IT support had positive influences on e-service quality mediated by IT leadership.

IV. RESULT AND DISCUSSION

Path coefficients were initially analyzed to find out the research outcomes. Estimation was made throughout PLS algorithm method and bootstrapping to obtain optimal values from data distribution and meet the normality assumption. Next, bootstrapping with an algorithm created a number of subsamples (resamples). A method applied was resampling with replacement. In other words, each resample contains rows selected or further reselected at random from the original data sets [41].

Concerning SEM-PLS model, constructs of this study comprised IT capability, IT support, IT leadership, and e-service quality. Their indicators were determined through the reference of previous literature review. To elaborate, IT capability consisted of IT infrastructure (ITCP1), IT business spanning (ITCP2), and IT proactive stance (ITCP3); IT support covered hardware (ITS1), software (ITS2), database (ITS3), and network system (ITS4); IT leadership included e-communication skill (ITL1), e-social skill (ITL2), e-team building skill (ITL3), e-change management skill (ITL4), e-technological skill (ITL5), and e-trustworthiness (ITL6); and e-service quality involved system functionality (ESQ1),

manageability (ESQ2), customer support (ESQ3), procedure (ESQ4), and content (ESQ5).

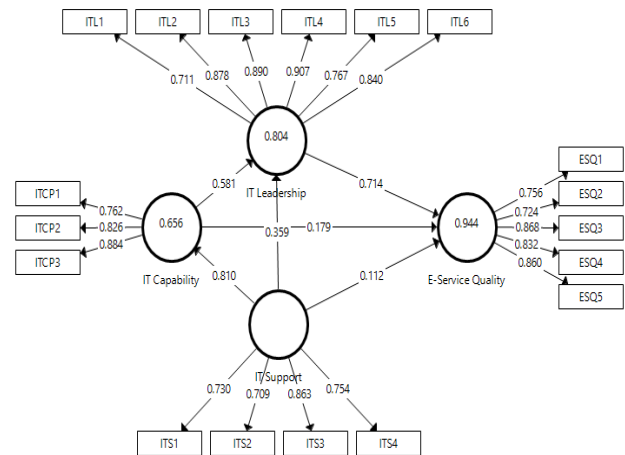


Fig. 1. Path Diagram of Research Model

In addition to this stage, a test was performed to determine convergent and discriminant validity coefficients by referring to computed Average Variance Extracted (AVE). It represented an adequate range of convergent validity. Comprehensibly, latent variables could explain more than half of variance of average indicators. Based on results of data processing, an outer model showed construct influences represented through the path diagram of research model (see Figure 1). Values obtained represented the magnitude of correlation between indicators and respective constructs. Loading factor values of indicators were greater than 0.70, meaning that they were completely valid and could be used in this research model [40,41].

Discriminant validity coefficients of constructs were further tested by using the Fornell-Larcker criteria. The content in Table I presented all results of these coefficients. Meanwhile, the one in Table II showed all testing outcomes of reliability and validity, including Composite Reliability (CR), Cronbach's Alpha (CA), and AVE. Based on the requirements, CR, CA, and AVE should be consecutively greater than 0.80, 0.70, and 0.50 [40,41] to achieve good reliability and validity.

TABLE I. DISCRIMINANT VALIDITY

Fornell-Larcker Criterion	ESQ	ITCP	ITL	ITS
E-Service Quality (ESQ)	0.810			
IT Capability (ITCP)	0.893	0.826		
IT Leadership (ITL)	0.964	0.871	0.835	
IT Support (ITS)	0.850	0.810	0.829	0.767

TABLE II. CONSTRUCT RELIABILITY AND VALIDITY

Fornell-Larcker Criterion	CA	rho_A	CR	AVE
E-Service Quality (ESQ)	0.867	0.876	0.905	0.656
IT Capability (ITCP)	0.766	0.778	0.865	0.682
IT Leadership (ITL)	0.911	0.919	0.932	0.697
IT Support (ITS)	0.764	0.771	0.850	0.588

Next, an inner model was analyzed through bootstrapping and SmartPLS application program. The objective was to determine the significance of construct indicators and to obtain t-values testing whether or not there were relationships among constructs. Provided that the t-statistic is greater than 1.96, an indicator is significant [41]. The significance test of path coefficients produced results indicating that all original sample values were positive. Understandably, the better an exogenous construct was, the better an endogenous construct would be. Besides, the t-statistic showed significance of influences of exogenous constructs on endogenous ones. Relationships among these constructs were represented with the t-statistic which was greater than the t-table. Thus, they completely possessed positive, significant influences (see Table III).

TABLE III. PATH SIGNIFICANCE TEST

Fornell-Larcker Criterion	Original Sample (O)	T-Statistic (O/S TDEV)	P-Value
IT Capability → E-Service Quality	0.179	4.184	0.000
IT Capability → IT Leadership	0.581	11.181	0.000
IT Leadership → E-Service Quality	0.714	19.822	0.000
IT Support → E-Service Quality	0.112	3.110	0.002
IT Support → IT Capability	0.810	38.908	0.000
IT Support → IT Leadership	0.359	6.708	0.000

Calculating R-squared values was additionally performed to test Goodness of Fit model (an inner model). The adjusted R-squared value of e-service quality was revealed (0.943 or 94.3%). The interpretation was that e-service quality was strongly influenced by IT capability and IT support through IT leadership. A small number of influences, nevertheless, came from other factors which were not in this study model (0.057 or 5.7%). On the contrary, the adjusted R-square value of IT leadership was 0.802 (80.2%) representing that this leadership was also influenced by IT capability and IT support. The rest were influential models not examined in this study (0.198 or 19.8%). Ultimately, the one of IT capability influenced by IT support 0.655 (65.5%). The others were influential factors which were out of the research model (0.345 or 34.5%). Furthermore, in order to find out the value of R-squared predictive relevance, a formula, $Q^2 = 1 - (1 - R^2 \text{ e-service quality}) * (1 - R^2 \text{ IT leadership}) * (1 - R^2 \text{ IT capability})$ was used [41]. 0.996 (99.61%) was the outcome, meaning that this research model had relatively large predictive relevance and was very feasible and valid to be used in this research model.

Analyzing the path model, it was found that IT capability and IT support directly and positively influenced IT leadership. Their path coefficients were respectively 0.581 and 0.359. Moreover, IT leadership directly and positively influenced e-service quality (path coefficient = 0.714). Another finding was that IT capability (0.179) and IT support (0.112) had direct, positive influences on e-service quality. Following this, IT support had direct, positive influences on IT capability (0.810). Indirect influences of IT capability (0.415) and IT support (0.256) on e-service quality

through IT leadership were further found. It turned out that better, direct influences appeared without going through roles of IT leadership. It could be concluded that all path coefficients represented direct, indirect, and positive influences of all exogenous and endogenous constructs in this study. These were significant factors in improving the e-service quality of operating online family business, especially in West Kalimantan through roles of IT leadership.

The highest path coefficients of IT support on IT capability and IT leadership on e-service quality existed. Meaningfully, IT support and IT leadership were the most critical factors which needed to be monitored and improved comprehensively and continuously for better online family business. For this reason, all online business performers with family companies should understand and empower IT support, an essential element, not IT capability. This finding was inconsistent with previous research stating that online business success was influenced by IT capability [16,17,18]. Apart from inconsistency, there was also controversy noting that IT support was not only a complement, but also an important element for smooth IT capability [19,20]. It also turned out that IT leadership was highly influential in terms of the smoothness and improvement of online business managed by the majority of family companies. In general, strategic departments in such companies were rarely managed by outsiders not having family relationships. A vital finding was particularly noted. Here, roles of IT leadership should be noticed and absolutely needed for online business enhancement despite the fact that previous studies only emphasized IT capability, IT support, and other variables [21,22].

Based on the prediction of the research model, controversy appeared. An emphasis was that IT capability was not the only factor determining smooth online business in West Kalimantan [24,25,26]. Analysis results revealed that readiness and skill of IT leadership should be professionally managed without being tied to seniority factors based on the family hierarchy. Additionally, it was strengthened by path coefficients of IT capability and IT support on IT leadership (respectively 0.581 and 0.359), in comparison to the ones of IT capability and IT support on e-service quality (respectively 0.179 and 0.112). Hence, IT leadership should, again, be immediately ready to improve e-service quality of online family business, especially in West Kalimantan.

With reference to the loading factor value of each indicator of constructs, notice was directed to: (a) IT infrastructure (ITCP1) = 0.762; (b) software (ITS2) = 0.709, hardware (ITS1) = 0.730, and network system (ITS4) = 0.754; (c) e-communication skill (ITL1) = 0.711 and e-technological skill (ITL5) = 0.767; and (d) manageability (ESQ2) = 0.724 and system functionality (ESQ1) = 0.756. As shown, all of these loading factor values were less than 0.800. From all constructs, the evidence showed that despite the fact that IT support had the most critical element, constant monitoring was needed because of the smallest path coefficients indicating small or weak influences on efforts to improve e-service quality of operating online family business. Socialization to all family companies was compulsory. Here, attention should be directed to hardware, software, and network system, and not only database used to process and manage order data of online transaction. One of

the difficulties lied in IT support. The management of online business should realize that IT support was inseparable from IT capability. Therefore, professionals in the IT field were required to ascertain smooth IT service management with a high level of accuracy.

Likewise, indicators of IT infrastructure, communication skill, e-technological skill, manageability, and system functionality still needed further arrangement to accurately and comprehensively realize the mapping of each product. A reflection for every family companies managing online business was that there should be full collaboration and linkage among aforesaid indicators. Emphasized by the evidence, e-change management skill (ITL4) with the highest loading factor value (0.907) signified that making changes or adjustment was uncomplicated to do. It was clear that IT leadership had substantial roles in mediating IT capability and IT support to improve e-service quality. Besides, this statement was in line with all research hypotheses and became novelty.

Based on the findings of a qualitative analysis conducted through focus group discussions with five key informants and feedback obtained, it is concluded that implications through roles of IT leadership and importance of IT support for family companies performed as a form of capability to manage resources together by utilizing information technology to facilitate and ensure continuity of managing online business. The linkage of IT capability, IT support, and IT leadership was further a form of compliance, reliability, and innovation in building strategic business values to enhance e-service quality. Capability to provide and disseminate quality e-service was no longer based on accuracy, completeness, and updates of product information. However, the one to conduct digital transformation in assuring personalized relationships with customers in the world became a necessity. This research was still limited to family companies operating online business with unspecific mapping of types of online products.

V. CONCLUSION AND FUTURE RESEARCH

In summary, the whole online business performers, particularly family companies must understand and empower IT support and IT leadership, fundamental elements in improving e-service quality. Meanwhile, IT capability is not the critical one as it does not have strong influences in assuring the continuity of online business. Readiness and skill of IT leadership should be managed professionally without being tied to seniority factors based on the family hierarchy. This research continuation can be on more specific determination of confirmatory analysis of each indicator based on direct and indirect influences among constructs. This information is useful for clustering the needs for all online business in terms of e-service quality in a national scope.

REFERENCES

- [1] J. Soluk, I. Miroshnychenko, N. Kammerlander and A. De Massis, "Family Influence and Digital Business Model Innovation: The Enabling Role of Dynamic Capabilities," *Entrepreneurship Theory and Practice*, 45(4), 2021, pp. 867-905.
- [2] E. Ansong and R. Boateng, "Surviving in the Digital Era – Business Models of Digital Enterprises in a Developing Economy," *Digital Policy, Regulation and Governance*, 21(2), 2019, pp. 164-178.
- [3] M. S. Rahman, M. A. Hossain, M. H. Zaman and M. Mannan, "E-Service Quality and Trust on Customer's Patronage Intention: Moderation Effect of Adoption of Advanced Technologies," *Journal of Global Information Management (JGIM)*, 28(1), 2020, pp. 39-55.
- [4] M. L. R. Varela, A. F. Araújo, G. G. Vieira, V. K. Manupati and K. Manoj, "Integrated Framework Based on Critical Success Factors for e-Commerce," *Journal of Information Systems Engineering & Management*, 2(1), 2017, pp. 1-9.
- [5] A. Al-Khayyal, M. Alshurideh, B. Al Kurdi and S. A. Salloum, "Factors Influencing Electronic Service Quality on Electronic Loyalty in Online Shopping Context: Data Analysis Approach," In *Enabling AI Applications in Data Science*, Springer, 2021, pp. 367-378.
- [6] A. Rahmayanti and H. Wandebori, "The Effects of E-Service Quality on Customer Online Repurchase Intention towards E-commerce Marketplace C2C in Indonesia," *The 7th Smart Collaboration for Business in Technology and Information Industries*, 2018, pp. 35-40.
- [7] W. K. Putri and V. Pujani, "The Influence of System Quality, Information Quality, E-Service Quality and Perceived Value on Shopee Consumer Loyalty in Padang City," *The International Technology Management Review*, 8(1), 2019, pp. 10-15.
- [8] M. I. Setiawan, C. Hasyim, N. Kurniasih, D. Abdullah, D. Napitupulu, R. Rahim ... and R. D. Nasihien, "E-Business, the Impact of Regional Growth on the Improvement of Information and Communication Development," *Journal of Physics: Conference Series*, 2018, pp. 1-5.
- [9] R. Zhou, X. Wang, Y. Shi, R. Zhang, L. Zhang and H. Guo, "Measuring E-Service Quality and Its Importance to Customer Satisfaction and Loyalty: An Empirical Study in a Telecom Setting," *Electronic Commerce Research*, 19(3), 2019, pp. 477-499.
- [10] G. Bongiorno, D. Rizzo and G. Vaia, "CIOs and the Digital Transformation: A New Leadership Role," *Springer, Cham*, 2018, pp. 1-9.
- [11] D. Corkindale, J. Ram and H. Chen, "The Adoption of Firm-Hosted Online Communities: An Empirical Investigation into the Role of Service Quality and Social Interactions," *Enterprise Information Systems*, 12(2), 2018, pp. 173-195.
- [12] X. T. Li, A. Rahman, G. Connie and Z. Osman, "Examining Customers' Perception of Electronic Shopping Mall's E-Service Quality," *International Journal of Services, Economics and Management*, 11(4), 2020, pp. 329-346.
- [13] N. Urbach, P. Drews and J. Ross, "Digital Business Transformation and the Changing Role of the IT Function," *MIS Quarterly Executive*, 16(2), 2017, pp. 1-4.
- [14] M. A. Alanezi and A. Sellami, "A Unified Framework for Measuring E-Service Quality," *Engineering, Technology & Applied Science Research*, 9(3), 2019, pp. 4249-4254.
- [15] F. W. Swierczek and T. Monta, "Key Factors of Service Quality of B-2-B Technology Providers," *International Journal of Services and Operations Management*, 38(4), 2021, pp. 508-535.
- [16] L. Li, F. Su, W. Zhang and J. Y. Mao, "Digital Transformation by SME Entrepreneurs: A Capability Perspective," *Information Systems Journal*, 28(6), 2018, pp. 1129-1157.
- [17] J. Braojos, J. Benitez and J. Llorens, "How Do Social Commerce-IT Capabilities Influence Firm Performance? Theory and Empirical Evidence," *Information & Management*, 56(2), 2019, pp. 155-171.
- [18] H. C. Chae, C. E. Koh and K. O. Park, "Information Technology Capability and Firm Performance: Role of Industry," *Information & Management*, 55(5), 2018, pp. 525-546.
- [19] C. K. Hou, "The Effects of IT Infrastructure Integration and Flexibility on Supply Chain Capabilities and Organizational Performance: An Empirical Study of the Electronics Industry in Taiwan," *Information Development*, 36(4), 2020, pp. 576-602.
- [20] B. Lu and S. Zhang, "A Conjoint Approach to Understanding Online Buyers' Decisions towards Online Marketplaces," *Journal of Theoretical and Applied Electronic Commerce Research*, 15(3), 2020, pp. 69-83.
- [21] S. Kosasi, Vedyanto and I. D. A. E. Yuliani, "Accelerating and Optimizing Digital Businesses through IT Governance," *International Seminar on Application for Technology of Information and Communication (iSemantic)*, 2020, pp. 98-103.
- [22] H. Saleh, "Enhance Small Medium Enterprise (SMEs) Family Business in Malaysia through E-Marketing Strategies," *International Journal of Scientific & Technology Research*, 2019, pp. 3374-3377.

- [23] S. Jorfi, K. M. Nor and L. Najjar, "An Empirical Study of the Role of IT Flexibility and IT Capability in IT-Business Strategic Alignment," *Journal of Systems and Information Technology*, 2017, pp. 2-21.
- [24] A. A. A. E. Ibrahim and A. E. H. M. Abou Naem, "The Impact of Strategic Information System and Strategic Design on Organization's Competitiveness: A Field Study," *Academy of Strategic Management Journal*, 18(1), 2019, pp. 1-12.
- [25] B. Kaya, E. Behraves, A. M. Abubakar, O. S. Kaya and C. Orús, "The Moderating Role of Website Familiarity in the Relationships between E-Service Quality, E-Satisfaction and E-Loyalty," *Journal of Internet Commerce*, 18(4), 2019, pp. 369-394.
- [26] H. Taherdoost, "Electronic Service Quality Measurement: Development of a Survey Instrument to Measure the Quality of E-Service," *International Journal of Intelligent Engineering Informatics*, 7(6), 2019, pp. 491-528.
- [27] N. Van Thuy, "Strategy, Culture, Human Resource, IT Capability, Digital Transformation and Firm Performance—Evidence from Vietnamese Enterprises," *Behavioral Predictive Modeling in Economics*, Springer, 2021, pp. 237-252.
- [28] J. K. Nwankpa and Y. Roumani, "IT Capability and Digital Transformation: A Firm Performance Perspective," *International Conference on Information Systems*, Dublin, 2016, pp. 1-16.
- [29] Z. Wang, M. Rafait Mahmood, H. Ullah, I. Hanif, Q. Abbas and M. Mohsin, "Multidimensional Perspective of Firms' IT Capability between Digital Business Strategy and Firms' Efficiency: A Case of Chinese SMEs," *SAGE Open*, 10(4), 2020, pp. 1-15.
- [30] D. Nurmadewi and E. R. Mahendrawathi, "Analyzing Linkage between Business Process Management (BPM) Capability and Information Technology: A Case Study in Garment SMEs," *Procedia Computer Science*, 161, 2019, pp.935-942.
- [31] A. Mazzucchelli, R. Chierici, D. Tortora and S. Fontana, "Innovation Capability in Geographically Dispersed R&D Teams: The Role of Social Capital and IT support," *Journal of Business Research*, 2019, pp. 1-10.
- [32] N. I. J. Qammach, "The Mediating Role of Knowledge Sharing on Relationship between IT Capability and IT Support as Predictors of Innovation Performance: An Empirical Study on Mobile Companies," *Procedia Economics and Finance*, 2016, pp. 562-570.
- [33] J. Oh, H. Lee and H. Zo, "The Effect of Leadership and Teamwork on ISD Project Success," *Journal of Computer Information Systems*, 2019, pp. 1-11.
- [34] M. Hyder and K. M. Iraqi, "Paradigm Shift of Leadership: Leaders in Information Technology," *Journal-Sheikh Zayed Islamic Centre, University of Karachi*, 41, 2019, pp. 166-175.
- [35] M. Van Wart, A. Roman, X. Wang and C. Liu, "Operationalizing the Definition of e-Leadership: Identifying the Elements of e-Leadership," *International Review of Administrative Sciences*, 85(1), 2019, pp. 80-97.
- [36] P. Rita, T. Oliveira and A. Farisa, "The Impact of E-Service Quality and Customer Satisfaction on Customer Behavior in Online Shopping," *Heliyon*, 5(10), 2019.
- [37] N. S. Bhati, "Validation of Customers' Perceived E-Service Quality Determinants: A Study of Online Shoppers. International Conference on Sustainable Computing in Science," *Technology & Management (SUSCOM-2019)*, 2019, pp. 1782-1787.
- [38] M. A. Alanezi and A. Sellami, "A Unified Framework for Measuring E-Service Quality," *Engineering, Technology & Applied Science Research*, 9(3), 2019, pp. 4249-4254.
- [39] U. Sekaran and R. Bougie, "Research Methods for Business: A Skill Building Approach," 8th Edition ed., United Kingdom: John & Wiley & Sons, Ltd., 2020.
- [40] R. E. Schumacker and R. G. Lomax, "A Beginner's Guide to Structural Equation Modeling," Fourth Edition ed., Routledge, 2015.
- [41] J. F. Hair, et. al., "A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)," 3rd Edition, SAGE Publications, Inc., 2021.
- [42] J. W. Creswell and J. David Creswell, "Research Design: Qualitative, Quantitative, and Mixed Methods Approaches," Fifth Edition, California: SAGE Publications, Inc., 2018.